



FIRE RETARDANT ADDITIVES

# Safety Data Sheet

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

**GHS (Globally Harmonized System)**

**Issue Date** 15/Feb/2023

**Print Date** 17/Apr/2023

**Revision Number** 1.3.1

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

### 1.1. Product identifier

**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  
**EU REACH registration number** 01-2119529248-35-xxxx  
01-2119529248-35-0017

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

**Recommended Use** Abrasive , Polishing agent , Adsorbent(s) , Catalyst , Filler , 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

**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

**GHS Classification** This product is not classified as hazardous according to the UN GHS guideline and labeling is not required

#### **Hazards identification**

**Physical Hazard** Not classified

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**Health Hazards** Not classified**Environmental Hazard** Not classified**2.2. Label elements****Symbols/Pictograms** None**Signal Word** None**Hazard Statement** 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.

## SECTION 3: Composition/information on ingredients

**Pure substance/mixture** Substance

| Chemical Name  | CAS Number | TSCA: United States | EU REACH registration number                   |
|----------------|------------|---------------------|------------------------------------------------|
| Aluminum oxide | 1344-28-1  | A                   | 01-2119529248-35-xxxx<br>01-2119529248-35-0017 |

**Legend**

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

## 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

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|                                                                                        |                                                                                                                                          |
|----------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                        | 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>Inhalation</b>                                                                      | If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.                          |
| <b>Ingestion</b>                                                                       | Rinse mouth thoroughly with water.                                                                                                       |
| <b>Aspiration hazard</b>                                                               | Not an expected route of exposure.                                                                                                       |
| <b>Notes to Physician</b>                                                              | Treat symptomatically.                                                                                                                   |
| <b>4.2. Most important symptoms and effects, both acute and delayed</b>                | Dust contact with the eyes can lead to mechanical irritation. Contact with dust can cause mechanical irritation or drying of the skin.   |
| <b>4.3. Indication of any immediate medical attention and special treatment needed</b> | 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 (CO<sub>2</sub>).

#### **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

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## 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  
Thailand

Not established

#### Biological Limit Values

None

#### Recommended monitoring procedures

Refer also to national guidance documents for information on currently recommended monitoring procedures

### 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

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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.

**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:

|                                                |                                                                        |
|------------------------------------------------|------------------------------------------------------------------------|
| <b>Physical State</b>                          | Solid Powder                                                           |
| <b>Color</b>                                   | White                                                                  |
| <b>Odor</b>                                    | Odorless                                                               |
| <b>Odor Threshold</b>                          | No information available                                               |
| <b>pH:</b>                                     | Not available                                                          |
| <b>Melting point / Freezing point</b>          | 2000 °C (3632 °F) (1013 hPa)                                           |
| <b>Initial boiling point and boiling range</b> | 2980 °C (5396 °F) (1013 hPa)                                           |
| <b>Freezing Point</b>                          | Not applicable                                                         |
| <b>Flash Point</b>                             | Not applicable Product/Substance is inorganic Solid                    |
| <b>Evaporation Rate</b>                        | Not applicable. Melting Point : > 300°C                                |
| <b>Flammability (solid, gas)</b>               | No information available                                               |
| <b>Upper flammability limit:</b>               | --                                                                     |
| <b>Lower flammability limit:</b>               | --                                                                     |
| <b>Vapor Pressure</b>                          | 1 hPa (2158 °C)                                                        |
| <b>Vapor Density</b>                           | Not applicable Melting Point : > 300°C                                 |
| <b>Density</b>                                 | No data available                                                      |
| <b>Relative Density</b>                        | 4 (20 °C)                                                              |
| <b>Water Solubility</b>                        | Insoluble                                                              |
| <b>Solubility in other solvents</b>            | No information available                                               |
| <b>Partition coefficient</b>                   | No information available Not applicable Product/Substance is inorganic |
| <b>Autoignition Temperature</b>                | Aluminum oxide has no potential to explode.                            |
| <b>Decomposition Temperature</b>               | ~2000 °C (> 2050 °C)                                                   |
| <b>Viscosity</b>                               | No information available.                                              |
| <b>Kinematic viscosity</b>                     | Not applicable Solid                                                   |
| <b>Dynamic viscosity</b>                       | Not applicable Solid                                                   |

