Martoxid® AN/I

This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006
COMMISSION REGULATION (EU) No. 2020/878

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

1.1. Product identifier

Product Name:	**Martoxid® AN/I**
Chemical Name	Aluminum Oxide
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.
Professional use	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 : +49-2271-90.22.78 Fax. : +49-2271-90.27.17
Internet	www.huberadvancedmaterials.com
Contact E-Mail	www.huberadvancedmaterials.com/contact

1.4. Emergency telephone number	CHEMTREC: +1 800 424 9300 or International 1+703-527-3887
Poison control center phone number	National Anti-Poison Center UK: +44 844 892 0111 (National Poisons Information Service)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

(CLP) Regulation (EC 1272/2008) Not classified.

Hazards identification

Physical Hazard Not classified.

Health Hazards Not classified.

Environmental Hazard Not classified.

2.2. Label elements

Symbols/Pictograms None

Signal Word None

Hazard Statements This product is not classified as hazardous according to the UN GHS guideline and labeling is not required
This material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200)

Precautionary Statements

Prevention Employ good industrial hygiene practice
Wash hands thoroughly after handling

Response IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
IF ON SKIN: Wash with plenty of soap and water
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 Keep in a dry place
Store away from incompatible materials

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

Additional Information: None.

2.3. Other hazards

This product does not contain any known or suspected endocrine disruptors
The product does not contain any substance(s) classified as PBT or vPvB above the threshold of declaration
The product does not contain any substance(s) classified as PMT or vPvM above the threshold of declaration

SECTION 3: Composition/information on ingredients

3.1. Substance Substance

Chemical Name	CAS NUMBER:	EC No	(CLP) Regulation (EC 1272/2008)	Weight-%
Aluminum oxide	1344-28-1	215-691-6	Not classified	>99

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.

Inhalation If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.

Ingestion Rinse mouth thoroughly with water.

Aspiration hazard Not an expected route of exposure.

Notes to Physician Treat symptomatically.

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

Media
Water spray (fog). Foam. Dry chemical. Carbon dioxide (CO2).

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

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

ACGIH	TWA: 10 mg/m³
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	Not established
Austria	TWA: 5 mg/m³ respirable fraction, smoke
Austria	STEL: 10 mg/m³ respirable fraction, smoke
Belgium	TWA: 1 mg/m³
Bulgaria	TWA: 1.5MGM3;Respirable fraction. 10.0MGM3;Dust.
Croatia	TWA: 10 mg/m³ total dust 4 mg/m³ respirable dust
Czech Republic	TWA: 10.0 mg/m³ dust
Denmark	TWA: 5 mg/m³ total 2 mg/m³ respirable
Estonia	TWA: 10 mg/m³ total dust 4 mg/m³ respirable dust
Finland	TWA: 2 mg/m³ Al
France	VME/VLE: 10MGM3
Germany	TWA 4 mg/m³ Inhalable fraction 1.5 mg/m³ Respirable dust TRGS 900 3 mg/m³ Respirable dust 10 mg/m³ Inhalable fraction
Germany	1.25 mg/m³ 10 mg/m³
Greece	TWA: 10 mg/m³ inhalable fraction 5 mg/m³ respirable fraction
Hungary	TWA: 6 mg/m³ respirable dust
Ireland	TWA: 10 mg/m³ total inhalable dust 4 mg/m³ respirable dust
Ireland	30 mg/m³ total inhalable dust 12 mg/m³ respirable dust
Italy	TWA: 1MGM3;Respirable.
Latvia	TWA: 6 mg/m³ disintegration aerosol
Lithuania	TWA: 5 mg/m³ Al inhalable fraction 2 mg/m³ Al respirable fraction
Netherlands	MAC TWA: 10 mg/m³
Norway	TWA: 10 mg/m³
Norway	STEL: 10 mg/m³
Poland	TWA: 2.5 mg/m³ inhalable fraction 1.2 mg/m³ respirable fraction
Portugal	TWA: 10 mg/m³ particulate matter containing no Asbestos and <1% Crystalline silica
Romania	TWA: 2 mg/m³ aerosol 3 mg/m³ 1 mg/m³
Romania	STEL: 5 mg/m³ aerosol 10 mg/m³ dust 3 mg/m³ fume
Slovakia	TWA: 1.5 mg/m³ fume

	1.5 mg/m³
	0.1 mg/m³ respirable fraction 6 mg/m³ total aerosol
Spain	TWA: 10 mg/m³
Sweden	TWA: 5 mg/m³ total dust
	2 mg/m³ respirable dust
Switzerland	TWA: 3 mg/m³ respirable dust, smoke
Switzerland	STEL: 24 mg/m³ respirable dust, smoke
United Kingdom	TWA: 10 mg/m³ inhalable dust
	4 mg/m³ respirable dust

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

Biological Limit Values None

DNEL (Derived No Effect Level)

Aluminum oxide

Worker - inhalative, long-term - systemic	3 mg/m³
Consumer - oral, long-term - systemic	1.32 mg/kg bw/d

PNEC (Predicted No Effect Concentration) No information available

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 Protective gloves.

Hand protection For operations where prolonged or repeated skin contact may occur, impervious gloves should be worn. Wear suitable gloves tested to EN 374.

Respiratory Protection In case of inadequate ventilation wear respiratory protection. When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. Recommended filter type:. (FFP2). (FFP3).

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:	
Physical State	Solid Powder
Color	White
Odor	Odorless
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 Melting Point : > 300°C
Flammability	No information available
Upper flammability limit:	--
Lower flammability limit:	--
Vapor Pressure	1 hPa (2158 °C)
Relative 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 Characteristics	Observe technical data sheet
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 Decomposition Temperature ~ 2000 °C (> 2050°C) < / =0.3% : Al_2O_3 , 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

LD50s and LC50s	> 5000 mg/kg Oral LD50
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.

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.
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. Avoid release to the environment.

Aluminum oxide

Aquatic toxicity	Not considered to be harmful to aquatic life
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

12.7. Other Adverse Effects None known

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 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 (AIIC)	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)(ISHL)	KE-01012	Y	55-1-01518	Y	Y	Y	A

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

REACH No.

Aluminum oxide

EU REACH registration number 01-2119529248-35-xxxx
Turkish KKDIK pre-registration 05-0000192736-20-0000

Germany
Aluminum oxide
WGK Classification (AwSV) 1346. WGK: nwg

15.2. Chemical safety assessment
For this substance a chemical safety assessment is not required

SECTION 16: Other information

Reason for Revision	This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006 & COMMISSION REGULATION (EU) No. 2020/878
Issue Date	15/Feb/2023
Print Date	23/Oct/2026
Revision Number	1.3.1
Prepared by	Huber Engineered Materials Global Regulatory Affairs (Email – HEM.HAMRegulatory@huber.com).
(CLP) Regulation (EC 1272/2008)	Not classified.
Labeling	
Symbols/Pictograms	None
Signal Word	None
Hazard Statements	This product is not classified as hazardous according to the UN GHS guideline and labeling is not required This material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200)
Training Advice	Do not handle until all safety precautions have been read and understood.
Abbreviations and acronyms	IARC (International Agency for Research on Cancer) IUCLID (International Uniform Chemical Information Database) WHMIS (Workplace Hazardous Materials Information System) 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) 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)
IATA (International Air Transport Association)
IMDG (International Maritime Dangerous Goods)
DOT (Department of Transportation)
TDG (Transport of Dangerous Goods) Canada
PNEC (Predicted No Effect Concentration)
SCBA (Self-Contained Breathing Apparatus) Positive Pressure
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