

# **Riva Silver Liquid**

#### **SDI Limited**

Version No: 4.1.1.1 Safety Data Sheet (Conforms to Regulations (EC) No 2015/830) Issue Date: 18/03/2016 Print Date: 30/03/2016 Initial Date: Not Available L.REACH.GBR.EN

# SECTION 1 IDENTIFICATION OF THE SUBSTANCE / MIXTURE AND OF THE COMPANY / UNDERTAKING

#### 1.1.Product Identifier

| Product name                  | Riva Silver Liquid |
|-------------------------------|--------------------|
| Synonyms                      | Not Available      |
| Other means of identification | Not Available      |

#### 1.2. Relevant identified uses of the substance or mixture and uses advised against

| Relevant identified uses | Professional dental use: For the making of dental cement. |
|--------------------------|-----------------------------------------------------------|
| Uses advised against     | Not Applicable                                            |

#### 1.3. Details of the supplier of the safety data sheet

| Registered company name | ny name SDI Limited SDI Brazil Industria E Comercio Ltda |                                                                           | SDI Germany GmbH                        |  |
|-------------------------|----------------------------------------------------------|---------------------------------------------------------------------------|-----------------------------------------|--|
| Address                 | 3-15 Brunsdon Street VIC Bayswater 3153<br>Australia     | Rua Dr. Virgilio de Carvalho Pinto, 612 São<br>Paulo CEP 05415-020 Brazil | Hansestrasse 85 Cologne D-51149 Germany |  |
| Telephone               | +61 3 8727 7111 (Business Hours)                         | +55 11 3092 7100                                                          | +49 0 2203 9255 0                       |  |
| Fax                     | +61 3 8727 7222                                          | +55 11 3092 7101                                                          | +49 0 2203 9255 200                     |  |
| Website                 | www.sdi.com.au                                           | www.sdi.com.au                                                            | www.sdi.com.au                          |  |
| Email                   | info@sdi.com.au                                          | brasil@sdi.com.au                                                         | germany@sdi.com.au                      |  |
|                         |                                                          |                                                                           |                                         |  |
| Registered company name | SDI (North America) Inc.                                 |                                                                           |                                         |  |
| Address                 | 1279 Hamilton Parkway IL Itasca 60143 United States      |                                                                           |                                         |  |
| Telephone               | +1 630 361 9200 (Business hours)                         |                                                                           |                                         |  |
| Fax                     | Not Available                                            |                                                                           |                                         |  |
| Website                 | Not Available                                            |                                                                           |                                         |  |
| Email                   | USA.Canada@sdi.com.au                                    |                                                                           |                                         |  |

#### 1.4. Emergency telephone number

| Association / Organisation        | SDI Limited           | Not Available | Not Available |  |  |
|-----------------------------------|-----------------------|---------------|---------------|--|--|
| Emergency telephone numbers       | +61 3 8727 7111       | Not Available | Not Available |  |  |
| Other emergency telephone numbers | ray.cahill@sdi.com.au | Not Available | Not Available |  |  |
| Association / Organisation        | Not Available         |               |               |  |  |
| A330Clation / Organisation        | 140t Available        | NOT Available |               |  |  |
| Emergency telephone numbers       | +61 3 8727 7111       |               |               |  |  |
| Other emergency telephone numbers | Not Available         |               |               |  |  |

# **SECTION 2 HAZARDS IDENTIFICATION**

#### 2.1. Classification of the substance or mixture

Considered a dangerous mixture according to directive 1999/45/EC, Reg. (EC) No 1272/2008 (if applicable) and their amendments. Not classified as Dangerous Goods for transport purposes.

| DSD classification     | In case of mixtures, classification has been prepared by following DPD (Directive 1999/45/EC) and CLP Regulation (EC) No 1272/2008 regulations              |  |  |
|------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|
| DPD classification [1] | R36/37/38 Irritating to eyes, respiratory system and skin.                                                                                                  |  |  |
| Legend:                | 1. Classification by vendor; 2. Classification drawn from EC Directive 67/548/EEC - Annex I; 3. Classification drawn from EC Directive 1272/2008 - Annex VI |  |  |

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Classification according to regulation (EC) No 1272/2008 [CLP] [1]

Skin Corrosion/Irritation Category 2, Eye Irritation Category 2, Specific target organ toxicity - single exposure Category 3 (respiratory tract irritation)

Legend:

1. Classification by vendor; 2. Classification drawn from EC Directive 67/548/EEC - Annex I; 3. Classification drawn from EC Directive 1272/2008 - Annex VI

#### 2.2. Label elements

**CLP** label elements



SIGNAL WORD

WARNING

# Hazard statement(s)

| H315 | Causes skin irritation.           |  |  |
|------|-----------------------------------|--|--|
| H319 | Causes serious eye irritation.    |  |  |
| H335 | May cause respiratory irritation. |  |  |

# Supplementary statement(s)

Not Applicable

#### Precautionary statement(s) Prevention

| · ·  |                                                                            |
|------|----------------------------------------------------------------------------|
| P271 | Use only outdoors or in a well-ventilated area.                            |
| P261 | Avoid breathing dust/fume/gas/mist/vapours/spray.                          |
| P280 | Wear protective gloves/protective clothing/eye protection/face protection. |

# Precautionary statement(s) Response

| P305+P351+P338 | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. |
|----------------|----------------------------------------------------------------------------------------------------------------------------------|
| P312           | Call a POISON CENTER/doctor/physician/first aider/if you feel unwell.                                                            |
| P337+P313      | If eye irritation persists: Get medical advice/attention.                                                                        |
| P302+P352      | IF ON SKIN: Wash with plenty of water and soap.                                                                                  |
| P304+P340      | IF INHALED: Remove person to fresh air and keep comfortable for breathing.                                                       |
| P332+P313      | If skin irritation occurs: Get medical advice/attention.                                                                         |
| P362+P364      | Take off contaminated clothing and wash it before reuse.                                                                         |

### Precautionary statement(s) Storage

| P405      | Store locked up.                                                 |
|-----------|------------------------------------------------------------------|
| P403+P233 | Store in a well-ventilated place. Keep container tightly closed. |

#### Precautionary statement(s) Disposal

| P501 Dispose of contents/container in accordance with local regulations. |  |
|--------------------------------------------------------------------------|--|
|--------------------------------------------------------------------------|--|

#### 2.3. Other hazards

Ingestion may produce health damage\*.

Cumulative effects may result following exposure\*.

REACh - Art.57-59: The mixture does not contain Substances of Very High Concern (SVHC) at the SDS print date.

# SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

# 3.1.Substances

See 'Composition on ingredients' in Section 3.2

#### 3.2.Mixtures

| 0.Emiliator 00                                                                                                             |           |                             |                                                        |                                                                                                                                                                                                                            |
|----------------------------------------------------------------------------------------------------------------------------|-----------|-----------------------------|--------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1.CAS No<br>2.EC No<br>3.Index No<br>4.REACH No                                                                            | %[weight] | Name                        | Classification according to directive 67/548/EEC [DSD] | Classification according to regulation (EC) No 1272/2008 [CLP]                                                                                                                                                             |
| 1.9003-01-4<br>2.Not Available<br>3.Not Available<br>4.Not Available                                                       | 30        | acrylic acid<br>homopolymer | R36/37/38, R51/53 <sup>[1]</sup>                       | Skin Corrosion/Irritation Category 2, Eye Irritation Category 2, Specific target organ toxicity - single exposure Category 3 (respiratory tract irritation), Chronic Aquatic Hazard Category 2; H315, H319, H335, H411 [1] |
| 1.87-69-4<br>2.201-766-0<br>3.Not Available<br>4.01-2119537204-47-XXXX,<br>01-2119851173-43-XXXX,<br>01-2119851174-41-XXXX | 10        | tartaric acid               | R36/37/38 <sup>[1]</sup>                               | Skin Corrosion/Irritation Category 2, Eye Irritation Category 2, Specific target organ toxicity - single exposure Category 3 (respiratory tract irritation); H315, H319, H335 [1]                                          |

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Legena:

1. Classification by vendor; ∠. Classification drawn from EC Directive 67/348/EEC - Annex (; 3. Classification drawn from EC Directive (12/2/2008 - Annex v) 4. Classification drawn from C&L

#### **SECTION 4 FIRST AID MEASURES**

#### 4.1. Description of first aid measures

General

#### If skin contact occurs:

- Immediately remove all contaminated clothing, including footwear.
- Flush skin and hair with running water (and soap if available).
- Seek medical attention in event of irritation.

#### If this product comes in contact with the eyes:

- ▶ Immediately hold eyelids apart and flush the eye continuously with running water.
- Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids.
- ▶ Continue flushing until advised to stop by the Poisons Information Centre or a doctor, or for at least 15 minutes
- ► Transport to hospital or doctor without delay.
- Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.
- If fumes or combustion products are inhaled remove from contaminated area.
- Seek medical attention.
- Immediately give a glass of water.
- ▶ First aid is not generally required. If in doubt, contact a Poisons Information Centre or a doctor.

Seek medical attention.

Rinse mouth with water.

# Eye Contact

If this product comes in contact with the eyes:

- ▶ Immediately hold eyelids apart and flush the eye continuously with running water.
- Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids.
- ▶ Continue flushing until advised to stop by the Poisons Information Centre or a doctor, or for at least 15 minutes.
- ► Transport to hospital or doctor without delay.
- ▶ Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.

# Skin Contact

## If skin contact occurs:

- ► Immediately remove all contaminated clothing, including footwear.
- Flush skin and hair with running water (and soap if available).
- ▶ Seek medical attention in event of irritation.

# Inhalation

- If fumes or combustion products are inhaled remove from contaminated area.
- Seek medical attention

# Ingestion

Immediately give a glass of water.
 First aid is not generally required. If in doubt, contact a Poisons Information Centre or a doctor.

Seek medical attention.

Rinse mouth with water.

# 4.2 Most important symptoms and effects, both acute and delayed

See Section 11

#### 4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

# **SECTION 5 FIREFIGHTING MEASURES**

# 5.1. Extinguishing media

Foam is generally ineffective

#### 5.2. Special hazards arising from the substrate or mixture

| Fire Incompatibility         | None known.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |  |  |  |
|------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|--|
| 5.3. Advice for firefighters |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |  |  |  |
| Fire Fighting                | <ul> <li>Alert Fire Brigade and tell them location and nature of hazard.</li> <li>Wear full body protective clothing with breathing apparatus.</li> <li>Prevent, by any means available, spillage from entering drains or water course.</li> <li>Use water delivered as a fine spray to control fire and cool adjacent area.</li> <li>Avoid spraying water onto liquid pools.</li> <li>DO NOT approach containers suspected to be hot.</li> <li>Cool fire exposed containers with water spray from a protected location.</li> <li>If safe to do so, remove containers from path of fire.</li> </ul> |  |  |  |  |
|                              | <ul> <li>Combustible.</li> <li>Slight fire hazard when exposed to heat or flame.</li> <li>Heating may cause expansion or decomposition leading to violent rupture of containers.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                         |  |  |  |  |

# Fire/Explosion Hazard

- ► On combustion, may emit toxic fumes of carbon monoxide (CO).
- May emit acrid smoke.
- ► Mists containing combustible materials may be explosive.

Combustion products include; carbon dioxide (CO2) other pyrolysis products typical of burning organic materialMay emit poisonous fumes. May emit corrosive fumes.

