FIRE RETARDANT ADDITIVES

# Safety Data Sheet

## Martoxid® DN-206; Martoxid® DN-430; Martoxid® DN-440; Martoxid® DN-6

**Prepared in accordance with GB/T 16483-2008, GB/TGB/T 24774-2009, GB 13690 – 2009, GB/T 17519–2013 Globally Harmonized System (GHS)**



## Section 1: PRODUCT AND COMPANY IDENTIFICATION

**Product Name:** Martoxid® DN-206; Martoxid® DN-430; Martoxid® DN-440; Martoxid® DN-6

**Pure substance/mixture** Substance

**Aluminum oxide**
**CAS Number** 1344-28-1
**Weight-%** -

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

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## Section 2: HAZARDS IDENTIFICATION

**GHS Classification** Not classified

**Physical Hazard** Not classified

**Health Hazard** Not classified

**Environmental Hazard** Not classified

**Label Elements**

**Symbols/Pictograms** None

**Signal Word** None

**Precautionary Statements**

| | |
|---|---|
| **Prevention** | Do not handle until all safety precautions have been read and understood.<br>Observe good industrial hygiene practices.<br>Wear protective gloves/protective clothing/eye protection/face protection.<br>Use mechanical ventilation (dilution and local exhaust) to control exposure<br>Avoid breathing dust. |
| **Response** | None |
| **Spills and Leaks** | Collect spillage |
| **Storage** | Store in a dry place |
| **Disposal** | Dispose of in accordance with federal, state and local regulations |
| **General Advice** | In case of doubt or when symptoms persist, seek medical attention. |
| **Additional Information:** | None. |

## Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

**Pure substance/mixture** Substance

| Chemical Name | CAS Number | China (IECSC) | China classification | TSCA: United States | REACH registration number | Weight-% |
|---|---|---|---|---|---|---|
| Aluminum oxide | 1344-28-1 | Y | Not classified | A | 01-2119529248-35-xxxx<br><br>01-2119529248-35-0017 | - |

## Section 4: FIRST AID MEASURES

| | |
|---|---|
| **General Advice** | In case of doubt or when symptoms persist, seek medical attention. |
| **Eye Contact** | Hold eyelids apart and flush eyes with a steady, gentle stream of water for several minutes. |
| **Skin Contact** | Wash skin with soap and water |
| **Inhalation** | IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing |
| **Ingestion** | Rinse mouth with water. Do not induce vomiting. |
| **Notes to Physician** | Treat symptomatically |

| | |
|---|---|
| **Personal Protective Equipment For First Aid Responders** | Wear suitable protective clothing<br>IF exposed or concerned: Get medical advice/attention |
| **Expected acute symptoms and delayed symptoms** | None known |

## Section 5: FIRE FIGHTING MEASURES

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|---|---|
| **Flammable Properties** | None known |
| **Suitable Extinguishing Media** | Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. |
| **Unsuitable extinguishing media:** | None known |
| **Specific Hazards Arising from the Chemical** | None known |
| **Unusual fire & explosion hazards:** | None |
| **Protective measures:** | Use protective equipment that is appropriate for surrounding materials. |
| **Protective Equipment and Precautions for Firefighters** | Wear self-contained breathing apparatus and protective suit |

## Section 6: SPILLAGE, ACCIDENTAL RELEASE MEASURES

| | |
|---|---|
| **Personal Precautions** | Avoid dust formation. When exposed to high concentrations of airborne dust, wear a SCBA in accordance with national legislation |
| **Environmental Precautions** | This product does not present any particular risk to the environment. Refer to applicable national, state and local regulations prior to washing in drain. |
| **Methods for cleaning up** | Pick up mechanically and / or by rinsing with water. Avoid dry sweeping and use a sprinkler system or exhaust ventilation to prevent dust formation. |
| **Other Information:** | None known |

## Section 7: HANDLING AND STORAGE

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|---|---|
| **Handling** | Avoid dust formation. Avoid breathing dust. Handle in accordance with good industrial hygiene and safety practice. |
| **Storage** | Store in a dry area. Keep containers closed and protect from physical damage. |

## Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

**Exposure Limits** Provide adequate ventilation as well as local exhaustion at critical locations

**Aluminum oxide**

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|---|---|
| **China** | TWA: 4 mg/m³ total dust |
| **China** | STEL: 8 mg/m³ total dust |
| **ACGIH** | TWA: 10 mg/m³ |
| **ACGIH TLV** | TWA: 1 mg/m³ respirable fraction |
| NIOSH | Not established |
| **OSHA** | TWA: 15 mg/m³ total dust<br>TWA: 5 mg/m³ respirable fraction<br>(vacated) TWA: 10 mg/m³ total dust<br>(vacated) TWA: 5 mg/m³ respirable fraction |

**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** Impervious gloves

**Respiratory Protection** When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

**Hygiene Measures** Handle in accordance with good industrial hygiene and safety practice Handle in accordance with good industrial hygiene and safety practice

