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SECTION 1: Identification of the substance/mixture and of the company/undertaking

. 1.1 Product identifier

Dentatec . Trade name: . Article number: 5360-0421

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

No further relevant information available.

. Application of the substance / the mixture

Milling additive

. **1.3 Details of the supplier of the safety data sheet**. Manufacturer/Supplier: SIRONA Dental Systems GmbH

Fabrikstraße 31 D-64625 Bensheim

Germany

http://www.dentsplysirona.com T.: +49 (0) 6251/16-1670

Hersteller/Manufacturer:

Graichen Produktions- und Vertriebs-GmbH

Darmstädter Str. 127 D-64625 Bensheim Tel.: +49(0)6251/7707880 Fax: +49(0)6251/77901

e-mail: ehs@graichen-bensheim.de

http://www.graichen.net

. Further information obtainable

from:

Environment protection department . 1.4 Emergency telephone

Advice centre for poisoning university Mainz phone +49(0)6131/19240 or poison information:+49(0)700/GIFTINFO number:

SECTION 2: Hazards identification

. 2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

Skin Irrit. 2 H315 Causes skin irritation. Eye Irrit. 2 H319 Causes serious eye irritation. H317 May cause an allergic skin reaction. Skin Sens. 1

Aquatic Chronic 2 H411 Toxic to aquatic life with long lasting effects.

. 2.2 Label elements

Labelling according to Regulation

(EC) No 1272/2008 . Hazard pictograms

The product is classified and labelled according to the CLP regulation.



GHS07 GHS09

. Signal word Warning

labelling:

. Hazard-determining components of

mixture of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-

2Hisothiazol-3-one [EC no. 220-239-6] (3:1)

. Hazard statements

H315 Causes skin irritation. H319 Causes serious eye irritation. H317 May cause an allergic skin reaction.

H411 Toxic to aquatic life with long lasting effects.

P261 Avoid breathing dust/fume/gas/mist/vapours/spray. . Precautionary statements

P264 Wash thoroughly after handling. P273 Avoid release to the environment.

P280 Wear protective gloves / eye protection / face protection.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove

contact lenses, if present and easy to do. Continue rinsing. If skin irritation or rash occurs: Get medical advice/attention.

P333+P313 P337+P313 If eye irritation persists: Get medical advice/attention. P501

Dispose of contents/container in accordance with local/regional/

national/international regulations.

. 2.3 Other hazards

. Results of PBT and vPvB assessment

Not applicable. . PBT: . vPvB: Not applicable.

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Trade name: Dentatec

(Contd. of page 1)

SECTION 3: Composition/information on ingredients

. 3.2 Chemical characterisation: Mixtures

. Dangerous components:				
	bronopol (INN)	< 2.5%		
EINECS: 200-143-0	Eye Dam. 1, H318; Acute Tox. 4, H302; Acute Tox. 4, H312; Skin Irrit. 2, H315; STOT SE 3, H335			
CAS: 55965-84-9	mixture of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-	< 2.5%		
	2Hisothiazol-3-one [EC no. 220-239-6] (3:1)			
	Acute Tox. 3, H301; Acute Tox. 2, H310; Acute Tox. 2, H330; Skin Corr. 1C, H314; Eye Dam. 1, H318; Aquatic Acute 1, H400 (M=100); Aquatic Chronic 1, H410 (M=100); Skin			
	Sens. 1A, H317			

. Additional information:

For the wording of the listed hazard phrases refer to section 16.

SECTION 4: First aid measures

. 4.1 Description of first aid measures

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident. . General information:

Position and transport stably in side position.

. After inhalation: Supply fresh air; consult doctor in case of complaints.

If skin irritation continues, consult a doctor. . After skin contact:

Immediately wash with water and soap and rinse thoroughly.

. After eye contact: Rinse opened eye for several minutes under running water. If symptoms persist, consult a

doctor.

. After swallowing: Rinse out mouth and then drink plenty of water.

. 4.2 Most important symptoms and effects, both acute and

delayed

No further relevant information available.

