



# Safety Data Sheet

FIRE RETARDANT ADDITIVES

## **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 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® 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.

### **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**

**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 from 5/20/1997.

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**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	REACH registration number	GHS Classification	Weight-%
Aluminium oxide	1344-28-1	A	01-2119529248-35-xx xx 01-2119529248-35-00 17	Not classified.	>99

## Additional information

TSCA A: Component is listed on Inventory as Active

**SECTION 4: First aid measures****4.1. Description of first aid measures**

<b>General Advice</b>	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.
<b>Eye Contact</b>	In case of eye contact, remove contact lens and rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.
<b>Skin Contact</b>	Wash with plenty of soap and water.
<b>Ingestion</b>	Rinse mouth thoroughly with water.
<b>Inhalation</b>	If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.
<b>Aspiration hazard</b>	Not an expected route of exposure.
<b>4.2. Most important symptoms and effects, both acute and delayed</b>	May cause skin, eye, and respiratory tract irritation.
<b>4.3. Indication of any immediate medical attention and special treatment needed</b>	Treatment should be symptomatic and supportive.

**SECTION 5: Firefighting measures****Flammable Properties** None known**5.1. Extinguishing media**

<b>Suitable Extinguishing Media</b>	Water spray (fog). Foam. Dry chemical. Carbon dioxide (CO2).
<b>Unsuitable Extinguishing Media</b>	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****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****Aluminium oxide - 1344-28-1**  
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

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NIOSH  
ACGIH  
Mexico

Not established  
TWA: 10 mg/m<sup>3</sup>  
TWA 10 mg/m<sup>3</sup>

**Predicted No Effect  
Concentration (PNEC)**

**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

**Odor** Odorless

**Odor Threshold** No information available

**pH:** Not available

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

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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 <sup>3</sup> (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). < / =0.3%. ∴ Al <sub>2</sub> O <sub>3</sub> ∴ 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**

<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.
<b>Ingestion</b>	Ingestion is not a likely route of exposure.
<b>Aspiration hazard</b>	Not an expected route of exposure.
<b>Symptoms related to the physical, chemical and toxicological characteristics</b>	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**

<b>Mutagenicity</b>	in vitro in vivo Based on available data, the classification criteria are not met
<b>Reproductive Effects</b>	No indication of effects on fertility. No indication of effects on developmental toxicity.
<b>Acute Toxicity</b>	Based on available data, the classification criteria are not met
<b>Chronic Toxicity</b>	Based on available data, the classification criteria are not met.
<b>Chronic Effects</b>	Based on available data, the classification criteria are not met.
<b>Serious eye damage/eye irritation</b>	Based on available data, the classification criteria are not met.
<b>Respiratory Sensitization</b>	Based on available data, the classification criteria are not met.
<b>Skin Corrosion/Irritation</b>	Based on available data, the classification criteria are not met.
<b>Skin Sensitization</b>	Based on available data, the classification criteria are not met.
<b>Mutagenicity</b>	Based on available data, the classification criteria are not met.
<b>Germ cell mutagenicity</b>	Based on available data, the classification criteria are not met.
<b>Reproductive Effects</b>	This product does not contain any known or suspected reproductive hazards.

<b>Reproductive Toxicity</b>	Based on available data, the classification criteria are not met.
<b>Carcinogenicity</b>	This product does not contain any carcinogens or potential carcinogens as listed by OSHA, IARC or NTP.
<b>Specific target organ toxicity - Single exposure</b>	Based on available data, the classification criteria are not met.
<b>Specific target organ toxicity - Repeated exposure</b>	Based on available data, the classification criteria are not met.
<b>Mixture versus substance information</b>	No information available.

## SECTION 12: Ecological information

<b>12.1. Ecotoxicity</b>	Very low solubility. Not considered to be harmful to aquatic life.
<b><u>Aluminium oxide - 1344-28-1</u></b>	
<b>WGK Classification (AwSV)</b>	1346. WGK: nwg
<b>12.2. Persistence and degradability</b>	The methods for determining biodegradability are not applicable to inorganic substances.
<b>12.3. Bioaccumulative potential</b>	Not likely to bioaccumulate.
<b>Partition coefficient</b>	Not available.
<b>Bioconcentration factor (BCF)</b>	No data available.
<b>12.4. Mobility in soil</b>	None.
<b>12.5. Results of PBT and vPvB assessment</b>	This substance does not meet the criteria for classification as PBT or vPvB.
<b>12.6. Other adverse effects</b>	None known

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

<b>Contaminated Packaging</b>	Empty containers should be taken to an approved waste handling site for recycling or disposal. Do not reuse container.
<b>Waste codes</b>	Waste codes should be assigned by the user based on the application for which



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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**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	REACH registration number	Australia (AICS)	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	Y	Y	Y	(1)-23 (ENCs)(ISH L)	KE-01012	Y	Y	Y	Y	A

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			xxx										
			01-211952 9248-35-0 017										

**Legend**

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

Information on risks and safety as written on the label

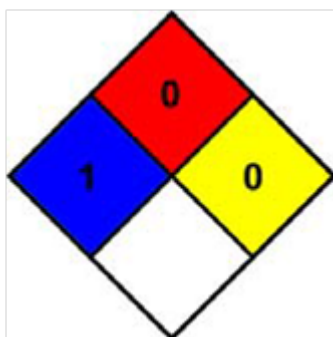
Health - Blue

Flammability - Red

Physical Hazard - Yellow

Special - White

Diamante de Hommel



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

## SECTION 16: Other information

**Prepared by**

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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**

International Agency for Research on Cancer (IARC)  
International Air Transport Association (IATA)  
International Maritime Dangerous Goods (IMDG)  
International Uniform Chemical Information Database (IUCLID)  
Workplace Hazardous Materials Information System (WHMIS) status and classification  
EPA SARA Title III Section 312 (40 CFR 370) Hazard Classification  
DOT (Department of Transportation)  
OSHA (Occupational Safety and Health Administration of the US Department of Labor)  
TWA - Time-Weighted Average  
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA)  
The Classification, Labeling and Packaging of Substances and Mixtures (CLP) Regulation (EC 1272/2008)

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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)  
Reportable Quantity (RQ) (RQ/% in mixture)  
STEL - Short Term Exposure Limit  
TLV® - Threshold Limit Value  
Derived No Effect Level (DNEL)  
SVHC: Substances of Very High Concern for Authorization:  
Land transport (ADR/RID)  
Biochemical oxygen demand (BOD)  
Chemical oxygen demand (COD)  
ICAO (air)  
(IMDG) International Maritime Dangerous Goods  
Positive Pressure Self-Contained Breathing Apparatus (SCBA)  
Predicted No Effect Concentration (PNEC)  
Globally Harmonized System (GHS)

### 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**