Safety Data Sheet



Martoxid® PN-202; Martoxid® PN-6(12); Martoxid® PN-6; Martoxid® PS-6(12); Martoxid® PS-6

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

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

1.1. Product identifier

Product Name: Martoxid® PN-202; Martoxid® PN-6(12); Martoxid® PN-6;

Martoxid® PS-6(12); Martoxid® PS-6

Pure substance/mixture Substance

Chemical Name	CAS Number	EC No	EU REACH registration number	(CLP) Regulation (EC 1272/2008)	Weight-%
Aluminum oxide	1344-28-1	215-691-6	01-2119529248-35- xxxx 01-2119529248-35- 0017		>99

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

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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

Manufacturer MARTINSWERK GmbH

Kölner Strasse 110 50127 Bergheim

Germany

Tel.: +49-2271-90.22.78 Fax.: +49-2271-90.27.17

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

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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

Not classified **Physical Hazard**

Health Hazards Not classified

Environmental Hazard Not classified

2.2. Label elements

None Symbols/Pictograms

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

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact Response

> 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

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

and regulations.

Additional Information: None.

2.3. Other hazards No information available.

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SECTION 3: Composition/information on ingredients

3.1. Substance Substance

Chemical Name	CAS Number	EC No	EU REACH registration number	(CLP) Regulation (EC 1272/2008)	Annex	Weight-%
Aluminum oxide	1344-28-1	215-691-6	01-2119529248-35	Not classified	-	>99
			-xxxx			
			01-2119529248-35			
			-0017			

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.

Rinse mouth thoroughly with water. Ingestion

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.

medical attention and special

treatment needed

4.3. Indication of any immediate Treatment should be symptomatic and supportive.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable Extinguishing

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Media

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

Unsuitable Extinguishing Media

None known.

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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, Store away from incompatible materials **including any incompatibilities** Keep container tightly closed and dry

7.3. Specific end use(s)No information available.

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SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits

Aluminum oxide

Ireland

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

Not established NIOSH

TWA: 5 mg/m³ respirable fraction, smoke Austria STEL: 10 mg/m3 respirable fraction, smoke Austria

TWA: 1 mg/m³ Belaium

TWA: 1.5MGM3;Respirable fraction. Bulgaria

10.0MGM3;Dust.

Croatia TWA: 10 mg/m³ total dust

4 mg/m³ respirable dust

TWA: 10.0 mg/m³ dust **Czech Republic Denmark** TWA: 5 mg/m3 total

2 mg/m³ respirable

TWA: 10 mg/m3 total dust **Estonia**

4 mg/m³ respirable dust TWA: 2 mg/m3 Al

Finland France VME/VLE: 10MGM3

DFG MAK: 8-hr TWA: 4 mg/m³: haltige Stäube (alveolengängige Fraktion)[4 mg/m³: Germany

inhalable dust fraction]

1.5 mg/m³ haltige Stäube (einatembare Fraktion)[1.5MGM3 : respirable dust fraction]

TRGS 900 limit: 3 mg/m³: respirable; 10MG/M3 inhalable

TWA: 10 mg/m³ inhalable fraction Greece

5 mg/m³ respirable fraction TWA: 6 mg/m³ respirable dust

Hungary TWA: 10 mg/m3 total inhalable dust Ireland

4 mg/m3 respirable dust 30 mg/m³ total inhalable dust 12 mg/m³ respirable dust

TWA: 1MGM3;Respirable. Italy

TWA: 6 mg/m³ disintegration aerosol Latvia TWA: 5 mg/m³ Al inhalable fraction Lithuania

2 mg/m³ Al respirable fraction

MAC TWA: 10 mg/m³ Netherlands TWA: 10 mg/m³ **Norway** 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

STEL: 5 mg/m3 aerosol Romania

10 mg/m³ dust

3 mg/m³ fume

TWA: 1.5 mg/m3 fume Slovakia

1.5 mg/m³

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0.1 mg/m³ respirable fraction 6 mg/m³ total aerosol

Spain TWA: 10 mg/m³

TWA: 5 mg/m³ total dust Sweden 2 mg/m3 respirable dust

Switzerland TWA: 3 mg/m³ respirable dust, smoke STEL: 24 mg/m³ respirable dust, smoke Switzerland