### **SECTION 6 ACCIDENTAL RELEASE MEASURES**

#### 6.1. Personal precautions, protective equipment and emergency procedures

See section 8

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# 6.2. Environmental precautions

See section 12

#### 6.3. Methods and material for containment and cleaning up

| Minor Spills | <ul> <li>Remove all ignition sources.</li> <li>Clean up all spills immediately.</li> <li>Avoid breathing vapours and contact with skin and eyes.</li> <li>Control personal contact with the substance, by using protective equipment.</li> <li>Contain and absorb spill with sand, earth, inert material or vermiculite.</li> <li>Wipe up.</li> <li>Place in a suitable, labelled container for waste disposal.</li> </ul>                                                                                                                                                                                                                                                                                                                |
|--------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Major Spills | Moderate hazard.  Clear area of personnel and move upwind.  Alert Fire Brigade and tell them location and nature of hazard.  Wear breathing apparatus plus protective gloves.  Prevent, by any means available, spillage from entering drains or water course.  No smoking, naked lights or ignition sources.  Increase ventilation.  Stop leak if safe to do so.  Contain spill with sand, earth or vermiculite.  Collect recoverable product into labelled containers for recycling.  Absorb remaining product with sand, earth or vermiculite.  Collect solid residues and seal in labelled drums for disposal.  Wash area and prevent runoff into drains.  If contamination of drains or waterways occurs, advise emergency services. |

#### 6.4. Reference to other sections

Personal Protective Equipment advice is contained in Section 8 of the SDS.

# **SECTION 7 HANDLING AND STORAGE**

#### 7.1. Precautions for safe handling

| Safe handling                 | <ul> <li>Avoid all personal contact, including inhalation.</li> <li>Wear protective clothing when risk of exposure occurs.</li> <li>Use in a well-ventilated area.</li> <li>Prevent concentration in hollows and sumps.</li> <li>DO NOT enter confined spaces until atmosphere has been checked.</li> <li>Avoid smoking, naked lights or ignition sources.</li> <li>Avoid contact with incompatible materials.</li> <li>When handling, DO NOT eat, drink or smoke.</li> <li>Keep containers securely sealed when not in use.</li> <li>Avoid physical damage to containers.</li> <li>Always wash hands with soap and water after handling.</li> <li>Work clothes should be laundered separately.</li> <li>Use good occupational work practice.</li> <li>Observe manufacturer's storage and handling recommendations contained within this SDS.</li> <li>Atmosphere should be regularly checked against established exposure standards to ensure safe working conditions.</li> </ul> |
|-------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Fire and explosion protection | See section 5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Other information             | Store between 5 and 30 deg C.  Do not store in direct sunlight.  Store in a dry and well ventilated-area, away from heat and sunlight.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |

#### 7.2. Conditions for safe storage, including any incompatibilities

| 12. Conditions for said storage, moraling any most partitions |                                                                                                                                                          |  |  |
|---------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|
| Suitable container                                            | <ul> <li>DO NOT repack. Use containers supplied by manufacturer only.</li> <li>Check that containers are clearly labelled and free from leaks</li> </ul> |  |  |
| Storage incompatibility                                       | ► Avoid strong bases.                                                                                                                                    |  |  |

#### 7.3. Specific end use(s)

See section 1.2

# **SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION**

# 8.1. Control parameters

DERIVED NO EFFECT LEVEL (DNEL)

Not Available

PREDICTED NO EFFECT LEVEL (PNEC)

Not Available

OCCUPATIONAL EXPOSURE LIMITS (OEL)

# INGREDIENT DATA

| Source        | Ingredient    | Material name | TWA           | STEL          | Peak          | Notes         |
|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Not Available |

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| Ingredient               | Material name                                     |     | TEEL-1        | TEEL-2   | TEEL-3    |
|--------------------------|---------------------------------------------------|-----|---------------|----------|-----------|
| acrylic acid homopolymer | Acrylic acid polymers; (Acrylic polymer or resin) |     | 7.5 mg/m3     | 83 mg/m3 | 500 mg/m3 |
| tartaric acid            | Tartaric acid                                     |     | 1.6 mg/m3     | 17 mg/m3 | 100 mg/m3 |
| Ingredient               | Original IDLH                                     | Por | vised IDLH    |          |           |
| ingredient               | Oliginariben                                      | ne  | VISEU IDEN    |          |           |
| acrylic acid homopolymer | Not Available                                     | Not | Not Available |          |           |
| tartaric acid            | Not Available                                     | Not | Not Available |          |           |

#### MATERIAL DATA

#### 8.2. Exposure controls

Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard. Well-designed engineering controls can be highly effective in protecting workers and will typically be independent of worker interactions to provide this high level of protection. The basic types of engineering controls are:

Process controls which involve changing the way a job activity or process is done to reduce the risk.

Enclosure and/or isolation of emission source which keeps a selected hazard "physically" away from the worker and ventilation that strategically "adds" and "removes" air in the work environment. Ventilation can remove or dilute an air contaminant if designed properly. The design of a ventilation system must match the particular process and chemical or contaminant in use.

Employers may need to use multiple types of controls to prevent employee overexposure.

General exhaust is adequate under normal operating conditions. Local exhaust ventilation may be required in special circumstances. If risk of overexposure exists, wear approved respirator. Supplied-air type respirator may be required in special circumstances. Correct fit is essential to ensure adequate protection. Provide adequate ventilation in warehouses and enclosed storage areas. Air contaminants generated in the workplace possess varying "escape" velocities which, in turn, determine the "capture velocities" of fresh circulating air required to effectively remove the contaminant.

# 8.2.1. Appropriate engineering controls

| Type of Contaminant:                                                                                                                                                                                                | Air Speed:                   |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------|
| solvent, vapours, degreasing etc., evaporating from tank (in still air).                                                                                                                                            | 0.25-0.5 m/s (50-100 f/min)  |
| aerosols, fumes from pouring operations, intermittent container filling, low speed conveyer transfers, welding, spray drift, plating acid fumes, pickling (released at low velocity into zone of active generation) | 0.5-1 m/s (100-200 f/min.)   |
| direct spray, spray painting in shallow booths, drum filling, conveyer loading, crusher dusts, gas discharge (active generation into zone of rapid air motion)                                                      | 1-2.5 m/s (200-500 f/min.)   |
| grinding, abrasive blasting, tumbling, high speed wheel generated dusts (released at high initial velocity into zone of very high rapid air motion)                                                                 | 2.5-10 m/s (500-2000 f/min.) |

Within each range the appropriate value depends on:

| Lower end of the range                                     | Upper end of the range           |
|------------------------------------------------------------|----------------------------------|
| 1: Room air currents minimal or favourable to capture      | 1: Disturbing room air currents  |
| 2: Contaminants of low toxicity or of nuisance value only. | 2: Contaminants of high toxicity |
| 3: Intermittent, low production.                           | 3: High production, heavy use    |
| 4: Large hood or large air mass in motion                  | 4: Small hood-local control only |

Simple theory shows that air velocity falls rapidly with distance away from the opening of a simple extraction pipe. Velocity generally decreases with the square of distance from the extraction point (in simple cases). Therefore the air speed at the extraction point should be adjusted, accordingly, after reference to distance from the contaminating source. The air velocity at the extraction fan, for example, should be a minimum of 1-2 m/s (200-400 f/min) for extraction of solvents generated in a tank 2 meters distant from the extraction point. Other mechanical considerations, producing performance deficits within the extraction apparatus, make it essential that theoretical air velocities are multiplied by factors of 10 or more when extraction systems are installed or used.

#### 8.2.2. Personal protection









- ► Safety glasses with side shields.
- Chemical goggles

#### Eye and face protection

Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lenses or restrictions on use, should be created for each workplace or task. This should include a review of lens absorption and adsorption for the class of chemicals in use and an account of injury experience. Medical and first-aid personnel should be trained in their removal and suitable equipment should be readily available. In the event of chemical exposure, begin eye irrigation immediately and remove contact lens as soon as practicable. Lens should be removed at the first signs of eye redness or irritation - lens should be removed in a clean environment only after workers have washed hands thoroughly. [CDC NIOSH Current Intelligence Bulletin 59], [AS/NZS 1336 or national equivalent]

# Skin protection

See Hand protection below

• Rubber Gloves

#### Body protection

Hands/feet protection

See Other protection below

Overalls.

#### Other protection

- P.V.C. apron.
- ▶ Barrier cream
- Skin cleansing cream.Eye wash unit.

#### Thermal hazards

Not Available

#### 8.2.3. Environmental exposure controls

See section 12

#### **SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES**

# Riva Silver Liquid

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# 9.1. Information on basic physical and chemical properties

| Appearance                                   | Colourless liquid with slightly characteristic odour, mixes with water. |                                         |                |
|----------------------------------------------|-------------------------------------------------------------------------|-----------------------------------------|----------------|
| Physical state                               | Liquid                                                                  | Relative density (Water = 1)            | Not Available  |
| Odour                                        | Not Available                                                           | Partition coefficient n-octanol / water | Not Available  |
| Odour threshold                              | Not Available                                                           | Auto-ignition temperature (°C)          | Not Available  |
| pH (as supplied)                             | <2                                                                      | Decomposition temperature               | Not Available  |
| Melting point / freezing point (°C)          | Not Available                                                           | Viscosity (cSt)                         | Not Available  |
| Initial boiling point and boiling range (°C) | Not Available                                                           | Molecular weight (g/mol)                | Not Applicable |
| Flash point (°C)                             | Not Available                                                           | Taste                                   | Not Available  |
| Evaporation rate                             | Not Available                                                           | Explosive properties                    | Not Available  |
| Flammability                                 | Not Available                                                           | Oxidising properties                    | Not Available  |
| Upper Explosive Limit (%)                    | Not Available                                                           | Surface Tension (dyn/cm or mN/m)        | Not Available  |
| Lower Explosive Limit (%)                    | Not Available                                                           | Volatile Component (%vol)               | Not Available  |
| Vapour pressure (kPa)                        | Not Available                                                           | Gas group                               | Not Available  |
| Solubility in water (g/L)                    | Miscible                                                                | pH as a solution (1%)                   | Not Available  |
| Vapour density (Air = 1)                     | Not Available                                                           | VOC g/L                                 | Not Available  |

# 9.2. Other information

Not Available

# SECTION 10 STABILITY AND REACTIVITY

| 10.1.Reactivity                             | See section 7.2                                                                                                                                                  |
|---------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 10.2.Chemical stability                     | <ul> <li>Unstable in the presence of incompatible materials.</li> <li>Product is considered stable.</li> <li>Hazardous polymerisation will not occur.</li> </ul> |
| 10.3. Possibility of<br>hazardous reactions | See section 7.2                                                                                                                                                  |
| 10.4. Conditions to avoid                   | See section 7.2                                                                                                                                                  |
| 10.5. Incompatible materials                | See section 7.2                                                                                                                                                  |
| 10.6. Hazardous decomposition products      | See section 5.3                                                                                                                                                  |

