



Martoxid® MZS; Martoxid® MZS-1; Martoxid® MZS-3; Martoxid® MZS-12

This material safety datasheet has been prepared according to Brazilian legislation and ABNT NBR 14725:2014 GHS (Globally Harmonized System)

Issue Date 17/Jul/2024
Print Date 19/Jul/2024

Revision Number 1.3.1

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

1.1. Product identifier

Product Name: Martoxid® MZS; Martoxid® MZS-1; Martoxid® MZS-3; Martoxid® MZS-12

Pure substance/mixture Substance

Aluminium oxide

CAS Number 1344-28-1

Weight-% >99

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

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

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

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

Brazil Ministry of Transport

This product is not part of the Hazardous Products Classification established by the Brazilian Federal Department of Transportation's Administrative Ruling 204

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from 5/20/1997.

2.1. Classification of the substance or mixture

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

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	TSCA: United States	EU REACH registration number	GHS Classification	Weight-%
Aluminium oxide	1344-28-1	A	01-2119529248-35-xx	Not classified.	>99

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Additional information TSCA A: Component is listed on Inventory as Active

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** May cause skin, eye, and respiratory tract irritation.
- 4.3. Indication of any immediate medical attention and special treatment needed** Treatment should be symptomatic and supportive.

SECTION 5: Firefighting measures

Flammable Properties None known

5.1. Extinguishing media

- Suitable Extinguishing Media** Water spray (fog). Foam. Dry chemical. Carbon dioxide (CO2).
- Unsuitable Extinguishing Media** None known.

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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

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

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Occupational exposure limits

Aluminium oxide - 1344-28-1

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

NIOSH

ACGIH

Mexico

Not established

TWA: 10 mg/m³

TWA 10 mg/m³

PNEC (Predicted No Effect Concentration)

No information available

Biological Limit Values

None

8.2. Exposure controls

Engineering Measures

Do not handle until all safety precautions have been read and understood
Ensure adequate ventilation, especially in confined areas
Provide a good standard of controlled ventilation (10 to 15 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

Physical State

Solid.

Color

White

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Odor	Odorless
Odor Threshold	No information available
pH:	Not available
Melting point / Freezing point	2000 °C (3632 °F) (1013 hPa)
Initial boiling point	Not available
Flash Point	Not applicable Product/Substance is inorganic Solid
Evaporation Rate	Not applicable
Flammability (solid, gas)	No information available
Vapor Pressure	1 hPa (2158 °C)
Relative Density	4 g/cm ³ (20°C)
Water Solubility	Insoluble
Partition coefficient	Not available
Autoignition Temperature	Aluminum oxide has no potential to explode.
Decomposition Temperature	~2000 °C (> 2050 °C)
Viscosity	Not applicable
Explosive Properties	None
Oxidizing Properties	None
VOC Content (%)	Not applicable
Solubility in other solvents	No information available

9.2. Other information

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).

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< / =0.3%. ∴ Al₂O₃. ∴ 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.

Ingestion Ingestion is not a likely route of exposure.

Aspiration hazard Not an expected route of exposure.

Symptoms related to the physical, chemical and toxicological characteristics Signs and symptoms may include coughing, gasping, choking and difficulty breathing. Contact with eyes may cause irritation.

Symptoms Low hazard for usual industrial or commercial handling

11.1. Information on toxicological effects

Aluminium oxide - 1344-28-1

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.

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.

Serious eye damage/eye irritation Based on available data, the classification criteria are not met.

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

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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.
Germ cell 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.
Mixture versus substance information	No information available.

SECTION 12: Ecological information

12.1. Ecotoxicity	Not considered to be harmful to aquatic life. Avoid release to the environment.
<u>Aluminium oxide - 1344-28-1</u> 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.
Partition coefficient	Not available.
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

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SECTION 13: Disposal considerations

13.1. Waste treatment methods

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

SECTION 14: Transport information

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

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

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SECTION 15: Regulatory information

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

Global Inventories

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
Aluminium 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

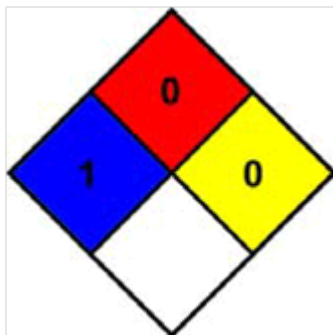
Information on risks and safety as written on the label

Health - Blue

Flammability - Red

Physical Hazard - Yellow

Special - White



- 4- Extreme
- 3- High
- 2- Moderate
- 1- Low
- 0- Minimum

SECTION 16: Other information

Prepared by

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

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Reason for Version

Brasil: ABNT NRB 14725-4: 2014.

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)
SCBA (Self-Contained Breathing Apparatus) Positive Pressure
PNEC (Predicted No Effect Concentration)
GHS (Globally Harmonized System)
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