

Trade name: Korox® (REF 46014)

Current version : 2.1.0, issued: 10.04.2019

Replaced version: 2.0.0, issued: 26.02.2019

Region: GB

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

### 1.1 Product identifier

Trade name

**Korox® (REF 46014)**

**Korox® 250 (REF 46014, 54300)**

**Korox® 110 (REF 46044, 54299)**

**Korox® 50 (REF 46062, 54298)**

**Korox® 25 (REF 46036)**

Substance name aluminium oxide  
REACH registration no. 01-2119529248-35

#### Identification numbers

CAS no. 1344-28-1  
EC no. 215-691-6

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

#### Relevant identified uses of the substance or mixture

Manufacturing of dental prosthesis in a dental laboratory

#### Uses advised against

No data available.

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

#### Address

BEGO Bremer Goldschlägerei  
Wilh. Herbst GmbH & Co. KG  
Wilhelm-Herbst-Str. 1  
28359 Bremen

Telephone no. +49/ 421/ 2028 – 0  
Fax no. +49/ 421/ 2028 – 115  
e-mail msds@bego.com

#### Information provided by / telephone

Research & Development Department - Materials, alloys and ceramics; +49/ 421/ 2028 – 130 (Chief Development Officer alloys)

#### Advice on Safety Data Sheet

msds@bego.com

### 1.4 Emergency telephone number

For medical advice (in German and English):  
+49 (0)551 192 40 (Giftinformationszentrum Nord)

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

#### Classification information

This product does not meet the classification and labelling criteria given in the Regulation (EC) No 1272/2008 (CLP).

### 2.2 Label elements

Not relevant

### 2.3 Other hazards

PBT assessment  
The product is not considered to be a PBT.  
vPvB assessment  
The product is not considered to be a vPvB.

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### SECTION 3: Composition/information on ingredients

#### 3.1 Substances

##### Chemical characterization

Substance name aluminium oxide

##### Identification numbers

CAS no. 1344-28-1

EC no. 215-691-6

#### 3.2 Mixtures

Not applicable. The product is not a mixture.

### SECTION 4: First aid measures

#### 4.1 Description of first aid measures

##### General information

If the patient is likely to become unconscious, place and transport in stable sideways position. In case of persisting adverse effects, consult a physician. Remove contaminated clothing and shoes immediately, and launder thoroughly before reusing.

##### After inhalation

Remove affected person from the immediate area. Ensure supply of fresh air. If a high concentration of dust is inhaled, seek medical help immediately.

##### After skin contact

Wash off immediately with soap and water.

##### After eye contact

Remove contact lenses. Rinse eye thoroughly under running water keeping eyelids wide open and protecting the unaffected eye (at least 10 to 15 minutes).

##### After ingestion

Rinse mouth thoroughly with water. Never give anything by mouth to an unconscious person. Let plenty of water be drunk in small gulps. Call a doctor immediately.

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

No data available.

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

No data available.

### SECTION 5: Firefighting measures

#### 5.1 Extinguishing media

##### Suitable extinguishing media

Carbon dioxide; Extinguishing powder; Water spray jet; Foam

##### Unsuitable extinguishing media

High power water jet

#### 5.2 Special hazards arising from the substance or mixture

None known.

#### 5.3 Advice for firefighters

Use self-contained breathing apparatus. Wear protective clothing.

### SECTION 6: Accidental release measures

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

##### For non-emergency personnel

Avoid dust formation. Refer to protective measures listed in sections 7 and 8.

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**For emergency responders**

No data available. Personal protective equipment (PPE) - see Section 8.

**6.2 Environmental precautions**

Do not discharge into the drains/surface waters/groundwater.

**6.3 Methods and material for containment and cleaning up**

Take up mechanically. Avoid raising dust. When picked up, treat material as prescribed under heading "Disposal considerations".

**6.4 Reference to other sections**

No data available.

**SECTION 7: Handling and storage**

**7.1 Precautions for safe handling**

**General protective and hygiene measures**

Wash hands before breaks and after work. Do not eat, drink or smoke during work time. Remove soiled or soaked clothing immediately. Do not inhale dust. Keep away from foodstuffs and beverages.

**Advice on protection against fire and explosion**

No special measures necessary.

**7.2 Conditions for safe storage, including any incompatibilities**

**Technical measures and storage conditions**

Keep container tightly closed and dry in a cool, well-ventilated place.

**Requirements for storage rooms and vessels**

Keep only in the original container.

**Advice on storage assembly**

Do not store together with: explosive substances

**7.3 Specific end use(s)**

No data available.