# **SECTION 11 TOXICOLOGICAL INFORMATION**

# 11.1. Information on toxicological effects

| Inhaled            | Evidence shows, or practical experience predicts, that the material produces irritation of the respiratory system, in a substantial number of individuals, following inhalation. In contrast to most organs, the lung is able to respond to a chemical insult by first removing or neutralising the irritant and then repairing the damage. The repair process, which initially evolved to protect mammalian lungs from foreign matter and antigens, may however, produce further lung damage resulting in the impairment of gas exchange, the primary function of the lungs. Respiratory tract irritation often results in an inflammatory response involving the recruitment and activation of many cell types, mainly derived from the vascular system. |                                                                                                                                         |  |
|--------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|--|
| Ingestion          | Accidental ingestion of the material may be damaging                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | to the health of the individual.                                                                                                        |  |
| Skin Contact       | direct contact, and/or produces significant inflammation twenty-four hours or more after the end of the exposure form of contact dermatitis (nonallergic). The dermatitis blistering (vesiculation), scaling and thickening of the exposure (spongiosis) and intracellular oedema of the epidermi. The material may accentuate any pre-existing dermatif Open cuts, abraded or irritated skin should not be exposure.                                                                                                                                                                                                                                                                                                                                      | is condition used to this material abrasions, puncture wounds or lesions, may produce systemic injury with harmful effects. Examine the |  |
| Eye                | Evidence exists, or practical experience predicts, that the material may cause eye irritation in a substantial number of individuals and/or may produce significant ocular lesions which are present twenty-four hours or more after instillation into the eye(s) of experimental animals.  Repeated or prolonged eye contact may cause inflammation characterised by temporary redness (similar to windburn) of the conjunctiva (conjunctivitis); temporary impairment of vision and/or other transient eye damage/ulceration may occur.                                                                                                                                                                                                                  |                                                                                                                                         |  |
| Chronic            | Long-term exposure to respiratory irritants may result in disease of the airways involving difficult breathing and related systemic problems.  Limited evidence suggests that repeated or long-term occupational exposure may produce cumulative health effects involving organs or biochemical systems.                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                         |  |
|                    | TOVICITY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | IRRITATION                                                                                                                              |  |
| Pivo Silvor Liquid | TOXICITY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                         |  |
| Riva Silver Liquid |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | IIIIIIAIIQI                                                                                                                             |  |

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| acrylic acid homopolymer | тохісіту                                                                                                                                            | IRRITATION                                                                  |
|--------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
|                          | Oral (rat) LD50: 2500 mg/kgd <sup>[2]</sup>                                                                                                         | Nil reported                                                                |
|                          | TOXICITY                                                                                                                                            | IRRITATION                                                                  |
| tartaric acid            | dermal (rat) LD50: >2000 mg/kg <sup>[1]</sup>                                                                                                       | Nil reported                                                                |
|                          | Oral (rat) LD50: ca.920 mg/kg <sup>[1]</sup>                                                                                                        |                                                                             |
| Legend:                  | Value obtained from Europe ECHA Registered Substances - Acute toxicity 2     extracted from RTECS - Register of Toxic Effect of chemical Substances | 2.* Value obtained from manufacturer's SDS. Unless otherwise specified data |

#### **ACRYLIC ACID HOMOPOLYMER**

Asthma-like symptoms may continue for months or even years after exposure to the material ceases. This may be due to a non-allergenic condition known as reactive airways dysfunction syndrome (RADS) which can occur following exposure to high levels of highly irritating compound. Key criteria for the diagnosis of RADS include the absence of preceding respiratory disease, in a non-atopic individual, with abrupt onset of persistent asthma-like symptoms within minutes to hours of a documented exposure to the irritant. A reversible airflow pattern, on spirometry, with the presence of moderate to severe bronchial hyperreactivity on methacholine challenge testing and the lack of minimal lymphocytic inflammation, without eosinophilia, have also been included in the criteria for diagnosis of RADS. RADS (or asthma) following an irritating inhalation is an infrequent disorder with rates related to the concentration of and duration of exposure to the irritating substance. Industrial bronchitis, on the other hand, is a disorder that occurs as result of exposure due to high concentrations of irritating substance (often particulate in nature) and is completely reversible after exposure ceases. The disorder is characterised by dyspnea, cough and mucus production. The substance is classified by IARC as Group 3:

NOT classifiable as to its carcinogenicity to humans.

Evidence of carcinogenicity may be inadequate or limited in animal testing.

### TARTARIC ACID

Asthma-like symptoms may continue for months or even years after exposure to the material ceases. This may be due to a non-allergenic condition known as reactive airways dysfunction syndrome (RADS) which can occur following exposure to high levels of highly irritating compound. Key criteria for the diagnosis of RADS include the absence of preceding respiratory disease, in a non-atopic individual, with abrupt onset of persistent asthma-like symptoms within minutes to hours of a documented exposure to the irritant. A reversible airflow pattern, on spirometry, with the presence of moderate to severe bronchial hyperreactivity on methacholine challenge testing and the lack of minimal lymphocytic inflammation, without eosinophilia, have also been included in the criteria for diagnosis of RADS. RADS (or asthma) following an irritating inhalation is an infrequent disorder with rates related to the concentration of and duration of exposure to the irritating substance. Industrial bronchitis, on the other hand, is a disorder that occurs as result of exposure due to high concentrations of irritating substance (often particulate in nature) and is completely reversible after exposure ceases. The disorder is characterised by dyspnea, cough and mucus production. Convulsions, haemorrhage recorded.

| Acute Toxicity                    | 0        | Carcinogenicity          | 0 |
|-----------------------------------|----------|--------------------------|---|
| Skin Irritation/Corrosion         | <b>✓</b> | Reproductivity           | 0 |
| Serious Eye<br>Damage/Irritation  | <b>✓</b> | STOT - Single Exposure   | 0 |
| Respiratory or Skin sensitisation | 0        | STOT - Repeated Exposure | 0 |
| Mutagenicity                      | 0        | Aspiration Hazard        | 0 |

Legend:

X - Data available but does not fill the criteria for classification

Data required to make classification available

N - Data Not Available to make classification

# **SECTION 12 ECOLOGICAL INFORMATION**

#### 12.1. Toxicity

| Ingredient               | Endpoint                                                                                                                                                                                                                                                                                              | Test Duration (hr) | Species                       | Value         | Source |
|--------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|-------------------------------|---------------|--------|
| acrylic acid homopolymer | EC50                                                                                                                                                                                                                                                                                                  | 384                | Crustacea                     | 389.869mg/L   | 3      |
| acrylic acid homopolymer | EC50                                                                                                                                                                                                                                                                                                  | 96                 | Algae or other aquatic plants | 8596.446mg/L  | 3      |
| acrylic acid homopolymer | LC50                                                                                                                                                                                                                                                                                                  | 96                 | Fish                          | 1684.686mg/L  | 3      |
| tartaric acid            | EC50                                                                                                                                                                                                                                                                                                  | 96                 | Algae or other aquatic plants | 434.65983mg/L | 3      |
| tartaric acid            | LC50                                                                                                                                                                                                                                                                                                  | 96                 | Fish                          | >100mg/L      | 2      |
| tartaric acid            | EC50                                                                                                                                                                                                                                                                                                  | 48                 | Crustacea                     | 93.313mg/L    | 2      |
| tartaric acid            | EC50                                                                                                                                                                                                                                                                                                  | 72                 | Algae or other aquatic plants | 51.4043mg/L   | 2      |
| tartaric acid            | NOEC                                                                                                                                                                                                                                                                                                  | 72                 | Algae or other aquatic plants | 3.125mg/L     | 2      |
| Legend:                  | Extracted from 1. IUCLID Toxicity Data 2. Europe ECHA Registered Substances - Ecotoxicological Information - Aquatic Toxicity 3. EPIWIN Suite V3.12 - Aquatic Toxicity Data (Estimated) 4. US EPA, Ecotox database - Aquatic Toxicity Data 5. ECETOC Aquatic Hazard Assessment Data 6. NITE (Japan) - |                    |                               |               |        |

DO NOT discharge into sewer or waterways.

#### 12.2. Persistence and degradability

| Ingredient               | Persistence: Water/Soil | Persistence: Air |
|--------------------------|-------------------------|------------------|
| acrylic acid homopolymer | LOW                     | LOW              |
| tartaric acid            | LOW                     | LOW              |

Bioconcentration Data 7. METI (Japan) - Bioconcentration Data 8. Vendor Data

## 12.3. Bioaccumulative potential

| Ingredient |
|------------|
|------------|

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| acrylic acid homopolymer | LOW (LogKOW = 0.4415)  |
|--------------------------|------------------------|
| tartaric acid            | LOW (LogKOW = -1.0017) |

# 12.4. Mobility in soil

| Ingredient               | Mobility           |
|--------------------------|--------------------|
| acrylic acid homopolymer | HIGH (KOC = 1.201) |
| tartaric acid            | HIGH (KOC = 1)     |

#### 12.5. Results of PBT and vPvB assessment

|                         | P             | В             | Т             |
|-------------------------|---------------|---------------|---------------|
| Relevant available data | Not Available | Not Available | Not Available |
| PBT Criteria fulfilled? | Not Available | Not Available | Not Available |

#### 12.6. Other adverse effects

No data available

# **SECTION 13 DISPOSAL CONSIDERATIONS**

# 13.1. Waste treatment methods

| Product / Packaging<br>disposal | <ul> <li>DO NOT allow wash water from cleaning or process equipment to enter drains.</li> <li>It may be necessary to collect all wash water for treatment before disposal.</li> <li>In all cases disposal to sewer may be subject to local laws and regulations and these should be considered first.</li> <li>Where in doubt contact the responsible authority.</li> <li>Consult State Land Waste Management Authority for disposal.</li> <li>Bury residue in an authorised landfill.</li> </ul> |
|---------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Waste treatment options         | Not Available                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Sewage disposal options         | Not Available                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |

# **SECTION 14 TRANSPORT INFORMATION**

# **Labels Required**

| Marine Pollutant                                                     | NO             |  |
|----------------------------------------------------------------------|----------------|--|
| HAZCHEM                                                              | Not Applicable |  |
| Land transport (ADR): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS |                |  |
| 14.1.UN number                                                       | Not Applicable |  |
| 14.2.Packing group                                                   | Not Applicable |  |
| 14.3.UN proper shipping                                              | Not Applicable |  |

| 14.4.Environmental hazard | Not Applicable |
|---------------------------|----------------|
|                           |                |

| 14.5. Transport hazard | Class   | Not Applicable |
|------------------------|---------|----------------|
| class(es)              | Subrisk | Not Applicable |

|                                    | riazard identification (Normer) | 140t Applicable |
|------------------------------------|---------------------------------|-----------------|
|                                    | Classification code             | Not Applicable  |
| 14.6. Special precautions for user | Hazard Label                    | Not Applicable  |
|                                    | Special provisions              | Not Applicable  |
|                                    | Limited quantity                | Not Applicable  |

# Air transport (ICAO-IATA / DGR): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

|                                    | _                                                                                           |                                                |  |
|------------------------------------|---------------------------------------------------------------------------------------------|------------------------------------------------|--|
| 14.1. UN number                    | Not Applicable                                                                              |                                                |  |
| 14.2. Packing group                | Not Applicable                                                                              |                                                |  |
| 14.3. UN proper shipping name      | Not Applicable                                                                              |                                                |  |
| 14.4. Environmental hazard         | Not Applicable                                                                              |                                                |  |
| 14.5. Transport hazard class(es)   | ICAO/IATA Class Not Applicable  ICAO / IATA Subrisk Not Applicable  ERG Code Not Applicable |                                                |  |
| 14.6. Special precautions for user | Special provisions Cargo Only Packing Instructions Cargo Only Maximum Qty / Pack            | Not Applicable  Not Applicable  Not Applicable |  |