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

## Section 9: PHYSICAL AND CHEMICAL PROPERTIES

**Information on basic physical and chemical properties**

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|---|---|
| **Appearance:** | |
| **Physical State** | Solid<br>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) |
| **Flash Point:** | Not applicable. Product/Substance is inorganic. Solid. |
| **Evaporation Rate** | Not applicable Melting Point : > 300°C |
| **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** | 4 (20 °C) |
| **Water Solubility** | Insoluble |
| **Solubility in other solvents** | No information available |
| **Partition coefficient** | Not applicable Product/Substance is inorganic |
| **Autoignition Temperature** | Aluminum oxide has no potential to explode. |
| **Decomposition Temperature** | ~2000 °C (> 2050 °C) |
| **Kinematic viscosity** | Not applicable Solid |
| **Dynamic viscosity** | Not applicable Solid |
| **Explosive Properties** | None |
| **Oxidizing Properties** | None |

## Section 10: STABILITY AND REACTIVITY

| | |
|---|---|
| **Stability** | Stable under normal conditions |
| **Conditions to avoid:** | None known |
| **Incompatible materials** | Strong acids |
| **Hazardous decomposition products** | None under normal processing |
| **Hazardous Reactions** | None under normal processing |
| **Hazardous polymerization:** | None under normal processing |

## Section 11: TOXICOLOGICAL INFORMATION

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

**Product Information**

**Information on Likely Routes of Exposure**

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

| | |
|---|---|
| **Ingestion** | Ingestion is not a likely route of exposure |
| **Aspiration hazard** | Not an expected route of exposure. |
| **Symptoms** | Low hazard for usual industrial or commercial handling |

**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.<br>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<br>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. |
| **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 |
| **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. |

# Section 12: ECOLOGICAL INFORMATION

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|---|---|
| **Ecotoxicity** | Very low solubility. Not considered to be harmful to aquatic life. |
| **Persistence/Degradability:** | The methods for determining biodegradability are not applicable to inorganic substances. |
| **Bioaccumulative Potential** | Not likely to bioaccumulate. |
| **Partition coefficient** | Not available |
| **Bioconcentration factor (BCF)** | No data available. |
| **Mobility in soil** | None. |
| **Results of PBT and vPvB assessment** | This substance does not meet the criteria for classification as PBT or vPvB. |
| **Other Adverse Effects** | None known |

# Section 13: DISPOSAL CONSIDERATIONS

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| **Waste from Residues/Unused Products** | Dispose of in accordance with local regulations |
| **Contaminated Packaging:** | Empty containers should be taken to an approved waste handling site for recycling or disposal. |

# Section 14: TRANSPORT INFORMATION

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

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|---|---|
| **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. 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Aluminum oxide | 1344-28-1 | 215-691-6 | 01-2119529248-35-xxxx<br>01-2119529248-35-0017 | Y | Y | Y | (1)-23 (ENCS)(ISHL) | KE-01012 | Y | Y | Y | Y | A |

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

## Section 16: OTHER INFORMATION

| | |
|---|---|
| **Prepared by** | Huber Engineered Materials Global Regulatory Affairs<br>email: regulatory.affairs@huber.com |
| **Reason for Revision** | GB/T 16483-2008<br>GB/T 24774-2009<br>GB 13690 – 2009<br>GB/T 17519–2013 |
| **GHS Classification** | Not classified |
| **Physical Hazard** | Not classified |
| **Health Hazard** | Not classified |
| **Environmental Hazard** | Not classified |
| **Label Elements** | |
| **Symbols/Pictograms** | None |
| **Signal Word** | None |
| **Abbreviations and acronyms** | International Agency for Research on Cancer (IARC)<br>International Air Transport Association (IATA)<br>International Maritime Dangerous Goods (IMDG)<br>International Uniform Chemical Information Database (IUCLID)<br>Workplace Hazardous Materials Information System (WHMIS) status and classification<br>EPA SARA Title III Section 312 (40 CFR 370) Hazard Classification<br>DOT (Department of Transportation)<br>OSHA (Occupational Safety and Health Administration of the US Department of Labor)<br>TWA - Time-Weighted Average<br>Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA)<br>The Classification, Labeling and Packaging of Substances and Mixtures (CLP) Regulation (EC 1272/2008)<br>PPE - Personal Protection Equipment<br>NIOSH - National Institute for Occupational Safety and Health<br>TDG (Transport of Dangerous Goods) Canada<br>CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act)<br>Reportable Quantity (RQ) (RQ/% in mixture)<br>STEL - Short Term Exposure Limit<br>TLV® - Threshold Limit Value<br>Derived No Effect Level (DNEL)<br>SVHC: Substances of Very High Concern for Authorization:<br>Land transport (ADR/RID)<br>Biochemical oxygen demand (BOD)<br>Chemical oxygen demand (COD)<br>ICAO (air)<br>(IMDG) International Maritime Dangerous Goods<br>Positive Pressure Self-Contained Breathing Apparatus (SCBA)<br>Predicted No Effect Concentration (PNEC)<br>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**