TWA: 10 mg/m³ inhalable dust **United Kingdom**

4 mg/m³ respirable dust

Recommended monitoring

procedures

Refer also to national guidance documents for information on currently

recommended monitoring procedures

None **Biological Limit Values**

DNEL (Derived No Effect Level)

Aluminum oxide

Worker - inhalative,	3 mg/m³
long-term - systemic	
Consumer - oral, long-term -	6.22 mg/kg bw/d
systemic	

PNEC (Predicted No Effect Concentration)

Aluminum oxide

Sewage treatment plant	20 mg/l
------------------------	---------

8.2. Exposure controls

Do not handle until all safety precautions have been read and understood **Engineering Measures**

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.

For operations where prolonged or repeated skin contact may occur, impervious Hand protection

gloves should be worn. Wear suitable gloves tested to EN 374.

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.

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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 Odorless Odor Threshold None

pH: Not available

Melting point / Freezing point2000 °C (3632 °F) (1013 hPa)Initial boiling point2980 °C (5396 °F) (1013 hPa)Initial boiling point and boiling2980 °C (5396 °F) (1013 hPa)

range

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
Relative Density
Water Solubility
No data available
4 g/cm³ (20 °C)
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

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Not applicable

SECTION 10: Stability and reactivity

No data available 10.1. Reactivity

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% : Al₂ O₃ , Water

10.5. Incompatible materials Strong acids

10.6. Hazardous decomposition None known

products

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 eve damage/eve Non-irritant: Rabbit

irritation

Non-irritant: Rabbit Skin Corrosion/Irritation

Based on available data, the classification criteria are not met Mutagenicity

No indication of effects on fertility. **Reproductive Effects**

No indication of effects on developmental toxicity.

Target Organ Effects Lunas

Specific target organ toxicity May cause respiratory irritation

- Single exposure

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

- Repeated exposure Lungs

Not expected to be acutely toxic **Acute Toxicity**

Chronic Toxicity Based on available data, the classification criteria are not met.

Based on available data, the classification criteria are not met. **Chronic Effects**

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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

Based on available data, the classification criteria are not met Skin Sensitization

Mutagenicity Based on available data, the classification criteria are not met

Reproductive Effects No indication of effects on developmental toxicity. Information given is based on

data obtained from similar substances. No indication of effects on fertility.

Based on available data, the classification criteria are not met. Reproductive Toxicity

This product does not contain any carcinogens or potential carcinogens as listed Carcinogenicity

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

Do not breathe dust Inhalation

Ingestion is not a likely route of exposure Ingestion

Skin Avoid prolonged or repeated contact with skin

Contact with dust can cause mechanical irritation or drying of the skin

Avoid contact with eyes **Eyes**

Dust contact with the eyes can lead to mechanical irritation

Not an expected route of exposure. **Aspiration hazard**

11.2. Information on other hazards

11.2.1. Endocrine disrupting

This product does not contain any known or suspected endocrine disruptors

properties

11.2.2. Other information Not applicable

SECTION 12: Ecological information

12.1. Toxicity

Not considered to be harmful to aquatic life

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Aluminum oxide

WGK Classification (AwSV) 1346 WGK: nwg

12.2. Persistence andThe methods for determining biodegradability are not applicable to inorganic

degradability 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 MethodsDisposal 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

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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

14.5. Environmental hazards No

14.6. Special precautions for Not applicable

user

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)		Philippine s (PICCS)	Taiwan	TSCA: United States
Aluminum oxide	1344-28-1	215-691-6	Υ	Υ	Y	(1)-23 (ENCS)(IS HL)	KE-01012	Y	55-1-0151 7	Υ	Y	Υ	Α

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

REACH No.

<u>Aluminum oxide</u>

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

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15.2. Chemical safety assessment

A Chemical Safety Assessment has been carried out for this substance

SECTION 16: Other information

This safety data sheet complies with the requirements of Regulation (EC) No. Reason for Revision

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Huber Engineered Materials Global Regulatory Affairs Prepared by

email: regulatory.affairs@huber.com.

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

Labeling

Symbols/Pictograms None

Signal Word None

This product is not classified as hazardous according to the UN GHS guideline **Hazard Statements**

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.

IARC (International Agency for Research on Cancer) Abbreviations and acronyms

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

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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