4.3 Indication of any immediate medical attention and special

treatment needed No further relevant information available.

SECTION 5: Firefighting measures

. 5.1 Extinguishing media

. Suitable extinguishing agents: CO2, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

Use fire extinguishing methods suitable to surrounding conditions.

. 5.2 Special hazards arising from

Formation of toxic gases is possible during heating or in case of fire. Sulphur dioxide (SO2) the substance or mixture

Hydrogen chloride (HCI) Nitrogen oxides (NOx) Carbon monoxide (CÓ)

. 5.3 Advice for firefighters

Wear self-contained respiratory protective device. . Protective equipment:

SECTION 6: Accidental release measures

6.1 Personal precautions. protective equipment and

emergency procedures Use respiratory protective device against the effects of fumes/dust/aerosol.

Do not allow to enter sewers/ surface or ground water. 6.2 Environmental precautions:

Do not allow product to reach sewage system or any water course.

Inform respective authorities in case of seepage into water course or sewage system. Dilute with plenty of water.

. 6.3 Methods and material for

containment and cleaning up: Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders,

sawdust).

Ensure ádequate ventilation.

See Section 7 for information on safe handling. . 6.4 Reference to other sections

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

SECTION 7: Handling and storage

7.1 Precautions for safe

handling No special precautions are necessary if used correctly.

Information about fire - and

explosion protection: No special measures required.

. 7.2 Conditions for safe storage, including any incompatibilities

. Requirements to be met by

storerooms and receptacles: Store only in the original receptacle.

Information about storage in one

common storage facility: Store away from foodstuffs.

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Safety data sheet according to 1907/2006/EC, Article 31

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. Further information about storage

conditions:

Store receptacle in a well ventilated area.

. **7.3 Specific end use(s)**No further relevant information available.

SECTION 8: Exposure controls/personal protection

. 8.1 Control parameters

Additional information about

design of technical facilities: No further data; see item 7.

. Ingredients with limit values that require monitoring at the workplace:

CAS: 56-81-5 glycerol (50 - 100%)

WEL Long-term value: 10 mg/m³

. DNELs

CAS: 56-81-5 glycerol

Inhalative DNEL Long-term - local effects 56 mg/m³ (Workers (Arbeitnehmer))

. PNECs

CAS: 56-81-5 glycerol

PNEC Soil (Boden)

PNEC fresh water sediment (Süßwassersediment)

PNEC fresh water (Süßwasser)

PNEC marine water sediment

PNEC Marine water

PNEC mikrobiological activity in waste water

0.141 mg/kg (---)

3.3 mg/kg (---)

0.885 mg/l (---)

0.0885 mg/l (---)

1,000 mg/l (---)

. Additional Occupational Exposure

Limit Values for possible hazards

during processing: Country Components Categorie mg/m³

Germany 2-methyl-4-isothazolin-3-on MAK 0,05

5-chloro-2-methyl-4-isothazolin-3-on MAK 0,05

. Additional information: The lists valid during the making were used as basis.

. 8.2 Exposure controls

. Personal protective equipment:

General protective and hygienic

. General protective and hygienic measures:

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing Wash hands before breaks and at the end of work.

Avoid contact with the eyes and skin.

. Respiratory protection:

. Protection of hands:

Not required. Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the

preparation.

Due to missing tests no recommendation to the glove material can be given for the

product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion

and the degradation

. Material of gloves

Nitrile rubber, NBR Recommended thickness of the material: ≥ 0.7 mm

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a

preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

. Penetration time of glove material

Value for the permeation: Level \leq 0,7 mm 480min (8h) \dot{E} N374

The determined penetration times according to EN 16523-1:2015 are not performed under practical conditions. Therefore a maximum wearing time, which corresponds to 50% of the

penetration time, is recommended.

The exact break through time has to be found out by the manufacturer of the protective

gloves and has to be observed.

