



Martoxid® TM-1130

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
GHS (Globally Harmonized System)

Issue Date 19/Mar/2024
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Revision Number 1.3.1
Page 1 of 11

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

1.1. Product identifier

Product Name: Martoxid® TM-1130
Pure substance/mixture Substance

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

Recommended Use Thermally conductive filler
Industrial use --
Professional use --
Consumer use --
Uses advised against None known.

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.huberadvancedmaterials.com

Contact E-Mail www.huberadvancedmaterials.com/contact

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)

Safety Data Sheet

Martoxid® TM-1130**Issue Date** 19/Mar/2024**Print Date** 19/Mar/2024**Revision Number** 1.3.1**Page** 2 of 11**Physical Hazards** Not classified**Health Hazards** Not classified**Environmental Hazard** Not classified**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
Wash thoroughly after handling
Wear protective gloves/protective clothing/eye protection/face protection
Do not breathe dust

Response

IF ON SKIN: Wash with plenty of soap and water
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing
If swallowed, rinse mouth with water (only if the person is conscious)
Drink plenty of 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

Substance

Chemical Name	CAS Number	Weight-%
Aluminum oxide	1344-28-1	>99

Safety Data Sheet

Martoxid® TM-1130

Issue Date 19/Mar/2024
Print Date 19/Mar/2024

Revision Number 1.3.1
Page 3 of 11

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 protect themselves.
Eye Contact	In case of eye contact, remove contact lens and rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.
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	Dust contact with the eyes can lead to mechanical irritation. 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

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.

Safety Data Sheet

Martoxid® TM-1130**Issue Date** 19/Mar/2024**Print Date** 19/Mar/2024**Revision Number** 1.3.1**Page** 4 of 11**Fire-fighting measures**

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

SECTION 6: Accidental release measures

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 upMethods 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

Safety Data Sheet

Martoxid® TM-1130**Issue Date** 19/Mar/2024**Print Date** 19/Mar/2024**Revision Number** 1.3.1**Page** 5 of 11ACGIH
NIOSHTWA: 10 mg/m³
--**PNEC (Predicted No Effect Concentration)****DNEL (Derived No Effect Level)** No information available**Biological Limit Values** None**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.

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**Odor** Odorless**Odor Threshold** No information available**pH:** Not available**Melting point / Freezing point** 2000 °C (3632 °F) (1013 hPa)**Initial boiling point and boiling range** 2980 °C (5396 °F) (1013 hPa)**Freezing Point** Not applicable**Flash Point** Not applicable Product/Substance is inorganic Solid**Evaporation Rate** Not applicable. Melting Point : > 300°C**Flammability (solid, gas)** No information available

Safety Data Sheet

Martoxid® TM-1130**Issue Date** 19/Mar/2024**Print Date** 19/Mar/2024**Revision Number** 1.3.1**Page** 6 of 11

Upper flammability limit:	--
Lower flammability limit:	--
Vapor Pressure	1 hPa (2158 °C)
Vapor Density	Not applicable Melting Point : > 300°C
Density	No data available
Relative Density	4 (20 °C)
Water Solubility	Insoluble
Solubility in other solvents	No information available
Partition coefficient	No information available Not applicable Product/Substance is inorganic
Autoignition Temperature	Aluminum oxide has no potential to explode.
Decomposition Temperature	~2000 °C (> 2050 °C)
Viscosity	No information available.
Kinematic viscosity	Not applicable Solid
Dynamic viscosity	Not applicable Solid
Explosive Properties	None
Oxidizing Properties	None
Particle Size	No information available
VOC Content (%)	Not applicable

9.2. Other information**9.2.1. Information with regard to physical hazard classes**

Not applicable

9.2.2. Other safety characteristics

Not applicable

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 ~ 2000 °C (> 2050°C) < / =0.3% : Al ₂ O ₃ , Water
10.5. Incompatible materials	Strong acids
10.6. Hazardous decomposition products	None known

SECTION 11: Toxicological information

Safety Data Sheet

Martoxid® TM-1130**Issue Date** 19/Mar/2024**Print Date** 19/Mar/2024**Revision Number** 1.3.1**Page** 7 of 11**General Information**

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

11.1. Information on toxicological effects**Aluminum oxide**

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	No indication of effects on fertility. No indication of effects on developmental toxicity.
Target Organ Effects	Lungs
Specific target organ toxicity - Single exposure	May cause respiratory irritation
Specific target organ toxicity - Repeated exposure	May cause damage to organs through prolonged or repeated exposure if inhaled Lungs