**SECTION 8: Exposure controls/personal protection**

**8.1 Control parameters**

**Occupational exposure limit values**

No	Substance name	CAS no.	EC no.
1	aluminium oxide	1344-28-1	215-691-6
<b>List of approved workplace exposure limits (WELs) / EH40</b>			
Aluminium oxides			
total inhalable dust			
	WEL long-term (8-hr TWA reference period)	10	mg/m <sup>3</sup>
<b>List of approved workplace exposure limits (WELs) / EH40</b>			
Aluminium oxides			
respirable dust			
	WEL long-term (8-hr TWA reference period)	4	mg/m <sup>3</sup>
2	<b>Dust</b>		
<b>List of approved workplace exposure limits (WELs) / EH40</b>			
Dust respirable			
	WEL long-term (8-hr TWA reference period)	10	mg/m <sup>3</sup>
	Comments	see Definition 44 "Dust"	
<b>List of approved workplace exposure limits (WELs) / EH40</b>			
Dust inhalable			
	WEL long-term (8-hr TWA reference period)	4	mg/m <sup>3</sup>
	Comments	see Definition 44 "Dust"	

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## DNEL, DMEL and PNEC values

### DNEL values (worker)

No	Substance name			CAS / EC no
	Route of exposure	Exposure time	Effect	Value
1	aluminium oxide			1344-28-1 215-691-6
	inhalative	Long term (chronic)	local	15.63 mg/m <sup>3</sup>

### DNEL value (consumer)

No	Substance name			CAS / EC no
	Route of exposure	Exposure time	Effect	Value
1	aluminium oxide			1344-28-1 215-691-6
	oral	Long term (chronic)	systemic	3.29 mg/kg/day

### PNEC values

No	Substance name		CAS / EC no
	ecological compartment	Type	Value
1	aluminium oxide		1344-28-1 215-691-6
	water	marine water sediment	74.9 µg/L
	sewage treatment plant	-	20 mg/L

## 8.2 Exposure controls

### Appropriate engineering controls

No data available.

### Personal protective equipment

#### Respiratory protection

If workplace exposure limits are exceeded, a respiration protection approved for this particular job must be worn. In case of dust formation, take appropriate measures for breathing protection in the event workplace threshold values are not specified.

Respiratory filter (part): Feinstaubmaske (Schutzstufe P2)

#### Eye / face protection

Safety glasses with side protection shield (EN 166)

#### Hand protection

Sufficient protection is given wearing suitable protective gloves checked according to i.e. EN 374, in the event of risk of skin contact with the product. Before use, the protective gloves should be tested in any case for its specific work-station suitability (i.e. mechanical resistance, product compatibility and antistatic properties). Adhere to the manufacturer's instructions and information relating to the use, storage, care and replacement of protective gloves. Protective gloves shall be replaced immediately when physically damaged or worn. Design operations thus to avoid permanent use of protective gloves.

#### Other

Chemical-resistant work clothes.

#### Environmental exposure controls

No data available.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

<b>Form/Colour</b>
Powder
white
<b>Odour</b>
odourless

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<b>Odour threshold</b>	
No data available	
<b>pH value</b>	
No data available	
<b>Boiling point / boiling range</b>	
No data available	
<b>Melting point / melting range</b>	
Value	appr. 2000 °C
<b>Decomposition point / decomposition range</b>	
No data available	
<b>Flash point</b>	
No data available	
<b>Auto-ignition temperature</b>	
No data available	
<b>Oxidising properties</b>	
No data available	
<b>Explosive properties</b>	
No data available	
<b>Flammability (solid, gas)</b>	
No data available	
<b>Lower flammability or explosive limits</b>	
No data available	
<b>Upper flammability or explosive limits</b>	
No data available	
<b>Vapour pressure</b>	
No data available	
<b>Vapour density</b>	
No data available	
<b>Evaporation rate</b>	
No data available	
<b>Relative density</b>	
No data available	
<b>Density</b>	
Value	3.7 - 4.5 g/cm <sup>3</sup>
<b>Bulk density</b>	
Value	500 - 2500 kg/m <sup>3</sup>
<b>Solubility in water</b>	
Comments	insoluble
<b>Solubility(ies)</b>	
No data available	
<b>Partition coefficient: n-octanol/water</b>	
No data available	
<b>Viscosity</b>	
No data available	

## 9.2 Other information

<b>Other information</b>
No data available.

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## SECTION 10: Stability and reactivity

### 10.1 Reactivity

No data available.

### 10.2 Chemical stability

Stable under recommended storage and handling conditions (See section 7).

### 10.3 Possibility of hazardous reactions

None, if handled according to order.

### 10.4 Conditions to avoid

None, if handled according to intended use.

### 10.5 Incompatible materials

None known.

### 10.6 Hazardous decomposition products

No hazardous decomposition products known.