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Passenger and Cargo Packing Instructions Not Applicable Passenger and Cargo Maximum Qty / Pack Not Applicable Passenger and Cargo Limited Quantity Packing Instructions Not Applicable Passenger and Cargo Limited Maximum Qty / Pack Not Applicable

#### Sea transport (IMDG-Code / GGVSee): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

| 14.1. UN number                    | Not Applicable                                                                                |
|------------------------------------|-----------------------------------------------------------------------------------------------|
| 14.2. Packing group                | Not Applicable                                                                                |
| 14.3. UN proper shipping name      | Not Applicable                                                                                |
| 14.4. Environmental hazard         | Not Applicable                                                                                |
| 14.5. Transport hazard class(es)   | IMDG Class Not Applicable  IMDG Subrisk Not Applicable                                        |
| 14.6. Special precautions for user | EMS Number Not Applicable Special provisions Not Applicable Limited Quantities Not Applicable |

#### Inland waterways transport (ADN): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

| plicable                       |
|--------------------------------|
|                                |
| plicable                       |
| plicable                       |
| Applicable Not Applicable      |
| sification code Not Applicable |
| ial provisions Not Applicable  |
| ed quantity Not Applicable     |
| pment required Not Applicable  |
| cones number Not Applicable    |
| e e e                          |

# Transport in bulk according to Annex II of MARPOL and the IBC code

Not Applicable

# **SECTION 15 REGULATORY INFORMATION**

# 15.1. Safety, health and environmental regulations / legislation specific for the substance or mixture

#### ACRYLIC ACID HOMOPOLYMER(9003-01-4) IS FOUND ON THE FOLLOWING REGULATORY LISTS

EU REACH Regulation (EC) No 1907/2006 - Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles European Customs Inventory of Chemical Substances ECICS (English)

International Agency for Research on Cancer (IARC) - Agents Classified by the IARC

Monographs

TARTARIC ACID(87-69-4) IS FOUND ON THE FOLLOWING REGULATORY LISTS

European Customs Inventory of Chemical Substances ECICS (English) European List of Notified Chemical Substances (ELINCS)

European Union - European Inventory of Existing Commercial Chemical Substances (EINECS)

(English)

This safety data sheet is in compliance with the following EU legislation and its adaptations - as far as applicable -: 67/548/EEC, 1999/45/EC, 98/24/EC, 94/33/EC, 91/689/EEC, 1999/13/EC, Commission Regulation (EU) 2015/830, Regulation (EC) No 1272/2008 and their amendments as well as the following British legislation: - The Control of Substances Hazardous to Health Regulations (COSHH) 2002 - COSHH Essentials - The Management of Health and Safety at Work Regulations 1999

#### 15.2. Chemical safety assessment

For further information please look at the Chemical Safety Assessment and Exposure Scenarios prepared by your Supply Chain if available.

# **ECHA SUMMARY**

| Ingredient                    | CAS number Index No               |               | ECHA Dossier               |                           |                                                                        |
|-------------------------------|-----------------------------------|---------------|----------------------------|---------------------------|------------------------------------------------------------------------|
| acrylic acid homopolymer      | 9003-01-4                         | Not Available |                            | Not Available             | •                                                                      |
| Harmonisation (C&L Inventory) | Hazard Class and Category Code(s) |               | Pictograms S<br>Word Code( | Hazard Statement (Lode(s) |                                                                        |
| 1                             | Not Classified                    |               | Wng, GHS08,<br>GHS05, GHS0 | •                         | H319, H335, H340, H350, H314,<br>H332, H317, H290, H226, H302,<br>H312 |

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| 2 | Not Classified, Skin Irrit. 2, Eye Irrit. 2, STOT SE 3, Muta. 1B, Carc. 1A, Skin Corr. 1B, Aquatic Chronic 3, Skin Corr. 1A, Acute Tox. 4, Met. Corr. 1, Flam. Liq. 3, Aquatic Acute 1 | Wng, GHS08, Dgr,<br>GHS05, GHS09, GHS02 | H319, H335, H340, H350, H314,<br>H332, H317, H290, H226, H302,<br>H312 |
|---|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------|------------------------------------------------------------------------|
| 2 | Skin Corr. 1B, Eye Dam. 1                                                                                                                                                              | GHS05, Dgr                              | H314                                                                   |

Harmonisation Code 1 = The most prevalent classification. Harmonisation Code 2 = The most severe classification.

| Ingredient    | CAS number | Index No      | ECHA Dossier                                                        |
|---------------|------------|---------------|---------------------------------------------------------------------|
| tartaric acid | 87-69-4    | Not Available | 01-2119537204-47-XXXX, 01-2119851173-43-XXXX, 01-2119851174-41-XXXX |

| Harmonisation (C&L Inventory) | Hazard Class and Category Code(s)                                                                                                | Pictograms Signal Word Code(s) | Hazard Statement Code(s)        |
|-------------------------------|----------------------------------------------------------------------------------------------------------------------------------|--------------------------------|---------------------------------|
| 1                             | Acute Tox. 4, Skin Irrit. 2, Skin Sens. 1, Eye Irrit. 2, STOT SE 3                                                               | GHS07, Wng                     | H302, H315, H317, H319,<br>H335 |
| 2                             | Eye Dam. 1, Skin Irrit. 2, Acute Tox. 4, Skin Sens. 1, Eye Irrit. 2, STOT SE 3, Not Classified, Aquatic Chronic 3, Eye Irrit. 2A | GHS05, Dgr, Wng, GHS06         | H318, H315, H302, H317,<br>H335 |

Harmonisation Code 1 = The most prevalent classification. Harmonisation Code 2 = The most severe classification.

| National Inventory               | Status                                                                                                                                                                                |
|----------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Australia - AICS                 | Υ                                                                                                                                                                                     |
| Canada - DSL                     | Υ                                                                                                                                                                                     |
| Canada - NDSL                    | N (acrylic acid homopolymer; tartaric acid)                                                                                                                                           |
| China - IECSC                    | Υ                                                                                                                                                                                     |
| Europe - EINEC / ELINCS /<br>NLP | N (acrylic acid homopolymer)                                                                                                                                                          |
| Japan - ENCS                     | Υ                                                                                                                                                                                     |
| Korea - KECI                     | Υ                                                                                                                                                                                     |
| New Zealand - NZIoC              | Υ                                                                                                                                                                                     |
| Philippines - PICCS              | Υ                                                                                                                                                                                     |
| USA - TSCA                       | Υ                                                                                                                                                                                     |
| Legend:                          | Y = All ingredients are on the inventory N = Not determined or one or more ingredients are not on the inventory and are not exempt from listing(see specific ingredients in brackets) |

# **SECTION 16 OTHER INFORMATION**

# Full text Risk and Hazard codes

| H226   | Flammable liquid and vapour.                                                                |
|--------|---------------------------------------------------------------------------------------------|
| H290   | May be corrosive to metals.                                                                 |
| H302   | Harmful if swallowed.                                                                       |
| H312   | Harmful in contact with skin.                                                               |
| H314   | Causes severe skin burns and eye damage.                                                    |
| H317   | May cause an allergic skin reaction.                                                        |
| H318   | Causes serious eye damage.                                                                  |
| H332   | Harmful if inhaled.                                                                         |
| H340   | May cause genetic defects.                                                                  |
| H350   | May cause cancer.                                                                           |
| H411   | Toxic to aquatic life with long lasting effects.                                            |
| B-1/-0 |                                                                                             |
| R51/53 | Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. |

# Other information

# DSD / DPD label elements



Relevant risk statements are found in section 2.1

| Indication(s) of danger | Xi                                                                                                         |
|-------------------------|------------------------------------------------------------------------------------------------------------|
| SAFETY ADVICE           |                                                                                                            |
| S02                     | Keep out of reach of children.                                                                             |
| S23                     | Do not breathe gas/fumes/vapour/spray.                                                                     |
| S26                     | In case of contact with eyes, rinse with plenty of water and contact Doctor or Poisons Information Centre. |
| S35                     | This material and its container must be disposed of in a safe way.                                         |
| S37                     | Wear suitable gloves.                                                                                      |

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| S39 | Wear eye/face protection.                                                                  |
|-----|--------------------------------------------------------------------------------------------|
| S40 | To clean the floor and all objects contaminated by this material, use water.               |
| S46 | If swallowed, seek medical advice immediately and show this container or label.            |
| S56 | Dispose of this material and its container at hazardous or special waste collection point. |
| S64 | If swallowed, rinse mouth with water (only if the person is conscious).                    |

Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by SDI Limited using available literature references.

The SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings. Risks may be determined by reference to Exposures Scenarios. Scale of use, frequency of use and current or available engineering controls must be considered.

For detailed advice on Personal Protective Equipment, refer to the following EU CEN Standards:

EN 166 Personal eye-protection

EN 340 Protective clothing

EN 374 Protective gloves against chemicals and micro-organisms

EN 13832 Footwear protecting against chemicals

EN 133 Respiratory protective devices

#### **Definitions and abbreviations**

PC-TWA: Permissible Concentration-Time Weighted Average PC-STEL: Permissible Concentration-Short Term Exposure Limit

IARC: International Agency for Research on Cancer

ACGIH: American Conference of Governmental Industrial Hygienists

STEL: Short Term Exposure Limit

TEEL: Temporary Emergency Exposure Limit。

IDLH: Immediately Dangerous to Life or Health Concentrations

OSF: Odour Safety Factor

NOAEL :No Observed Adverse Effect Level LOAEL: Lowest Observed Adverse Effect Level

TLV: Threshold Limit Value LOD: Limit Of Detection OTV: Odour Threshold Value BCF: BioConcentration Factors BEI: Biological Exposure Index

The information contained in the Safety Data Sheet is based on data considered to be accurate, however, no warranty is expressed or implied regarding the accuracy of the data or the results to be obtained from the use thereof.

#### Other information:

Prepared by: SDI Limited

3-15 Brunsdon Street, Bayswater Victoria, 3153, Australia

Phone Number: +61 3 8727 7111

Date of preparation/revision: 23rd September 2015 Department issuing SDS: Research and Development

Contact: Technical Director



# Riva Silver (powder)

**SDI Limited** 

Version No: 4.1.1.1 Safety Data Sheet (Conforms to Regulations (EC) No 2015/830) Issue Date: 18/03/2016 Print Date: 31/03/2016 Initial Date: Not Available L.REACH.GBR.EN

# SECTION 1 IDENTIFICATION OF THE SUBSTANCE / MIXTURE AND OF THE COMPANY / UNDERTAKING

#### 1.1.Product Identifier

| Product name                  | Riva Silver (powder) |
|-------------------------------|----------------------|
| Synonyms                      | Not Available        |
| Other means of identification | Not Available        |

#### 1.2. Relevant identified uses of the substance or mixture and uses advised against

| Relevant identified uses | For the making of dental cement by dental professionals. |
|--------------------------|----------------------------------------------------------|
| Uses advised against     | Not Applicable                                           |

