

**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)

Issue Date: 04/Jun/2019
Print Date: 04/Jun/2019

Revision Number: 1.3
Page 1 of 11

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

E-mail 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

Issue Date: 04/Jun/2019
 Print Date: 04/Jun/2019

Revision Number: 1.3
 Page 2 of 11

2.2. Label elements

Symbols/Pictograms	None
Signal Word	None
Hazard Statements	None
Hazard Statements	None

Precautionary Statements

Prevention	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
Response	IF ON SKIN: Wash with plenty of soap and water
Storage	Store away from incompatible materials
Disposal	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

Issue Date: 04/Jun/2019
Print Date: 04/Jun/2019

Revision Number: 1.3
Page 3 of 11

	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 (CO₂).

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

Issue Date: 04/Jun/2019
Print Date: 04/Jun/2019

Revision Number: 1.3
Page 4 of 11

- 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/m³ total dust
TWA: 5 mg/m³ respirable fraction
(vacated) TWA: 10 mg/m³ total dust
(vacated) TWA: 5 mg/m³ respirable fraction
TWA: 10 mg/m³
TWA: 1 mg/m³ respirable fraction
Not established
TWA 10 mg/m³

ACGIH

ACGIH TLV

NIOSH

Mexico

Biological Limit Values:

None

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

Issue Date: 04/Jun/2019
 Print Date: 04/Jun/2019

Revision Number: 1.3
 Page 5 of 11

Worker - inhalative, long-term - systemic	3 mg/m ³
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
------------------------	---------

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 ₂ O ₃)
Odor	Odorless
Odor Threshold	No information available
pH:	+/- 9 (10 % / H ₂ 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

Issue Date: 04/Jun/2019
Print Date: 04/Jun/2019Revision Number: 1.3
Page 6 of 11

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

SECTION 10: Stability and reactivity

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

SECTION 11: Toxicological information

General Information Users are advised to consider national Occupational Exposure Limits or other equivalent values.

Information on Likely Routes of Exposure

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

Safety Data Sheet

Martoxid® KMS-94

Issue Date: 04/Jun/2019
Print Date: 04/Jun/2019

Revision Number: 1.3
Page 7 of 11

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)/m³

- **Repeated exposure**

Repeated dose toxicity 1- Year Rat NOAEL (No observed adverse effect level) >=30 mg Al/kg bw

Acute Toxicity

Mixture

Al₂O₃

Repeated dose toxicity Inhalation 28-d Rat NOAEL (No observed adverse effect level) 70 mg(Al)/m³ . Target Organs Lungs Respiratory system

Repeated dose toxicity 1- Year Oral Rat NOAEL (No observed adverse effect level) >=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.

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

Safety Data Sheet

Martoxid® KMS-94

Issue Date: 04/Jun/2019
 Print Date: 04/Jun/2019

Revision Number: 1.3
 Page 9 of 11

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)(ISHL)	KE-01012	Y	Y	Y	Y	Y

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

US Federal Regulations

EPA

CERCLA
Aluminum oxide

Safety Data Sheet

Martoxid® KMS-94

Issue Date: 04/Jun/2019
Print Date: 04/Jun/2019

Revision Number: 1.3
Page 10 of 11

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

--

SECTION 16: Other information

Prepared by

Huber Engineered Materials (HEM) Global Regulatory Affairs
regulatory.affairs@huber.com

Issue Date:

04/Jun/2019

Print Date:

04/Jun/2019

HUBER

Safety Data Sheet

Martoxid® KMS-94

Issue Date: 04/Jun/2019
Print Date: 04/Jun/2019

Revision Number: 1.3
Page 11 of 11

Revision Number: 1.3

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