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

Acute oral toxicity			
No	Substance name	CAS no.	EC no.
1	aluminium oxide	1344-28-1	215-691-6
LD50	>	15900	mg/kg bodyweight
Species	rat		
Method	OECD 401		
Source	ECHA		

Acute dermal toxicity			
No data available			

Acute inhalational toxicity			
No	Substance name	CAS no.	EC no.
1	aluminium oxide	1344-28-1	215-691-6
LC50		7.6	mg/l
Duration of exposure		1	h
State of aggregation	Dust		
Species	rat		
Method	OECD 403		
Source	ECHA		

Skin corrosion/irritation			
No	Substance name	CAS no.	EC no.
1	aluminium oxide	1344-28-1	215-691-6
Species	rabbit		
Method	OECD 404		
Source	ECHA		
Evaluation	non-irritant		

Serious eye damage/irritation			
No	Substance name	CAS no.	EC no.
1	aluminium oxide	1344-28-1	215-691-6
Species	rabbit		
Method	OECD 405		
Source	ECHA		
Evaluation	non-irritant		

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Respiratory or skin sensitisation			
No	Substance name	CAS no.	EC no.
1	aluminium oxide	1344-28-1	215-691-6
Route of exposure		Skin	
Species		guinea pig	
Source		ECHA	
Evaluation		non-sensitizing	
Germ cell mutagenicity			
No data available			
Reproduction toxicity			
No data available			
Carcinogenicity			
No data available			
STOT - single exposure			
No data available			
STOT - repeated exposure			
No data available			
Aspiration hazard			
No data available			
Delayed and immediate effects as well as chronic effects from short and long-term exposure			
Contact with the skin and eyes may cause mechanical irritation. Inhalation of dusts may irritate the respiratory tract.			

## SECTION 12: Ecological information

### 12.1 Toxicity

Toxicity to fish (acute)
No data available
Toxicity to fish (chronic)
No data available
Toxicity to Daphnia (acute)
No data available
Toxicity to Daphnia (chronic)
No data available
Toxicity to algae (acute)
No data available
Toxicity to algae (chronic)
No data available
Bacteria toxicity
No data available

### 12.2 Persistence and degradability

No data available.

### 12.3 Bioaccumulative potential

No data available.

### 12.4 Mobility in soil

No data available.

### 12.5 Results of PBT and vPvB assessment

Results of PBT and vPvB assessment	
PBT assessment	The product is not considered to be a PBT.
vPvB assessment	The product is not considered to be a vPvB.

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## 12.6 Other adverse effects

No data available.

## 12.7 Other information

### Other information

Do not discharge product unmonitored into the environment.

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

#### Product

Allocation of a waste code number, according to the European Waste Catalogue, should be carried out in agreement with the regional waste disposal company.

#### Packaging

Residuals must be removed from packaging and when emptied completely disposed of in accordance with the regulations for waste removal. Incompletely emptied packaging must be disposed of in the form of disposal specified by the regional disposer.

## SECTION 14: Transport information

### 14.1 Transport ADR/RID/ADN

The product is not subject to ADR/RID/ADN regulations.

### 14.2 Transport IMDG

The product is not subject to IMDG regulations.

### 14.3 Transport ICAO-TI / IATA

The product is not subject to ICAO-TI / IATA regulations.

### 14.4 Other information

No data available.

### 14.5 Environmental hazards

Information on environmental hazards, if relevant, please see 14.1 - 14.3.

### 14.6 Special precautions for user

No data available.

### 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code

Not relevant

## SECTION 15: Regulatory information

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

#### EU regulations

#### Regulation (EC) No 1907/2006 (REACH) Annex XIV (List of substances subject to authorisation)

In accordance with the Reach regulation (EC) 1907/2006, the product does not contain any substances that are considered as subject to listing in annex XIV, inventory of substances requiring authorisation.

#### REACH candidate list of substances of very high concern (SVHC) for authorisation

In accordance with article 57 and article 59 of the Reach regulation (EC) 1907/2006, this substance is not considered as subject to listing in annex XIV, inventory of substances requiring authorisation ("Authorization list").

#### Regulation (EC) No 1907/2006 (REACH) Annex XVII: RESTRICTIONS ON THE MANUFACTURE, PLACING ON THE MARKET AND USE OF CERTAIN DANGEROUS SUBSTANCES, PREPARATIONS AND ARTICLES

The substance is not subject to the provisions of annex XVII (restriction entries) of the Reach regulation (EC) 1907/2006.

#### Directive 2012/18/EU on the control of major-accident hazards involving dangerous substances

This substance is not subject to Part I or 2 of Annex I

#### Other regulations

Adhere to the national sanitary and occupational safety regulations when using this product.



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## 15.2 Chemical safety assessment

A chemical safety assessment has been carried out for this substance.

### SECTION 16: Other information

#### Sources of key data used to compile the data sheet:

Regulation (EC) No 1907/2006 (REACH), 1272/2008 (CLP) as amended in each case.

EC Directives 2000/39/EC, 2006/15/EC, 2009/161/EU

National Threshold Limit Values of the corresponding countries as amended in each case.

Transport regulations according to ADR, RID, IMDG, IATA as amended in each case.

The data sources used to determine physical, toxic and ecotoxic data, are indicated directly in the corresponding chapter.

#### Department issuing safety data sheet

UMCO GmbH - D-21107 Hamburg, Georg-Wilhelm-Strasse 187, Tel.: +49(40)555 546 300, Fax: +49(40)555 546 357, e-mail: umco@umco.de

This information is based on our present knowledge and experience.

The safety data sheet describes products with a view to safety requirements.

It does not however, constitute a guarantee for any specific product properties and shall not establish a legally valid contractual relationship.

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