



ADVANCED MATERIALS

Safety Data Sheet

Martoxid® AN/I

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 15/Feb/2023
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Revision Number 1.3.1
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SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product Name: Martoxid® AN/I
Pure substance/mixture Substance

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

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

Industrial use

- Production substance
- Polymer processing
- Production of plastics and rubber compounds
- Formulation flame retardant preparation
- Compounds used in transport industry
- Compounds used in electrical application
- Compounds used in electronic application
- Compounds used in Wire & Cable
- Abrasive for glass industry, ceramics and stones
- Textile coating
- Production of corrosion inhibitors
- Fuels
- Deacidification agent for paper
- pH Regulating agent
- Use in coatings, inks, paints and roofing
- Use as corrosion inhibitor of gas turbines and boilers
- Use in cleaning agents
- Use in oil field operations
- Use in lubricants
- Use in metal working fluids
- Use in blowing agents
- Use in binders and release agents
- Use in textile
- Use in functional fluids
- Use in agrochemicals
- Use in water treatment chemicals
- Use in mining chemicals
- Recycling plastics
- White pigment for paper and board, filler, etc.

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Polymer processing
Use in Adhesives and/or sealants
Use in coatings, inks, paints and roofing
Use in agrochemicals
Use in cleaning agents
Use in oil field operations
Use in lubricants
Use in metal working fluids
Use in binders and release agents
Use in propellants
Use in textile
Use in explosives
Use in water treatment chemicals
Use in functional fluids
For use by laboratories for research
Fuels
De-icing & anti-icing applications
Road and construction applications

Consumer use

Use in coatings, inks, paints and roofing
Use in cleaning agents
Use in lubricants
Use in propellants
Fuels
Use in functional fluids
De-icing & anti-icing applications
Cosmetic additive
Use in water treatment chemicals

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

Internetwww.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

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This material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200)

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 Not classified.
(HNOC)

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SECTION 3: Composition/information on ingredients

Pure substance/mixture

Substance

| Chemical Name | CAS Number | TSCA: United States | Canada (DSL) | Mexico | EU REACH registration number | OSHA Regulatory Status | WHMIS | Weight-% |
|----------------|------------|---------------------|--------------|--------|--|------------------------|-------|----------|
| Aluminum oxide | 1344-28-1 | A | Y | Y | 01-211952924 8-35-xxxx 01-211952924 8-35-0017 | Not classified | -- | >99 |

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 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

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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 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
TWA: 10 mg/m³

ACGIH

NIOSH

--

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

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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 |
| 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 |

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10.4. Conditions to avoid Incompatible materials
Decomposition Temperature ~ 2000 °C (> 2050°C)
< / =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.

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.

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| | |
|---|--|
| 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 |
| 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. |

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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

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 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

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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

Pure substance/mixture Substance

| Chemical Name | CAS Number | EC No | EU REACH registration number | Australia (AIC) | 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 |

Legend

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 |

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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 | Huber Engineered Materials (HEM) Global Regulatory Affairs regulatory.affairs@huber.com |
| Issue Date | 15/Feb/2023 |
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| 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) IUCID (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

HUBER

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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