. Not suitable are gloves made of

the following materials:

Natural rubber, NR

PVA gloves

. Eye protection: Tightly sealed goggles

SECTION 9: Physical and chemical properties

. 9.1 Information on basic physical and chemical properties

. General Information

. Appearance:

Form: Fluid
Colour: Colourless
Odour: Characteristic
Odour threshold: Not determined

pH-value at 20 °C: > 2 - ≤ 2.8

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	(Contd. of page 3)			
. pH-value 10% aqu. solution	< 4.5			
. Change in condition Initial boiling point and boiling range	e: 100 °C			
. Flash point:	> 100 °C			
. Flammability (solid, gas):	Not applicable.			
. Ignition temperature:	400 °C			
. Decomposition temperature:	Not determined.			
. Auto-ignition temperature:	Product is not selfigniting.			
. Explosive properties:	Not determined.			
. Explosion limits: Lower: Upper:	0.9 Vol % Not determined.			
. Vapour pressure at 20 °C:	< 0.1 hPa			
. Density at 20 °C: . Relative density . Vapour density . Evaporation rate	1.2135 – 1.2165 g/cm³ Not determined. Not determined. Not determined.			
. Solubility in / Miscibility with water:	Fully miscible.			
. Partition coefficient: n-octanol/water:	Not determined.			
. Viscosity: Dynamic:	Not determined.			
. Solvent content: Organic solvents: Water: VOC (EC) VOC (EU) (%)	81.3 % 18.2 % -0.0 g/l 0.0 %			
Solids content:	0.6 %			
. 9.2 Other information	No further relevant information available.			

SECTION 10: Stability and reactivity

. 10.1 Reactivity No further relevant information available.

10.2 Chemical stability Thermal decomposition /

conditions to be avoided:

. 10.3 Possibility of hazardous

reactions

No decomposition if used according to specifications.

Forms explosive gas mixture with air. Reacts with strong oxidising agents.

. 10.4 Conditions to avoid . 10.5 Incompatible materials:

. 10.6 Hazardous decomposition

products:

No further relevant information available. No further relevant information available.

Hydrogen chloride (HCI) Nitrogen oxides Sulphur dioxide

SECTION 11: Toxicological information

. 11.1 Information on toxicological effects

Based on available data, the classification criteria are not met. . Acute toxicity

	. LD/LC50 values relevant for classification:			
Γ	CAS: 56-8	CAS: 56-81-5 glycerol		
	Oral	LD50	12,600 mg/kg (rat)	
	Dermal	LD50	> 10,000 mg/kg (rabbit)	
Γ	CAS: 52-51-7 bronopol (INN)			
Γ	Oral	LD50	307 mg/kg (rat)	
	Dermal	LD50	> 2,000 mg/kg (rat)	
	Inhalative	LC50/4h	800 mg/l (rat)	
	CAS: 55965-84-9 mixture of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2Hisothiazol-3-one [EC no. 220-239-6] (3:1)			
Г	Oral	LD50	550 mg/kg (rat)	
	Dermal	LD50	200 – 1,000 mg/kg (rat)	
			660 mg/kg (rabbit)	
	Inhalative	LC50/4h	0.31 mg/l (rat)	
_			(Contd. on page 5)	

