

## Martoxid® KMS-94

OSHA HazCom Standard 29 CFR 1910.1200(g) and GHS Rev 03  
Canadian Workplace Hazardous Material Information System (WHMIS) 2015  
Mexico NOM-018-STPS-2000; NOM-018-STPS-2015  
Globally Harmonized System (GHS)

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

### 1.1. Product identifier

**Product Name:** Martoxid® KMS-94  
**Pure substance/mixture** Mixture

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

**Recommended Use** Abrasive. Catalyst. Adsorbent(s). Chemical industry (raw material for the production of other aluminium compounds), etc.

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

**Company:** MARTINSWERK GmbH  
Kölner Strasse 110  
50127 Bergheim  
Germany  
Tel. : +49-2271-90.22.78  
Fax. : +49-2271-90.27.17

**Internet** [www.hubermaterials.com](http://www.hubermaterials.com)

**E-mail** [hubermaterials@huber.com](mailto:hubermaterials@huber.com)

**1.4. Emergency telephone number** CHEMTREC: +1 800 424 9300 or International +1 703 527 3887

## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

**OSHA Regulatory Status** This material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200)

**Physical Hazards** Not classified

**Health Hazards** Not classified

**Environmental Hazard** Not classified

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## 2.2. Label elements

<b>Symbols/Pictograms</b>	None
<b>Signal Word</b>	None
<b>Hazard Statements</b>	None
<b>Hazard Statements</b>	None

## Precautionary Statements

<b>Prevention</b>	Employ good industrial hygiene practice Do not handle until all safety precautions have been read and understood. Do not breathe dust Wear protective gloves/protective clothing/eye protection/face protection
<b>Response</b>	IF ON SKIN: Wash with plenty of soap and water
<b>Storage</b>	Store away from incompatible materials
<b>Disposal</b>	Dispose of contents/containers in accordance with local regulations

**Additional Information:** None.

**Hazards not otherwise classified (HNOC)** Not classified.

## SECTION 3: Composition/information on ingredients

**Pure substance/mixture** Mixture

Chemical Name	CAS Number	TSCA: United States	Canada (DSL)	Mexico	REACH registration number	OSHA Regulatory Status	WHMIS	Weight-%
Aluminum oxide	1344-28-1	Y	Y	Y	01-211952924 8-35-xxxx 01-211952924 8-35-0017	Not classified	--	>=86

### Legend

X / Y: Complies , - / N: Not Listed , Exempt

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

**General Advice** When in doubt or if symptoms are observed, get medical advice. Ensure that medical personnel are aware of the material(s) involved and take precautions to

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protect themselves.

**Eye Contact**

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

**Skin Contact**

Wash with plenty of soap and water.

**Ingestion**

Rinse mouth thoroughly with water.

**Inhalation**

If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.

**Aspiration hazard**

Not an expected route of exposure.

**4.2. Most important symptoms and effects, both acute and delayed**

May cause irritation to mucous membranes and respiratory tract. Contact with dust can cause mechanical irritation or drying of the skin.

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

Treatment should be symptomatic and supportive.

## SECTION 5: Firefighting measures

**5.1. Extinguishing media****Suitable Extinguishing Media**

Not combustible. Use extinguishing agent suitable for type of surrounding fire. Water spray (fog). Foam. Dry chemical. Carbon dioxide (CO<sub>2</sub>).

**Unsuitable Extinguishing Media**

None known.

**5.2. Special hazards arising from the substance or mixture**

None known.

**5.3. Advice for firefighters****Special protective equipment for firefighters**

Wear a self-contained breathing apparatus and chemical protective clothing.

**Fire-fighting measures**

In case of fire and/or explosion do not breathe fumes.

## SECTION 6: Accidental release measures

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

Ensure adequate ventilation. Use personal protection recommended in Section 8.  
Avoid dust formation. Keep unauthorized personnel away.

**For non-emergency personnel**

Keep unauthorized personnel away.

**For emergency responders**

Keep unauthorized personnel away. Use personal protection recommended in Section 8.