Acute Toxicity	Based on available data, the classification criteria are not met
Chronic Toxicity	Based on available data, the classification criteria are not met.
Chronic Effects	Based on available data, the classification criteria are not met.
Respiratory Sensitization	Based on available data, the classification criteria are not met
Serious eye damage/eye irritation	Based on available data, the classification criteria are not met
Skin Corrosion/Irritation	Based on available data, the classification criteria are not met
Skin Sensitization	Based on available data, the classification criteria are not met
Mutagenicity	Based on available data, the classification criteria are not met
Reproductive Effects	This product does not contain any known or suspected reproductive hazards.
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.
Specific target organ toxicity - Single exposure	Based on available data, the classification criteria are not met.
Specific target organ toxicity - Repeated exposure	Based on available data, the classification criteria are not met.

Information on Likely Routes of Exposure

Inhalation	Do not breathe dust
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Safety Data Sheet

Martoxid® TM-1130**Issue Date** 19/Mar/2024**Print Date** 19/Mar/2024**Revision Number** 1.3.1**Page** 8 of 11

Ingestion	Ingestion is not a likely route of exposure
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
Aspiration hazard	Not an expected route of exposure.

11.2. Information on other hazards

11.2.1. Endocrine disrupting properties This product does not contain any known or suspected endocrine disruptors

11.2.2. Other information Not applicable

SECTION 12: Ecological information

12.1. Toxicity Not considered to be harmful to aquatic life

Aluminum oxide

WGK Classification (AwSV) 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. Endocrine disrupting properties This product does not contain any known or suspected endocrine disruptors

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Safety Data Sheet

Martoxid® TM-1130**Issue Date** 19/Mar/2024**Print Date** 19/Mar/2024**Revision Number** 1.3.1**Page** 9 of 11**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 (AwSV)** 1346 WGK: nwg

SECTION 14: Transport information

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

TDG -Canada	Not regulated
DOT	Not regulated
ADR	Not regulated
RID	Not regulated
ADN	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. Maritime transport in bulk according to IMO instruments**
Not applicable

SECTION 15: Regulatory information

Global Inventories

Safety Data Sheet

Martoxid® TM-1130

Issue Date 19/Mar/2024

Print Date 19/Mar/2024

Revision Number 1.3.1

Page 10 of 11

Pure substance/mixture

Substance

Chemical Name	CAS Number	EC No	EU REACH registration number	Australia (AIIIC)	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	A

X / Y: Complies ; A: Active ; - / N: Exempt / Not Listed

US Federal Regulations

EPA

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemicals which is subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

Aluminum oxide

SARA 313

1.0

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	Massachusetts	Minnesota	New Jersey	Pennsylvania
Aluminum oxide	1344-28-1	-	Y	Y	Y	Y

Y: Listed ; N: Not 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

SECTION 16: Other information

Prepared by

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HUBER

Safety Data Sheet

Martoxid® TM-1130

Issue Date 19/Mar/2024
Print Date 19/Mar/2024

Revision Number 1.3.1
Page 11 of 11

Issue Date 19/Mar/2024
Print Date 19/Mar/2024

Revision Number 1.3.1

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

IARC (International Agency for Research on Cancer)
IATA (International Air Transport Association)
IMDG (International Maritime Dangerous Goods)
IUCLID (International Uniform Chemical Information Database)
WHMIS (Workplace Hazardous Materials Information System)
DOT (Department of Transportation)
OSHA (Occupational Safety and Health Administration of the US Department of Labor)
TWA (Time-Weighted Average)
CLP (The Classification, Labeling and Packaging of Substances and Mixtures Regulation (EC 1272/2008))
PPE (Personal Protection Equipment)
NIOSH (National Institute for Occupational Safety and Health)
TDG (Transport of Dangerous Goods) Canada
CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act)
RQ (Reportable Quantity) (RQ/% in mixture)
STEL (Short Term Exposure Limit)
TLV® (Threshold Limit Value)
DNEL (Derived No Effect Level)
SVHC (Substances of Very High Concern)
BOD (Biochemical oxygen demand)
COD (Chemical oxygen demand)
ICAO (International Civil Aviation Organization)
IMDG (International Maritime Dangerous Goods)
ADR (European Agreement Concerning the International Carriage of Dangerous Goods by Road)
RID (Agreement Concerning the International Carriage of Dangerous Goods by Rail)
SCBA (Self-Contained Breathing Apparatus) Positive Pressure
GHS (Globally Harmonized System)
SARA (Superfund Amendments and Reauthorization Act of 1986)
TSCA (Toxic Substances Control Act)

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