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|                      |                          |
|----------------------|--------------------------|
| 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<br>Decomposition Temperature ~ 2000 °C (> 2050°C)<br>< / =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. |
|---------------------|-------------------------------------------------------------------------------------------------|

### 11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

#### 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    | May cause respiratory irritation                                                              |

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**- Single exposure**

**Specific target organ toxicity** May cause damage to organs through prolonged or repeated exposure if inhaled

**- Repeated exposure** Lungs

|                                                           |                                                                                                        |
|-----------------------------------------------------------|--------------------------------------------------------------------------------------------------------|
| <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>Respiratory Sensitization</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>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>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.                                      |

## Information on Likely Routes of Exposure

|                          |                                                                                                                          |
|--------------------------|--------------------------------------------------------------------------------------------------------------------------|
| <b>Inhalation</b>        | Do not breathe dust                                                                                                      |
| <b>Ingestion</b>         | Ingestion is not a likely route of exposure                                                                              |
| <b>Skin</b>              | Avoid prolonged or repeated contact with skin<br>Contact with dust can cause mechanical irritation or drying of the skin |
| <b>Eyes</b>              | Avoid contact with eyes<br>Dust contact with the eyes can lead to mechanical irritation                                  |
| <b>Aspiration hazard</b> | Not an expected route of exposure.                                                                                       |

## 11.2. Information on other hazards

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

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properties

**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**

**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

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## SECTION 14: Transport information

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

|                    |               |
|--------------------|---------------|
| <b>TDG -Canada</b> | Not regulated |
| <b>DOT</b>         | Not regulated |
| <b>ADR</b>         | Not regulated |
| <b>RID</b>         | Not regulated |
| <b>ADN</b>         | Not regulated |
| <b>IATA</b>        | Not regulated |
| <b>IMDG/IMO</b>    | Not regulated |
| <b>ICAO</b>        | Not regulated |

**14.1. UN number or ID number** None

**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

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

#### Global Inventories

**Pure substance/mixture** Substance

| Chemical Name  | CAS Number | EC No     | Australia (AIC) | Canada (DSL) | China (IECSC) | Japan                | S. Korea (KECL) | Mexico | Thailand (TECI) | New Zealand | Philippines (PICCS) | Taiwan | TSCA: United States |
|----------------|------------|-----------|-----------------|--------------|---------------|----------------------|-----------------|--------|-----------------|-------------|---------------------|--------|---------------------|
| Aluminum oxide | 1344-28-1  | 215-691-6 | Y               | Y            | Y             | (1)-23 (ENCS)(IS HL) | KE-01012        | Y      | 55-1-01517      | Y           | Y                   | Y      | A                   |

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

**REACH No.**

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## Aluminum oxide

EU REACH registration number 01-2119529248-35-xxxx

01-2119529248-35-0017

Turkish KKDIK pre-registration 05-0000192736-20-0000

## Germany

Very low solubility Not considered to be harmful to aquatic life

## Aluminum oxide

WGK Classification (AwSV) 1346 WGK: nwg

## 15.2. Chemical safety assessment

A Chemical Safety Assessment has been carried out for this substance

## SECTION 16: Other information

### Prepared by

Huber Engineered Materials Global Regulatory Affairs  
email: regulatory.affairs@huber.com.

### GHS Classification

This product is not classified as hazardous according to the UN GHS guideline and labeling is not required

### Symbols/Pictograms

None

### Signal Word

None

### Hazards identification

#### Physical Hazard

Not classified

#### Health Hazards

Not classified

#### Environmental Hazard

Not classified

### 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)  
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)  
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)

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SVHC (Substances of Very High Concern)  
Land transport (ADR/RID)  
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)

## 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**