**6.2. Environmental precautions**

Avoid runoff to waterways and sewers.

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

Methods for Containment : Prevent further leakage or spillage if safe to do so  
Methods for Clean-up : Sweep up and shovel into suitable containers for disposal

**6.4. Reference to other sections**

Section 8: Exposure controls and personal protection. See Section 13 for additional waste treatment information.

## SECTION 7: Handling and storage

**7.1. Precautions for safe handling**

Minimize dust generation and accumulation. Provide local exhaust ventilation.  
Handle in accordance with good industrial hygiene and safety practice.

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

Store away from incompatible materials. Keep container tightly closed and dry.

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

No information available.

## SECTION 8: Exposure controls/personal protection

**8.1. Control parameters****Occupational exposure limits****Aluminum oxide**

OSHA

TWA: 15 mg/m<sup>3</sup> total dust  
TWA: 5 mg/m<sup>3</sup> respirable fraction  
(vacated) TWA: 10 mg/m<sup>3</sup> total dust  
(vacated) TWA: 5 mg/m<sup>3</sup> respirable fraction  
TWA: 10 mg/m<sup>3</sup>  
TWA: 1 mg/m<sup>3</sup> respirable fraction  
Not established  
TWA 10 mg/m<sup>3</sup>

ACGIH

ACGIH TLV

NIOSH

Mexico

**Biological Limit Values:**

None

**DNEL/DMEL and PNEC values**  
**Aluminum oxide - 1344-28-1**

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Worker - inhalative, long-term - systemic	3 mg/m <sup>3</sup>
Consumer - oral, long-term - systemic	6.22 mg/kg bw/d

**Predicted No Effect Concentration (PNEC)****Aluminum oxide - 1344-28-1**

Sewage treatment plant	20 mg/l
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**8.2. Exposure controls**

**Engineering Measures** Provide a good standard of controlled ventilation (5 to 10 air changes per hour). Use exhaust ventilation to keep airborne concentrations below exposure limits. In case of insufficient ventilation, wear suitable respiratory equipment.

**Personal protective equipment**

**Eye/Face Protection** Wear safety glasses with side shields (or goggles).

**Skin and Body Protection** Wear suitable protective clothing.

**Hand protection** For operations where prolonged or repeated skin contact may occur, impervious gloves should be worn. Wear suitable gloves tested to EN 374.

**Respiratory Protection** In case of inadequate ventilation wear respiratory protection.

**Thermal hazards** None known.

**Hygiene Measures** Follow general hygiene considerations recognized as common good workplace practices. The worker should wash daily at the end of each work shift, and prior to eating, drinking, smoking, etc.

**Environmental Exposure Controls** Dispose of in accordance with local regulations.

**SECTION 9: Physical and chemical properties****9.1. Information on basic physical and chemical properties****Appearance:**

**Physical State** Solid Powder  
**Color** White (Al<sub>2</sub>O<sub>3</sub>)

**Odor** Odorless

**Odor Threshold** No information available

**pH:** +/- 9 (10 % / H<sub>2</sub>O)

**Melting point / Freezing point** 2000 °C (3632 °F) (1013 hPa)

**Initial boiling point and boiling range** 2980 °C (5396 °F) (1013 hPa)

**Flash Point:** Not applicable. Product/Substance is inorganic. Solid.

**Evaporation Rate** Not applicable. Melting Point : > 300°C

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<b>Flammability (solid, gas)</b>	No information available
Upper flammability limit:	
Lower flammability limit:	
<b>Vapor Pressure</b>	1 hPa (2158 °C)
<b>Vapor Density</b>	Not applicable
	Melting Point : > 300°C
<b>Relative Density</b>	+/- 3.7 - 3.9
<b>Water Solubility</b>	Insoluble
<b>Solubility in other solvents</b>	No information available
<b>Partition coefficient</b>	Not applicable : Product/Substance is inorganic
<b>Autoignition Temperature</b>	No information available
<b>Decomposition Temperature</b>	No information available
<b>Dynamic viscosity</b>	Not applicable Solid
<b>Explosive Properties</b>	None
<b>Oxidizing Properties</b>	None
	No data available