#### 1.3. Details of the supplier of the safety data sheet

| Registered company name | SDI Limited                                          | SDI Brazil Industria E Comercio Ltda                                      | SDI Germany GmbH                        |  |
|-------------------------|------------------------------------------------------|---------------------------------------------------------------------------|-----------------------------------------|--|
| Address                 | 3-15 Brunsdon Street VIC Bayswater 3153<br>Australia | Rua Dr. Virgilio de Carvalho Pinto, 612 São<br>Paulo CEP 05415-020 Brazil | Hansestrasse 85 Cologne D-51149 Germany |  |
| Telephone               | +61 3 8727 7111 (Business Hours)                     | +55 11 3092 7100                                                          | +49 0 2203 9255 0                       |  |
| Fax                     | +61 3 8727 7222                                      | +55 11 3092 7101                                                          | +49 0 2203 9255 200                     |  |
| Website                 | www.sdi.com.au                                       | www.sdi.com.au                                                            | www.sdi.com.au                          |  |
| Email                   | info@sdi.com.au                                      | brasil@sdi.com.au                                                         | germany@sdi.com.au                      |  |
|                         | 1                                                    |                                                                           |                                         |  |
| Registered company name | SDI (North America) Inc.                             |                                                                           |                                         |  |
| Address                 | 1279 Hamilton Parkway IL Itasca 60143 United States  |                                                                           |                                         |  |
| Telephone               | +1 630 361 9200 (Business hours)                     |                                                                           |                                         |  |
| Fax                     | Not Available                                        |                                                                           |                                         |  |
| Website                 | Not Available                                        |                                                                           |                                         |  |
| Email                   | USA.Canada@sdi.com.au                                |                                                                           |                                         |  |

#### 1.4. Emergency telephone number

| Association / Organisation        | SDI Limited           | Not Available | Not Available |  |  |
|-----------------------------------|-----------------------|---------------|---------------|--|--|
| Emergency telephone numbers       | +61 3 8727 7111       | Not Available | Not Available |  |  |
| Other emergency telephone numbers | ray.cahill@sdi.com.au | Not Available | Not Available |  |  |
|                                   |                       |               |               |  |  |
| Association / Organisation        | Not Available         | Not Available |               |  |  |
| Emergency telephone numbers       | +61 3 8727 7111       |               |               |  |  |
| Other emergency telephone numbers | Not Available         |               |               |  |  |

# **SECTION 2 HAZARDS IDENTIFICATION**

#### 2.1. Classification of the substance or mixture

Not considered a dangerous mixture according to directive 1999/45/EC, Reg. (EC) No 1272/2008 (if applicable) and their amendments. Not classified as Dangerous Goods for transport purposes.

| DSD classification                                                   | In case of mixtures, classification has been prepared by following DPD (Directive 1999/45/EC) and CLP Regulation (EC) No 1272/2008 regulations |
|----------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|
| DPD classification                                                   | Not Applicable                                                                                                                                 |
| Classification according to<br>regulation (EC) No<br>1272/2008 [CLP] | Not Applicable                                                                                                                                 |

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# Riva Silver (powder)

2.2. Label elements

CLP label elements Not Applicable

SIGNAL WORD NOT APPLICABLE

#### Hazard statement(s)

Not Applicable

#### Supplementary statement(s)

Not Applicable

#### Precautionary statement(s) Prevention

Not Applicable

#### Precautionary statement(s) Response

Not Applicable

# Precautionary statement(s) Storage

Not Applicable

#### Precautionary statement(s) Disposal

Not Applicable

#### 2.3. Other hazards

Ingestion may produce health damage\*.

May produce discomfort of the eyes, respiratory tract and  $\mathsf{skin}^\star.$ 

REACh - Art.57-59: The mixture does not contain Substances of Very High Concern (SVHC) at the SDS print date.

#### **SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS**

#### 3.1.Substances

See 'Composition on ingredients' in Section 3.2

#### 3.2.Mixtures

| 1.CAS No<br>2.EC No<br>3.Index No<br>4.REACH No                                             | %[weight] | Name                                                                                                                                                                                         | Classification according to directive 67/548/EEC [DSD] | Classification according to regulation (EC) No 1272/2008 [CLP] |
|---------------------------------------------------------------------------------------------|-----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|----------------------------------------------------------------|
| Not Available     Not Applicable     Not Applicable     Anot Applicable     Anot Applicable | 40-60     | glass powder                                                                                                                                                                                 | Not Applicable                                         | Not Applicable                                                 |
| 1.Not Available<br>2.Not Available<br>3.Not Available<br>4.Not Available                    | <10       | polyacrylic<br>acid                                                                                                                                                                          | Not Applicable                                         | Not Applicable                                                 |
| Not Available     Not Available     Not Available     Not Available     Anot Available      | 30-50     | alloy powder                                                                                                                                                                                 | Not Applicable                                         | Not Applicable                                                 |
| Legend:                                                                                     |           | 1. Classification by vendor; 2. Classification drawn from EC Directive 67/548/EEC - Annex I; 3. Classification drawn from EC Directive 1272/2008 - Annex VI 4. Classification drawn from C&L |                                                        |                                                                |

# **SECTION 4 FIRST AID MEASURES**

#### 4.1. Description of first aid measures

If skin or hair contact occurs:

- Flush skin and hair with running water (and soap if available).
- ▶ Seek medical attention in event of irritation.

If this product comes in contact with the eyes:

- Immediately hold eyelids apart and flush the eye continuously with running water.
- ▶ Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids.
- Continue flushing until advised to stop by the Poisons Information Centre or a doctor, or for at least 15 minutes.
- General

  Transport to hospital or doctor without delay.
  - ▶ Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.

# Seek medical attention.

- ▶ If fumes, aerosols or combustion products are inhaled remove from contaminated area.
- ► Other measures are usually unnecessary.
- ► Immediately give a glass of water.
- First aid is not generally required. If in doubt, contact a Poisons Information Centre or a doctor.

#### Seek medical attention.

# Eye Contact

- If this product comes in contact with the eyes:

   Immediately hold eyelids apart and flush the eye continuously with running water.
- ▶ Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids.
- ► Continue flushing until advised to stop by the Poisons Information Centre or a doctor, or for at least 15 minutes.

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|              | <ul> <li>Transport to hospital or doctor without delay.</li> <li>Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.</li> <li>Seek medical attention.</li> </ul> |
|--------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Skin Contact | If skin or hair contact occurs:  ► Flush skin and hair with running water (and soap if available).  ► Seek medical attention in event of irritation.                                                       |
| Inhalation   | If fumes, aerosols or combustion products are inhaled remove from contaminated area. Other measures are usually unnecessary.                                                                               |
| Ingestion    | <ul> <li>Immediately give a glass of water.</li> <li>First aid is not generally required. If in doubt, contact a Poisons Information Centre or a doctor.</li> <li>Seek medical attention.</li> </ul>       |

#### 4.2 Most important symptoms and effects, both acute and delayed

See Section 11

# 4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

# **SECTION 5 FIREFIGHTING MEASURES**

# 5.1. Extinguishing media

Foam is generally ineffective.

#### 5.2. Special hazards arising from the substrate or mixture

| Fire Incompatibility         | None known.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 5.3. Advice for firefighters |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Fire Fighting                | <ul> <li>Alert Fire Brigade and tell them location and nature of hazard.</li> <li>Wear breathing apparatus plus protective gloves in the event of a fire.</li> <li>Prevent, by any means available, spillage from entering drains or water courses.</li> <li>Use fire fighting procedures suitable for surrounding area.</li> <li>DO NOT approach containers suspected to be hot.</li> <li>Cool fire exposed containers with water spray from a protected location.</li> <li>If safe to do so, remove containers from path of fire.</li> <li>Equipment should be thoroughly decontaminated after use.</li> </ul> |
| Fire/Explosion Hazard        | <ul> <li>Non combustible.</li> <li>Not considered a significant fire risk, however containers may burn.</li> <li>May emit poisonous fumes. May emit corrosive fumes. Decomposes on heating and produces; carbon dioxide (CO2) carbon monoxide (CO)</li> </ul>                                                                                                                                                                                                                                                                                                                                                    |

# **SECTION 6 ACCIDENTAL RELEASE MEASURES**

# 6.1. Personal precautions, protective equipment and emergency procedures

See section 8

# 6.2. Environmental precautions

See section 12

#### 6.3. Methods and material for containment and cleaning up

| Minor Spills | <ul> <li>Remove all ignition sources.</li> <li>Clean up all spills immediately.</li> <li>Avoid contact with skin and eyes.</li> <li>Control personal contact with the substance, by using protective equipment.</li> <li>Use dry clean up procedures and avoid generating dust.</li> <li>Place in a suitable, labelled container for waste disposal.</li> </ul>                                                                                                                                                                                                                                                                                                                                         |
|--------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Major Spills | Moderate hazard.  CAUTION: Advise personnel in area.  Alert Emergency Services and tell them location and nature of hazard.  Control personal contact by wearing protective clothing.  Prevent, by any means available, spillage from entering drains or water courses.  Recover product wherever possible.  IF DRY: Use dry clean up procedures and avoid generating dust. Collect residues and place in sealed plastic bags or other containers for disposal. IF WET: Vacuum/shovel up and place in labelled containers for disposal.  ALWAYS: Wash area down with large amounts of water and prevent runoff into drains.  If contamination of drains or waterways occurs, advise Emergency Services. |

# 6.4. Reference to other sections

Personal Protective Equipment advice is contained in Section 8 of the SDS.

# **SECTION 7 HANDLING AND STORAGE**

# 7.1. Precautions for safe handling

# Safe handling

- ▶ Avoid all personal contact, including inhalation.
- Wear protective clothing when risk of exposure occurs. Use in a well-ventilated area.
- ▶ Prevent concentration in hollows and sumps.

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- DO NOT enter confined spaces until atmosphere has been checked.
- DO NOT allow material to contact humans, exposed food or food utensils.
- Avoid contact with incompatible materials.
- When handling, DO NOT eat, drink or smoke
- Keep containers securely sealed when not in use.
- Avoid physical damage to containers
- Always wash hands with soap and water after handling.
- Work clothes should be laundered separately. Launder contaminated clothing before re-use.
- Use good occupational work practice.
- Observe manufacturer's storage and handling recommendations contained within this SDS.
- ► Atmosphere should be regularly checked against established exposure standards to ensure safe working conditions are maintained.

#### Fire and explosion protection

See section 5

Other information

Store between 5 and 30 deg C. Do not store in direct sunlight.

Store in a dry and well ventilated-area, away from heat and sunlight.

#### 7.2. Conditions for safe storage, including any incompatibilities

Suitable container

- ▶ DO NOT repack. Use containers supplied by manufacturer only.
- ▶ Check that containers are clearly labelled and free from leaks
- Storage incompatibility ▶ Avoid strong acids, acid chlorides, acid anhydrides and chloroformates.

#### 7.3. Specific end use(s)

See section 1.2

#### **SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION**

Material name

#### 8.1. Control parameters

DERIVED NO EFFECT LEVEL (DNEL)

Not Available

PREDICTED NO EFFECT LEVEL (PNEC)

Not Available

#### OCCUPATIONAL EXPOSURE LIMITS (OEL)

#### INGREDIENT DATA

| Source        | Ingredient    | Material name | TWA           | STEL          | Peak          | Notes         |
|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Not Available |

# EMERGENCY LIMITS

Ingredient

| -                    |               |               |               |               |  |  |
|----------------------|---------------|---------------|---------------|---------------|--|--|
| Riva Silver (powder) | Not Available | Not Available | Not Available | Not Available |  |  |
|                      |               |               |               |               |  |  |
| Ingredient           | Original IDLH | Original IDLH |               | Revised IDLH  |  |  |
| glass powder         | Not Available | Not Available |               | Not Available |  |  |
| polyacrylic acid     | Not Available | Not Available |               |               |  |  |
| allov powder         | Not Available | Not Available |               |               |  |  |

# MATERIAL DATA

#### 8.2. Exposure controls

Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard. Well-designed engineering controls can be highly effective in protecting workers and will typically be independent of worker interactions to provide this high level of protection.