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Trade name: Dentatec (Contd. of page 4) Primary irritant effect: Skin corrosion/irritation CAS: 52-51-7 bronopol (INN) Ätz-/Reizwirkung auf die Haut (rab) CAS: 55965-84-9 mixture of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2Hisothiazol-3one [EC no. 220-239-6] (3:1) Ätz-/Reizwirkung auf die Haut (rab) Serious eye damage/irritation CAS: 52-51-7 bronopol (INN) Irritation of eyes Augenreiz- und -ätzwirkung (rab) Respiratory or skin sensitisation CAS: 52-51-7 bronopol (INN) Sensitisation | Sensibilisierung | (Guinea Pigs) CAS: 55965-84-9 mixture of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2Hisothiazol-3one [EC no. 220-239-6] (3:1) Sensitisation Sensibilisierung (Guinea Pigs Additional toxicological information: CAS: 55965-84-9 mixture of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2Hisothiazol-3one [EC no. 220-239-6] (3:1) NOAEL (subchronisch, 90d) < 5 mg/kg (rat) Oral Dermal NOAEL (subchronisch, 28d) < 3 mg/kg (rat) CMR effects (carcinogenity, mutagenicity and toxicity for reproduction) Based on available data, the classification criteria are not met. Germ cell mutagenicity Carcinogenicity Based on available data, the classification criteria are not met. Reproductive toxicity Based on available data, the classification criteria are not met. STOT-single exposure CAS: 52-51-7 bronopol (INN) STOT SE cat. 3, Atemwegsreizung . STOT-repeated exposure Based on available data, the classification criteria are not met. . Aspiration hazard Based on available data, the classification criteria are not met. **SECTION 12: Ecological information** 12.1 Toxicity Aquatic toxicity: CAS: 56-81-5 glycerol LC50 (24h) > 5,000 mg/l (Carassius auratus) IC50 (16h) > 10,000 mg/l (scenedesmus quadricauda) CAS: 52-51-7 bronopol (INN) EC50 (48h) 1.08 mg/l (daphnia magnia/gr. Wasserfloh) EC50 (72h) 0.4 - 2.8 mg/l (Algae) LC50 (96h) 41.2 mg/l (Oncorhynchus mykiss) 0.03 mg/l /chron. (Desmodesmus subspicatus/Grünalge) NOEC (21d) 0.06 mg/l /akut (daphnia magnia/gr. Wasserfloh) CAS: 55965-84-9 mixture of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2Hisothiazol-3one [EC no. 220-239-6] (3:1) LC50 acute (96h) 0.58 mg/l (danio rerio/ Zebrabärbling) 0.16 mg/l (daphnia magnia/gr. Wasserfloh) EC50 (48h) 0.018 mg/l (Desmodesmus subspicatus/Grünalge) EC50 (72h) 0.379 mg/l (Pseudokirchnerella subcapitata - Algen) EC50 (96h) 0.47 mg/l (Pseudokirchnerella subcapitata - Algen) EC50 (16h) 5.7 mg/l (Pseudomonas putida) LC50 (96h) 0.19 mg/l (Oncorhynchus mykiss) EC50 acute (21d) > 1 mg/l (daphnia magnia/gr. Wasserfloh) EC50 acute (48h) 1.02 mg/l (daphnia magnia/gr. Wasserfloh) EC50 chron. (3h) 31.7 mg/l (Mikroorganismus) LOEL chron. (34d) 1.6 mg/l (danio rerio/ Zebrabärbling) NOEC chron. (34d) 0.5 mg/l (danio rerio/ Zebrabärbling) 0.032 mg/l (Pseudokirchnerella subcapitata - Algen) NOEC (96h)

. 12.2 Persistence and degradability

CAS: 56-81-5 glycerol

CSB (chem. Sauerstoffbedarf) 95 mg/l (---) theor. O2 consumption (theor. Sauerstoffverbrauch) 1.217 g/g (---)

Biodegradability 14d 63 % (---) (Ready Biodegradability)

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(Contd. of page 5) CAS: 52-51-7 bronopol (INN)

51 - 57 % (Biodegradability - CO2 Evolution Test) Biodegradability 28d

CAS: 55965-84-9 mixture of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2Hisothiazol-3-< 50 % /10 Tage

one [EC no. 220-239-6] (3:1) Biodegradability

12.3 Bioaccumulative potential

CAS: 56-81-5 glycerol Log Pow ≤ 4 (--

CAS: 52-51-7 bronopol (INN)

Log Pow 0.17 (---)

. 12.4 Mobility in soil No further relevant information available.

. Additional ecological information:

. General notes: Water hazard class 3 (German Regulation) (Self-assessment): extremely hazardous for

water

Do not allow product to reach ground water, water course or sewage system, even in

small quantities.

Danger to drinking water if even extremely small quantities leak into the ground.

Danger to drinking water if even small quantities leak into the ground.

. 12.5 Results of PBT and vPvB assessment

. PBT: Not applicable. . vPvB Not applicable.

No further relevant information available. . 12.6 Other adverse effects

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Recommendation Must be specially treated adhering to official regulations.