## SECTION 10: Stability and reactivity

<b>10.1. Reactivity</b>	No data available
<b>10.2. Chemical stability</b>	Stable under normal conditions
<b>10.3. Possibility of hazardous reactions</b>	None under normal processing
<b>10.4. Conditions to avoid</b>	Incompatible materials Decomposition Temperature : Al <sub>2</sub> O <sub>3</sub> Water
<b>10.5. Incompatible materials</b>	Strong acids
<b>10.6. Hazardous decomposition products</b>	None known

## SECTION 11: Toxicological information

<b>General Information</b>	Users are advised to consider national Occupational Exposure Limits or other equivalent values.
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### Information on Likely Routes of Exposure

<b>Inhalation</b>	Do not breathe dust
<b>Skin</b>	Avoid prolonged or repeated contact with skin Contact with dust can cause mechanical irritation or drying of the skin
<b>Eyes</b>	Avoid contact with eyes Dust contact with the eyes can lead to mechanical irritation

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**Ingestion** Ingestion is not a likely route of exposure

**Aspiration hazard** Not an expected route of exposure.

### 11.1. Information on toxicological effects

#### Aluminum oxide

**Serious eye damage/eye irritation** Non-irritant : Rabbit

**Skin Corrosion/Irritation** Non-irritant : Rabbit

**Mutagenicity** in vitro in vivo Based on available data, the classification criteria are not met

**Reproductive Effects** No indication of effects on fertility.

No indication of effects on developmental toxicity.

**Target Organ Effects** Lungs

**Specific target organ toxicity** No information available

- **Single exposure**

**Specific target organ toxicity** Repeated dose toxicity Inhalation 28-d Rat NOAEL (No observed adverse effect level) 70 mg(Al)/m<sup>3</sup>

- **Repeated exposure** Repeated dose toxicity 1- Year Rat NOAEL (No observed adverse effect level)  $\geq 30$  mg Al/kg bw

**Acute Toxicity** Mixture  
Al<sub>2</sub>O<sub>3</sub>  
Repeated dose toxicity Inhalation 28-d Rat NOAEL (No observed adverse effect level) 70 mg(Al)/m<sup>3</sup> . Target Organs Lungs Respiratory system  
  
Repeated dose toxicity 1- Year Oral Rat NOAEL (No observed adverse effect level)  $\geq 30$  mg Al/kg bw

**Respiratory Sensitization** Based on available data, the classification criteria are not met

**Serious eye damage/eye irritation** Non-irritant : Rabbit

**Skin Corrosion/Irritation** Non-irritant : Rabbit

**Mutagenicity** Based on available data, the classification criteria are not met

**Reproductive Effects** Based on available data, the classification criteria are not met.

**Reproductive Toxicity** Based on available data, the classification criteria are not met.

**Carcinogenicity** This product does not contain any carcinogens or potential carcinogens as listed by OSHA, IARC or NTP.

**Target Organ Effects** Lungs.

**Specific target organ toxicity - Single exposure** No information available.

**Specific target organ toxicity - Repeated exposure** No information available.

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Mixture versus substance  
information Mixture

## SECTION 12: Ecological information

**12.1. Ecotoxicity** Very low solubility. Not considered to be harmful to aquatic life.

### Aluminum oxide

WGK Classification (VwVwS) 1346 WGK: nwg

**12.2. Persistence and degradability** The methods for determining biodegradability are not applicable to inorganic substances.

**12.3. Bioaccumulative potential** Not likely to bioaccumulate.

**Bioconcentration factor (BCF)** No data available.

**12.4. Mobility in soil** None.

**12.5. Results of PBT and vPvB assessment** This substance does not meet the criteria for classification as PBT or vPvB.