TEEL-2

The basic types of engineering controls are: Process controls which involve changing the way a job activity or process is done to reduce the risk.

TEEL-1

Enclosure and/or isolation of emission source which keeps a selected hazard "physically" away from the worker and ventilation that strategically "adds" and "removes" air in the work environment. Ventilation can remove or dilute an air contaminant if designed properly. The design of a ventilation system must match the particular process and chemical or contaminant in use.

Employers may need to use multiple types of controls to prevent employee overexposure.

- Local exhaust ventilation is required where solids are handled as powders or crystals; even when particulates are relatively large, a certain proportion will be powdered by mutual friction.
- ▶ If in spite of local exhaust an adverse concentration of the substance in air could occur, respiratory protection should be considered.

Such protection might consist of:

- 8.2.1. Appropriate (a): particle dust respirators, if necessary, combined with an absorption cartridge; engineering controls
  - (b): filter respirators with absorption cartridge or canister of the right type;

(c): fresh-air hoods or masks.

Air contaminants generated in the workplace possess varying "escape" velocities which, in turn, determine the "capture velocities" of fresh circulating air required to effectively remove the contaminant.

| Type of Contaminant:                                                                                                                                           | Air Speed:                   |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------|
| direct spray, spray painting in shallow booths, drum filling, conveyer loading, crusher dusts, gas discharge (active generation into zone of rapid air motion) | 1-2.5 m/s (200-500 f/min.)   |
| grinding, abrasive blasting, tumbling, high speed wheel generated dusts (released at high initial velocity into zone of very high rapid air motion).           | 2.5-10 m/s (500-2000 f/min.) |

Within each range the appropriate value depends on:

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| Lower end of the range                                     | Upper end of the range           |  |
|------------------------------------------------------------|----------------------------------|--|
| 1: Room air currents minimal or favourable to capture      | 1: Disturbing room air currents  |  |
| 2: Contaminants of low toxicity or of nuisance value only. | 2: Contaminants of high toxicity |  |
| 3: Intermittent, low production.                           | 3: High production, heavy use    |  |
| 4: Large hood or large air mass in motion                  | 4: Small hood-local control only |  |

Simple theory shows that air velocity falls rapidly with distance away from the opening of a simple extraction pipe. Velocity generally decreases with the square of distance from the extraction point (in simple cases). Therefore the air speed at the extraction point should be adjusted, accordingly, after reference to distance from the contaminating source. The air velocity at the extraction fan, for example, should be a minimum of 4-10 m/s (800-2000 f/min) for extraction of crusher dusts generated 2 metres distant from the extraction point. Other mechanical considerations, producing performance deficits within the extraction apparatus, make it essential that theoretical air velocities are multiplied by factors of 10 or more when extraction systems are installed or used.

#### 8.2.2. Personal protection





Safety glasses with side shields





# Eye and face protection

Chemical goggles.

Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lenses or restrictions on use, should be created for each workplace or task. This should include a review of lens absorption and adsorption for the class of chemicals in use and an account of injury experience. Medical and first-aid personnel should be trained in their removal and suitable equipment should be readily available. In the event of chemical exposure, begin eye irrigation immediately and remove contact lens as soon as practicable. Lens should be removed at the first signs of eye redness or irritation - lens should be removed in a clean environment only after workers have washed hands thoroughly. [CDC NIOSH Current Intelligence Bulletin 59], [AS/NZS 1336 or national equivalent]

# Skin protection

#### See Hand protection below

#### Hands/feet protection

- ▶ Wear chemical protective gloves, e.g. PVC.
- ▶ Wear safety footwear or safety gumboots, e.g. Rubber
- Rubber Gloves

#### **Body protection**

#### See Other protection below

- Overalls.P.V.C. apron.
- Other protection
- ▶ Barrier cream.
- Skin cleansing cream.
- ▶ Eye wash unit.

#### Thermal hazards

Not Available

# Respiratory protection

Particulate. (AS/NZS 1716 & 1715, EN 143:000 & 149:001, ANSI Z88 or national equivalent)

| Required Minimum Protection Factor | Half-Face Respirator | Full-Face Respirator | Powered Air Respirator |
|------------------------------------|----------------------|----------------------|------------------------|
| up to 10 x ES                      | P1<br>Air-line*      | -                    | PAPR-P1                |
| up to 50 x ES                      | Air-line**           | P2                   | PAPR-P2                |
| up to 100 x ES                     | -                    | P3                   | -                      |
|                                    |                      | Air-line*            | -                      |
| 100+ x ES                          | -                    | Air-line**           | PAPR-P3                |

<sup>\* -</sup> Negative pressure demand \*\* - Continuous flow

 $A(AII\ classes) = Organic\ vapours,\ B\ AUS\ or\ B1 = Acid\ gasses,\ B2 = Acid\ gas\ or\ hydrogen\ cyanide(HCN),\ B3 = Acid\ gas\ or\ hydrogen\ cyanide(HCN),\ E = Sulfur\ dioxide(SO2),\ G = Agricultural\ chemicals,\ K = Ammonia(NH3),\ Hg = Mercury,\ NO = Oxides\ of\ nitrogen,\ MB = Methyl\ bromide,\ AX = Low\ boiling\ point\ organic\ compounds(below\ 65\ degC)$ 

#### 8.2.3. Environmental exposure controls

See section 12

#### **SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES**

# 9.1. Information on basic physical and chemical properties

| Appearance                                   | Fine light grey powder with no odour, insoluble in water. |                                         |                |
|----------------------------------------------|-----------------------------------------------------------|-----------------------------------------|----------------|
| Physical state                               | Divided Solid                                             | Relative density (Water = 1)            | Not Available  |
| Odour                                        | Not Available                                             | Partition coefficient n-octanol / water | Not Available  |
| Odour threshold                              | Not Available                                             | Auto-ignition temperature (°C)          | Not Available  |
| pH (as supplied)                             | Not Available                                             | Decomposition temperature               | Not Available  |
| Melting point / freezing point (°C)          | Not Available                                             | Viscosity (cSt)                         | Not Available  |
| Initial boiling point and boiling range (°C) | Not Available                                             | Molecular weight (g/mol)                | Not Applicable |

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| Flash point (°C)          | Not Available | Taste                            | Not Available  |
|---------------------------|---------------|----------------------------------|----------------|
| Evaporation rate          | Not Available | Explosive properties             | Not Available  |
| Flammability              | Not Available | Oxidising properties             | Not Available  |
| Upper Explosive Limit (%) | Not Available | Surface Tension (dyn/cm or mN/m) | Not Applicable |
| Lower Explosive Limit (%) | Not Available | Volatile Component (%vol)        | Not Available  |
| Vapour pressure (kPa)     | Not Available | Gas group                        | Not Available  |
| Solubility in water (g/L) | Immiscible    | pH as a solution (1%)            | Not Available  |
| Vapour density (Air = 1)  | Not Available | VOC g/L                          | Not Available  |

#### 9.2. Other information

Not Available

# **SECTION 10 STABILITY AND REACTIVITY**

| 10.1.Reactivity                             | See section 7.2                                                                                                                                                  |
|---------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 10.2.Chemical stability                     | <ul> <li>Unstable in the presence of incompatible materials.</li> <li>Product is considered stable.</li> <li>Hazardous polymerisation will not occur.</li> </ul> |
| 10.3. Possibility of<br>hazardous reactions | See section 7.2                                                                                                                                                  |
| 10.4. Conditions to avoid                   | See section 7.2                                                                                                                                                  |
| 10.5. Incompatible materials                | See section 7.2                                                                                                                                                  |
| 10.6. Hazardous decomposition products      | See section 5.3                                                                                                                                                  |

# **SECTION 11 TOXICOLOGICAL INFORMATION**

|                                             | Limited evidence or practical experience suggests that the material may be                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | produce irritation of the respiratory system in a cignificant number of individuals                                                                                                                                                                                                                                                       |  |
|---------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| Inhaled                                     | Limited evidence or practical experience suggests that the material may produce irritation of the respiratory system, in a significant number of individuals, following inhalation. In contrast to most organs, the lung is able to respond to a chemical insult by first removing or neutralising the irritant and then repairing the damage. The repair process, which initially evolved to protect mammalian lungs from foreign matter and antigens, may however, produce further lung damage resulting in the impairment of gas exchange, the primary function of the lungs. Respiratory tract irritation often results in an inflammatory response involving the recruitment and activation of many cell types, mainly derived from the vascular system.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                           |  |
| illialed                                    | Persons with impaired respiratory function, airway diseases and conditions such as emphysema or chronic bronchitis, may incur further disability if excessive concentrations of particulate are inhaled.  If prior damage to the circulatory or nervous systems has occurred or if kidney damage has been sustained, proper screenings should be conducted on individuals who may be exposed to further risk if handling and use of the material result in excessive exposures.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                           |  |
| Ingestion                                   | Accidental ingestion of the material may be damaging to the health of the i                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | individual.                                                                                                                                                                                                                                                                                                                               |  |
| Skin Contact                                | Limited evidence exists, or practical experience predicts, that the material either produces inflammation of the skin in a substantial number of individuals following direct contact, and/or produces significant inflammation when applied to the healthy intact skin of animals, for up to four hours, such inflammation being present twenty-four hours or more after the end of the exposure period. Skin irritation may also be present after prolonged or repeated exposure; this may result in a form of contact dermatitis (nonallergic). The dermatitis is often characterised by skin redness (erythema) and swelling (oedema) which may progress to blistering (vesiculation), scaling and thickening of the epidermis. At the microscopic level there may be intercellular oedema of the spongy layer of the skin (spongiosis) and intracellular oedema of the epidermis.  Open cuts, abraded or irritated skin should not be exposed to this material  Entry into the blood-stream through, for example, cuts, abrasions, puncture wounds or lesions, may produce systemic injury with harmful effects. Examine the skin prior to the use of the material and ensure that any external damage is suitably protected.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                           |  |
|                                             | Limited evidence exists, or practical experience suggests, that the material may cause eye irritation in a substantial number of individuals and/or is expected to produce significant ocular lesions which are present twenty-four hours or more after instillation into the eye(s) of experimental animals. Repeated or prolonged eye contact may cause inflammation characterised by temporary redness (similar to windburn) of the conjunctiva (conjunctivitis); temporary impairment of visior and/or other transient eye damage/ulceration may occur.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                           |  |
| Еуе                                         | eye contact may cause inflammation characterised by temporary redness                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                           |  |
| Eye                                         | eye contact may cause inflammation characterised by temporary redness                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | (similar to windburn) of the conjunctiva (conjunctivitis); temporary impairment of viscosts adverse to health (as classified by EC Directives using animal models); urse.  In function (i.e. pneumoconiosis) caused by particles less than 0.5 micron                                                                                     |  |
| Chronic                                     | eye contact may cause inflammation characterised by temporary redness and/or other transient eye damage/ulceration may occur.  Long-term exposure to the product is not thought to produce chronic effect nevertheless exposure by all routes should be minimised as a matter of collaboration. Long term exposure to high dust concentrations may cause changes in lui                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | (similar to windburn) of the conjunctiva (conjunctivitis); temporary impairment of viscos adverse to health (as classified by EC Directives using animal models); urse.  In function (i.e. pneumoconiosis) caused by particles less than 0.5 micron                                                                                       |  |
|                                             | eye contact may cause inflammation characterised by temporary redness and/or other transient eye damage/ulceration may occur.  Long-term exposure to the product is not thought to produce chronic effect nevertheless exposure by all routes should be minimised as a matter of collaboration.  Long term exposure to high dust concentrations may cause changes in luppenetrating and remaining in the lung. A prime symptom is breathlessness.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | (similar to windburn) of the conjunctiva (conjunctivitis); temporary impairment of viscts adverse to health (as classified by EC Directives using animal models); urse.  In function (i.e. pneumoconiosis) caused by particles less than 0.5 micron s. Lung shadows show on X-ray.                                                        |  |
| Chronic Riva Silver (powder)                | eye contact may cause inflammation characterised by temporary redness and/or other transient eye damage/ulceration may occur.  Long-term exposure to the product is not thought to produce chronic effect nevertheless exposure by all routes should be minimised as a matter of concentration of the exposure to high dust concentrations may cause changes in lurice penetrating and remaining in the lung. A prime symptom is breathlessness                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | (similar to windburn) of the conjunctiva (conjunctivitis); temporary impairment of visets adverse to health (as classified by EC Directives using animal models); urse.  In function (i.e. pneumoconiosis) caused by particles less than 0.5 micron s. Lung shadows show on X-ray.                                                        |  |
| Chronic                                     | eye contact may cause inflammation characterised by temporary redness and/or other transient eye damage/ulceration may occur.  Long-term exposure to the product is not thought to produce chronic effect nevertheless exposure by all routes should be minimised as a matter of collaboration of the content of t | (similar to windburn) of the conjunctiva (conjunctivitis); temporary impairment of visits adverse to health (as classified by EC Directives using animal models); urse.  In function (i.e. pneumoconiosis) caused by particles less than 0.5 micron s. Lung shadows show on X-ray.  IRRITATION  Not Available                             |  |
| Chronic Riva Silver (powder)                | eye contact may cause inflammation characterised by temporary redness and/or other transient eye damage/ulceration may occur.  Long-term exposure to the product is not thought to produce chronic effect nevertheless exposure by all routes should be minimised as a matter of collaboration of the content of t | (similar to windburn) of the conjunctiva (conjunctivitis); temporary impairment of visets adverse to health (as classified by EC Directives using animal models); urse.  Ing function (i.e. pneumoconiosis) caused by particles less than 0.5 micron s. Lung shadows show on X-ray.  IRRITATION  Not Available  IRRITATION  Not Available |  |
| Chronic  Riva Silver (powder)  glass powder | eye contact may cause inflammation characterised by temporary redness and/or other transient eye damage/ulceration may occur.  Long-term exposure to the product is not thought to produce chronic effect nevertheless exposure by all routes should be minimised as a matter of collaboration of the content of t | (similar to windburn) of the conjunctiva (conjunctivitis); temporary impairment of visits adverse to health (as classified by EC Directives using animal models); urse.  Ing function (i.e. pneumoconiosis) caused by particles less than 0.5 micron s. Lung shadows show on X-ray.  IRRITATION  Not Available  IRRITATION                |  |