. European waste catalogue

HP14 Ecotoxic

Uncleaned packaging:

Dispose of packaging according to regulations on the disposal of packagings. Recommendation:

. Recommended cleansing agents: Water, if necessary together with cleansing agents.

SECTION 14: Transport information

. 14.1 UN-Number . ADR, IMDG, IATA	UN3082
. 14.2 UN proper shipping name	
. ADR	3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (mixture of: 5-chloro-2-methyl-4-isothiazolin-3- one [EC no. 247-500-7] and 2-methyl-2Hisothiazol-3-one [EC no. 220-239-6] (3:1), 2-BROMO-2-NITROPROPANE-1,3- DIOL)
. IMDG	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (mixture of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2Hisothiazol-3-one [EC no. 220-239-6] (3:1), 2-BROMO-2-NITROPROPANE-1,3-DIOL), MARINE POLLUTANT
. IATA	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (mixture of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2Hisothiazol-3-one [EC no. 220-239-6] (3:1). 2-BROMO-2-NITROPROPANE-1.3-DIOL)

. 14.3 Transport hazard class(es)

. ADR



Class 9 (M6) Miscellaneous dangerous substances and articles. Label

. IMDG, IATA



9 Miscellaneous dangerous substances and articles. Class Label

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	(Contd. of page
14.4 Packing group ADR, IMDG, IATA	III
. 14.5 Environmental hazards:	Product contains environmentally hazardous substances: mixture of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247 500-7] and 2-methyl-2Hisothiazol-3-one [EC no. 220-239-6] (3 1)
. Marine pollutant:	No Symbol (fish and tree)
. Special marking (ADR): . Special marking (IATA):	Symbol (fish and tree) Symbol (fish and tree)
. 14.6 Special precautions for user . Hazard identification number (Kemler code): . EMS Number:	Warning: Miscellaneous dangerous substances and articles. 90 F-A,S-F
Stowage Category	A
. 14.7 Transport in bulk according to Annex II of Mar the IBC Code	rpol and Not applicable.
Transport/Additional information:	Not dangerous according to the above specifications.
ADR Limited quantities (LQ) Excepted quantities (EQ)	5L Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
. Transport category . Tunnel restriction code	3
. IMDG . Limited quantities (LQ) . Excepted quantities (EQ)	5L Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
. UN "Model Regulation":	UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (MIXTURE OF: 5-CHLORO-2-METHYL-4- ISOTHIAZOLIN-3-ONE [EC NO. 247-500-7] AND 2-METHYL- 2HISOTHIAZOL-3-ONE [EC NO. 220-239-6] (3:1), 2-BROMO 2-NITROPROPANE-1,3-DIOL), 9, III

SECTION 15: Regulatory information

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

. Directive 2012/18/EU

. Named dangerous substances -

ANNEX I

None of the ingredients is listed. Seveso category E2 Hazardous to the Aquatic Environment

. Qualifying quantity (tonnes) for the

application of lower-tier

200 t requirements

Qualifying quantity (tonnes) for the

application of upper-tier

requirements

15.2 Chemical safety

assessment: A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

. Department issuing SDS:

Environment protection department.

ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods . Abbreviations and acronyms:

IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
VOC: Volatile Organic Compounds (USA, EU)
DNEL: Derived No-Effect Level (REACH)
PNEC: Predicted No-Effect Concentration (REACH)
C50: Lethal concentration 50 percent

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative
Acute Tox. 3: Acute toxicity – Category 3
Acute Tox. 4: Acute toxicity – Category 4
Acute Tox. 2: Acute toxicity – Category 2
Skin Corr. 1C: Skin corrosion/irritation – Category 2
Skin Irrit. 2: Skin corrosion/irritation – Category 2

Eye Dam. 1: Serious eye damage/eye irritation - Category 1

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Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
Skin Sens. 1: Skin sensitisation – Category 1
Skin Sens. 1A: Skin sensitisation – Category 1A
SKIN Sens. 1A: Skin sensitisation – Category 1A
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1
Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1
Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2

* Data compared to the previous version altered.

GB