**12.6. Other adverse effects** None known

## SECTION 13: Disposal considerations

### **13.1. Waste treatment methods**

**Disposal Methods** Disposal should be in accordance with applicable regional, national and local laws and regulations.

**Contaminated Packaging** Empty containers should be taken to an approved waste handling site for recycling or disposal. Do not reuse container.

**Waste codes** Waste codes should be assigned by the user based on the application for which the product was used

### Aluminum oxide

WGK Classification (VwVwS) 1346 WGK: nwg

## SECTION 14: Transport information



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### Mode of Transportation (Road, Water, Air, Rail)

TDG -Canada	Not regulated
DOT	Not regulated
ADR	Not regulated
IATA	Not regulated
IMDG/IMO	Not regulated
ICAO	Not regulated

14.1. UN number None

14.2. UN proper shipping name None

14.3. Transport hazard class(es) None

14.4. Packing group None

14.5. Environmental hazards No

14.6. Special precautions for user Not applicable

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code  
Not applicable

## SECTION 15: Regulatory information

### Global Inventories

Pure substance/mixture Mixture

Chemical Name	CAS Number	EC No	REACH registration number	Australia (AICS)	Canada (DSL)	China (IECSC)	Japan	S. Korea (KECL)	Mexico	New Zealand	Philippines (PICCS)	Taiwan	TSCA: United States
Aluminum oxide	1344-28-1	215-691-6	01-211952 9248-35-x xxx  01-211952 9248-35-0 017	Y	Y	Y	(1)-23 (ENCS)(ISH L)	KE-01012	Y	Y	Y	Y	Y

#### Legend

X / Y: Complies - / N: Not Listed Exempt

### US Federal Regulations

#### EPA

#### CERCLA

Aluminum oxide

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SARA 313

1.0

**SARA 313**

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

**SARA 311/312 Hazardous Categorization**

Yes :

Acute health hazard

No :

Chronic health hazard

Fire hazard

Sudden release of pressure hazard

Reactive hazard

**Aluminum oxide**

Acute Health Hazard Yes [based on aluminum generics]

Chronic Health Hazard No

Fire Hazard No

Sudden Release of Pressure Hazard No

Reactive Hazard No

**CWA (Clean Water Act)**

Not listed

**CAA (Clean Air Act)**

Not listed

**U.S. State Right-to-Know Regulations**

Chemical Name	CAS Number	California Proposition 65	California CPR	Massachusetts	Minnesota	New Jersey	Pennsylvania
Aluminum oxide	1344-28-1	-	--	Listed	--	Listed	Listed

**California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65)**

This product does not contain any Proposition 65 chemicals

**CANADA****WHMIS:**

This product has been classified in accordance with the hazard criteria of the Hazardous Products Regulations (HPR) and the SDS contains all the information required by the HPR

**Aluminum oxide**

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## SECTION 16: Other information

**Prepared by**

Huber Engineered Materials (HEM) Global Regulatory Affairs  
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Reason for Version OSHA (Occupational Safety and Health Administration of the US Department of Labor).

Training Advice Do not handle until all safety precautions have been read and understood.

### Abbreviations and acronyms

Land transport (ADR/RID)  
Biochemical oxygen demand (BOD)  
Chemical oxygen demand (COD)  
Derived No Effect Level (DNEL)  
Predicted No Effect Concentration (PNEC)  
DOT (Department of Transportation)  
ICAO (air)  
International Air Transport Association (IATA)  
International Agency for Research on Cancer (IARC)  
International Maritime Dangerous Goods (IMDG)  
PPE - Personal Protection Equipment  
Positive Pressure Self-Contained Breathing Apparatus (SCBA)  
STEL - Short Term Exposure Limit  
TLV® - Threshold Limit Value  
TWA - Time-Weighted Average  
CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act)  
NIOSH - National Institute for Occupational Safety and Health  
EPA SARA Title III Section 312 (40 CFR 370) Hazard Classification  
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA)  
TDG (Transport of Dangerous Goods) Canada  
Workplace Hazardous Materials Information System (WHMIS) status and classification

### Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

**End of Safety Data Sheet**