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# Riva Silver (powder)

| Serious Eye<br>Damage/Irritation  | 0 | STOT - Single Exposure   | 0                                                                  |
|-----------------------------------|---|--------------------------|--------------------------------------------------------------------|
| Respiratory or Skin sensitisation | 0 | STOT - Repeated Exposure | 0                                                                  |
| Mutagenicity                      | 0 | Aspiration Hazard        | 0                                                                  |
|                                   |   |                          | - Data available but does not fill the criteria for classification |

# **SECTION 12 ECOLOGICAL INFORMATION**

#### 12.1. Toxicity

| Ingredient    | Endpoint                                                                                                                                                                                                                                                                                                                                                                           | Test Duration (hr) | Species        | Value          | Source         |
|---------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|----------------|----------------|----------------|
| Not Available | Not Applicable                                                                                                                                                                                                                                                                                                                                                                     | Not Applicable     | Not Applicable | Not Applicable | Not Applicable |
| Legend:       | Extracted from 1. IUCLID Toxicity Data 2. Europe ECHA Registered Substances - Ecotoxicological Information - Aquatic Toxicity 3. EPIWIN Suite V3.12 - Aquatic Toxicity Data (Estimated) 4. US EPA, Ecotox database - Aquatic Toxicity Data 5. ECETOC Aquatic Hazard Assessment Data 6. NITE (Japan) - Bioconcentration Data 7. METI (Japan) - Bioconcentration Data 8. Vendor Data |                    |                |                |                |

#### DO NOT discharge into sewer or waterways.

#### 12.2. Persistence and degradability

| Ingredient | Persistence: Water/Soil               | Persistence: Air                      |
|------------|---------------------------------------|---------------------------------------|
|            | No Data available for all ingredients | No Data available for all ingredients |

#### 12.3. Bioaccumulative potential

| Ingredient | Bioaccumulation                       |
|------------|---------------------------------------|
|            | No Data available for all ingredients |

# 12.4. Mobility in soil

| Ingredient | Mobility                              |
|------------|---------------------------------------|
|            | No Data available for all ingredients |

#### 12.5. Results of PBT and vPvB assessment

|                         | P             | В             | Т             |
|-------------------------|---------------|---------------|---------------|
| Relevant available data | Not Available | Not Available | Not Available |
| PBT Criteria fulfilled? | Not Available | Not Available | Not Available |

# 12.6. Other adverse effects

No data available

# **SECTION 13 DISPOSAL CONSIDERATIONS**

## 13.1. Waste treatment methods

| Product / Packaging<br>disposal | <ul> <li>▶ DO NOT allow wash water from cleaning or process equipment to enter drains.</li> <li>▶ It may be necessary to collect all wash water for treatment before disposal.</li> <li>▶ In all cases disposal to sewer may be subject to local laws and regulations and these should be considered first.</li> <li>▶ Where in doubt contact the responsible authority.</li> <li>Consult State Land Waste Management Authority for disposal.</li> <li>Bury residue in an authorised landfill.</li> </ul> |
|---------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Waste treatment options         | Not Available                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Sewage disposal options         | Not Available                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |

# **SECTION 14 TRANSPORT INFORMATION**

Not Applicable

# **Labels Required**

14.4.Environmental hazard

| Marine Pollutant                                                     | NO             |
|----------------------------------------------------------------------|----------------|
| HAZCHEM                                                              | Not Applicable |
| Land transport (ADR): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS |                |
| 14.1.UN number                                                       | Not Applicable |
| 14.2.Packing group                                                   | Not Applicable |
| 14.3.UN proper shipping name                                         | Not Applicable |

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|                                                                                                                                                                                                                                                                                                                           | ı                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                |                   |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|
| 14.5. Transport hazard                                                                                                                                                                                                                                                                                                    | Class Not Applicable                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                |                   |
| class(es)                                                                                                                                                                                                                                                                                                                 | Subrisk Not Applicable                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                |                   |
|                                                                                                                                                                                                                                                                                                                           | Hazard identification (Kemler)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Not Applicable                                                                                                                                 |                   |
|                                                                                                                                                                                                                                                                                                                           | Classification code                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Not Applicable                                                                                                                                 |                   |
| 14.6. Special precautions for user                                                                                                                                                                                                                                                                                        | Hazard Label                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Not Applicable                                                                                                                                 |                   |
| usei                                                                                                                                                                                                                                                                                                                      | Special provisions                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Not Applicable                                                                                                                                 |                   |
|                                                                                                                                                                                                                                                                                                                           | Limited quantity                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Not Applicable                                                                                                                                 |                   |
| Air transport (ICAO-IATA / [                                                                                                                                                                                                                                                                                              | I<br>IGR): NOT REGULATED FO                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | R TRANSPORT OF DAN                                                                                                                             | GEROUS GOODS      |
| 14.1. UN number                                                                                                                                                                                                                                                                                                           | Not Applicable                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                |                   |
| 14.2. Packing group                                                                                                                                                                                                                                                                                                       | Not Applicable                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                |                   |
| 14.3. UN proper shipping name                                                                                                                                                                                                                                                                                             | Not Applicable                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                |                   |
| 14.4. Environmental hazard                                                                                                                                                                                                                                                                                                | Not Applicable                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                |                   |
|                                                                                                                                                                                                                                                                                                                           | 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | an line la la                                                                                                                                  |                   |
| 14.5. Transport hazard                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | pplicable                                                                                                                                      |                   |
| class(es)                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | pplicable                                                                                                                                      |                   |
|                                                                                                                                                                                                                                                                                                                           | ERG Code Not A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | pplicable                                                                                                                                      |                   |
|                                                                                                                                                                                                                                                                                                                           | Special provisions                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                | Not Applicable    |
|                                                                                                                                                                                                                                                                                                                           | Cargo Only Packing Instruction                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | ns                                                                                                                                             | Not Applicable    |
|                                                                                                                                                                                                                                                                                                                           | Cargo Only Maximum Qty / Pack                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                | Not Applicable    |
| 14.6. Special precautions for user                                                                                                                                                                                                                                                                                        | Passenger and Cargo Packing Instructions                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                | Not Applicable    |
|                                                                                                                                                                                                                                                                                                                           | Passenger and Cargo Maximus                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | m Qty / Pack                                                                                                                                   | Not Applicable    |
|                                                                                                                                                                                                                                                                                                                           | Passenger and Cargo Limited                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Quantity Packing Instructions                                                                                                                  | Not Applicable    |
|                                                                                                                                                                                                                                                                                                                           | Passenger and Cargo Limited Maximum Qty / Pack                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                | Not Applicable    |
|                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                |                   |
| Sea transport (IMDG-Code                                                                                                                                                                                                                                                                                                  | / GGVSee): NOT REGULAT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | ED FOR TRANSPORT O                                                                                                                             | F DANGEROUS GOODS |
| Sea transport (IMDG-Code                                                                                                                                                                                                                                                                                                  | / GGVSee): NOT REGULAT  Not Applicable                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | ED FOR TRANSPORT O                                                                                                                             | F DANGEROUS GOODS |
|                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | ED FOR TRANSPORT O                                                                                                                             | F DANGEROUS GOODS |
| 14.1. UN number                                                                                                                                                                                                                                                                                                           | Not Applicable                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | ED FOR TRANSPORT O                                                                                                                             | F DANGEROUS GOODS |
| 14.1. UN number 14.2. Packing group 14.3. UN proper shipping                                                                                                                                                                                                                                                              | Not Applicable  Not Applicable                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | ED FOR TRANSPORT O                                                                                                                             | F DANGEROUS GOODS |
| 14.1. UN number 14.2. Packing group 14.3. UN proper shipping name 14.4. Environmental hazard                                                                                                                                                                                                                              | Not Applicable  Not Applicable  Not Applicable  Not Applicable                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                | F DANGEROUS GOODS |
| 14.1. UN number 14.2. Packing group 14.3. UN proper shipping name                                                                                                                                                                                                                                                         | Not Applicable Not Applicable Not Applicable Not Applicable IMDG Class Not Applica                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | ble                                                                                                                                            | F DANGEROUS GOODS |
| 14.1. UN number 14.2. Packing group 14.3. UN proper shipping name 14.4. Environmental hazard 14.5. Transport hazard                                                                                                                                                                                                       | Not Applicable  Not Applicable  Not Applicable  Not Applicable                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | ble                                                                                                                                            | F DANGEROUS GOODS |
| 14.1. UN number 14.2. Packing group 14.3. UN proper shipping name 14.4. Environmental hazard 14.5. Transport hazard class(es)                                                                                                                                                                                             | Not Applicable Not Applicable Not Applicable Not Applicable IMDG Class Not Applica                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | bleble                                                                                                                                         | F DANGEROUS GOODS |
| 14.1. UN number 14.2. Packing group 14.3. UN proper shipping name 14.4. Environmental hazard 14.5. Transport hazard                                                                                                                                                                                                       | Not Applicable Not Applicable Not Applicable Not Applicable IMDG Class IMDG Subrisk Not Applica                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | ble<br>ble<br>blicable                                                                                                                         | F DANGEROUS GOODS |
| 14.1. UN number 14.2. Packing group 14.3. UN proper shipping name 14.4. Environmental hazard 14.5. Transport hazard class(es)                                                                                                                                                                                             | Not Applicable Not Applicable Not Applicable Not Applicable IMDG Class IMDG Subrisk Not Applica  EMS Number Not Applica                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | ble<br>ble<br>blicable<br>slicable                                                                                                             | F DANGEROUS GOODS |
| 14.1. UN number 14.2. Packing group 14.3. UN proper shipping name 14.4. Environmental hazard 14.5. Transport hazard class(es) 14.6. Special precautions for user                                                                                                                                                          | Not Applicable Not Applicable Not Applicable Not Applicable  IMDG Class Not Applica  IMDG Subrisk Not Applica  EMS Number Not App  Special provisions Not App                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | ble ble blicable blicable blicable                                                                                                             |                   |
| 14.1. UN number 14.2. Packing group 14.3. UN proper shipping name 14.4. Environmental hazard 14.5. Transport hazard class(es) 14.6. Special precautions for user                                                                                                                                                          | Not Applicable Not Applicable Not Applicable Not Applicable  IMDG Class Not Applica IMDG Subrisk Not Applica  EMS Number Not Applica  Special provisions Not Applica  Limited Quantities Not Applica                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | ble ble blicable blicable blicable                                                                                                             |                   |
| 14.1. UN number 14.2. Packing group 14.3. UN proper shipping name 14.4. Environmental hazard 14.5. Transport hazard class(es) 14.6. Special precautions for user                                                                                                                                                          | Not Applicable Not Applicable Not Applicable Not Applicable IMDG Class IMDG Subrisk Not Applica  EMS Number Special provisions Limited Quantities Not Application of the provision of the provisi | ble ble blicable blicable blicable                                                                                                             |                   |
| 14.1. UN number 14.2. Packing group 14.3. UN proper shipping name 14.4. Environmental hazard 14.5. Transport hazard class(es) 14.6. Special precautions for user Inland waterways transpor                                                                                                                                | Not Applicable Not Applicable Not Applicable Not Applicable  Not Applicable  IMDG Class IMDG Subrisk Not Applica  EMS Number Special provisions Limited Quantities  Not Application of the provision of the provis | ble ble blicable blicable blicable                                                                                                             |                   |
| 14.1. UN number 14.2. Packing group 14.3. UN proper shipping name 14.4. Environmental hazard 14.5. Transport hazard class(es) 14.6. Special precautions for user Inland waterways transport 14.1. UN number 14.2. Packing group 14.3. UN proper shipping                                                                  | Not Applicable Not Applicable Not Applicable Not Applicable IMDG Class IMDG Subrisk Not Applica  EMS Number Special provisions Limited Quantities Not App  t (ADN): NOT REGULATED Not Applicable Not Applicable                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | ble ble blicable blicable blicable                                                                                                             |                   |
| 14.1. UN number 14.2. Packing group 14.3. UN proper shipping name 14.4. Environmental hazard 14.5. Transport hazard class(es) 14.6. Special precautions for user Inland waterways transport 14.1. UN number 14.2. Packing group 14.3. UN proper shipping name                                                             | Not Applicable Not Applicable Not Applicable Not Applicable  IMDG Class IMDG Subrisk Not Applica  EMS Number Special provisions Limited Quantities Not Applicable Not Applicable Not Applicable Not Applicable Not Applicable                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | ble blicable olicable olicable FOR TRANSPORT OF D                                                                                              |                   |
| 14.1. UN number 14.2. Packing group 14.3. UN proper shipping name 14.4. Environmental hazard 14.5. Transport hazard class(es) 14.6. Special precautions for user Inland waterways transport 14.1. UN number 14.2. Packing group 14.3. UN proper shipping name 14.4. Environmental hazard 14.5. Transport hazard           | Not Applicable Not Applicable Not Applicable Not Applicable  IMDG Class IMDG Subrisk Not Applica  EMS Number Special provisions Limited Quantities Not Applicable                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | ble blicable olicable olicable FOR TRANSPORT OF December 1988                                                                                  |                   |
| 14.1. UN number 14.2. Packing group 14.3. UN proper shipping name 14.4. Environmental hazard 14.5. Transport hazard class(es) 14.6. Special precautions for user Inland waterways transport 14.1. UN number 14.2. Packing group 14.3. UN proper shipping name 14.4. Environmental hazard 14.5. Transport hazard           | Not Applicable Not Applicable Not Applicable Not Applicable  IMDG Class IMDG Subrisk Not Applica  EMS Number Special provisions Limited Quantities Not Applicable                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | ble ble blicable blicable blicable blicable blicable blicable policable                                                                        |                   |
| 14.1. UN number 14.2. Packing group 14.3. UN proper shipping name 14.4. Environmental hazard 14.5. Transport hazard class(es) 14.6. Special precautions for user Inland waterways transport 14.1. UN number 14.2. Packing group 14.3. UN proper shipping name 14.4. Environmental hazard 14.5. Transport hazard class(es) | Not Applicable Not Applicable Not Applicable Not Applicable IMDG Class IMDG Subrisk Not Applica  EMS Number Special provisions Limited Quantities Not Applicable                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | ble ble blicable blicable blicable blicable blicable blicable policable blicable                                                               |                   |
| 14.1. UN number 14.2. Packing group 14.3. UN proper shipping name 14.4. Environmental hazard 14.5. Transport hazard class(es) 14.6. Special precautions for user Inland waterways transport 14.1. UN number 14.2. Packing group 14.3. UN proper shipping name 14.4. Environmental hazard 14.5. Transport hazard class(es) | Not Applicable Not Applicable Not Applicable Not Applicable IMDG Class IMDG Subrisk Not Applica  EMS Number Special provisions Limited Quantities Not Applicable                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | ble ble blicable |                   |
| 14.1. UN number 14.2. Packing group 14.3. UN proper shipping name 14.4. Environmental hazard 14.5. Transport hazard class(es) 14.6. Special precautions for user Inland waterways transport 14.1. UN number 14.2. Packing group 14.3. UN proper shipping name 14.4. Environmental hazard 14.5. Transport hazard class(es) | Not Applicable Not Applicable Not Applicable Not Applicable IMDG Class IMDG Subrisk Not Applica  EMS Number Special provisions Limited Quantities Not Applicable                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | ble ble blicable blicable blicable blicable blicable blicable policable blicable                                                               |                   |

Transport in bulk according to Annex II of MARPOL and the IBC code

Not Applicable

# **SECTION 15 REGULATORY INFORMATION**

Version No: **4.1.1.1** Page **9** of **10** Issue Date: **18/03/2016** 

#### Riva Silver (powder)

Print Date: 31/03/2016

#### GLASS POWDER(NOT APPLICABLE) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Not Applicable

This safety data sheet is in compliance with the following EU legislation and its adaptations - as far as applicable -: 67/548/EEC, 1999/45/EC, 98/24/EC, 92/85/EC, 94/33/EC, 91/689/EEC, 1999/13/EC, Commission Regulation (EU) 2015/830, Regulation (EC) No 1272/2008 and their amendments as well as the following British legislation: - The Control of Substances Hazardous to Health Regulations (COSHH) 2002 - COSHH Essentials - The Management of Health and Safety at Work Regulations 1999

#### 15.2. Chemical safety assessment

For further information please look at the Chemical Safety Assessment and Exposure Scenarios prepared by your Supply Chain if available.

#### **ECHA SUMMARY**

| Ingredient   | CAS number | Index No       | ECHA Dossier   |
|--------------|------------|----------------|----------------|
| glass powder |            | Not Applicable | Not Applicable |

| Harmonisation (C&L Inventory) | Hazard Class and Category Code(s) | Pictograms Signal Word Code(s) | Hazard Statement Code(s) |
|-------------------------------|-----------------------------------|--------------------------------|--------------------------|
| Not Available                 | Not Available                     | Not Available                  | Not Available            |

Harmonisation Code 1 = The most prevalent classification. Harmonisation Code 2 = The most severe classification.

| National Inventory               | Status                                                                                                                                                                                |
|----------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Australia - AICS                 | Υ                                                                                                                                                                                     |
| Canada - DSL                     | Y                                                                                                                                                                                     |
| Canada - NDSL                    | Υ                                                                                                                                                                                     |
| China - IECSC                    | Y                                                                                                                                                                                     |
| Europe - EINEC / ELINCS /<br>NLP | Y                                                                                                                                                                                     |
| Japan - ENCS                     | Υ                                                                                                                                                                                     |
| Korea - KECI                     | Υ                                                                                                                                                                                     |
| New Zealand - NZIoC              | Y                                                                                                                                                                                     |
| Philippines - PICCS              | Υ                                                                                                                                                                                     |
| USA - TSCA                       | Y                                                                                                                                                                                     |
| Legend:                          | Y = All ingredients are on the inventory N = Not determined or one or more ingredients are not on the inventory and are not exempt from listing(see specific ingredients in brackets) |

# **SECTION 16 OTHER INFORMATION**

#### Full text Risk and Hazard codes

# Other information

### DSD / DPD label elements

Not Applicable

Relevant risk statements are found in section 2.1

| Indication(s) of danger | Not Applicable |
|-------------------------|----------------|
|-------------------------|----------------|

#### SAFETY ADVICE

Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by SDI Limited using available literature references.

The SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings. Risks may be determined by reference to Exposures Scenarios. Scale of use, frequency of use and current or available engineering controls must be considered.

For detailed advice on Personal Protective Equipment, refer to the following EU CEN Standards:

EN 166 Personal eye-protection

EN 340 Protective clothing

EN 374 Protective gloves against chemicals and micro-organisms

EN 13832 Footwear protecting against chemicals

EN 133 Respiratory protective devices

#### **Definitions and abbreviations**

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# Riva Silver (powder)

Print Date: 31/03/2016

PC-TWA: Permissible Concentration-Time Weighted Average PC-STEL: Permissible Concentration-Short Term Exposure Limit

IARC: International Agency for Research on Cancer

ACGIH: American Conference of Governmental Industrial Hygienists

STEL: Short Term Exposure Limit

TEEL: Temporary Emergency Exposure Limit。

IDLH: Immediately Dangerous to Life or Health Concentrations

OSF: Odour Safety Factor

NOAEL :No Observed Adverse Effect Level LOAEL: Lowest Observed Adverse Effect Level

TLV: Threshold Limit Value LOD: Limit Of Detection OTV: Odour Threshold Value BCF: BioConcentration Factors BEI: Biological Exposure Index

The information contained in the Safety Data Sheet is based on data considered to be accurate, however, no warranty is expressed or implied regarding the accuracy of the data or the results to be obtained from the use thereof.

#### Other information:

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Phone Number: +61 3 8727 7111

Date of preparation/revision: 23rd September 2015 Department issuing SDS: Research and Development

Contact: Technical Director