

Martinal® ONS

GHS (Globally Harmonized System)

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SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1. Product identifier****Product Name:** Martinal® ONS**Pure substance/mixture** SubstanceAluminum Hydroxide**CAS Number** 21645-51-2**Weight-%** >99**1.2. Relevant identified uses of the substance or mixture and uses advised against****Recommended Use** Additive : Flame retardant**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**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** Not a hazardous substance or mixture according to the Globally Harmonized System (GHS)**Hazards identification****Physical Hazard** Not classified**Health Hazards** Not classified

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Environmental Hazard Not classified

2.2. Label elements

Symbols/Pictograms None

Signal Word None

Hazard Statements None

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

Storage Keep in a dry place. Store away from incompatible materials.

Disposal Dispose of contents/containers in accordance with local regulations.

Additional Information: None.

2.3. Other hazards No information available.

SECTION 3: Composition/information on ingredients

Pure substance/mixture Substance

| Chemical Name | CAS Number | TSCA: United States | EC No | REACH registratio n number | GHS Classificatio n | Weight-% |
|--------------------|------------|---------------------------|-----------|----------------------------------|---------------------------|----------|
| Aluminum Hydroxide | 21645-51-2 | A | 244-492-7 | 01-211952 9246-39. | 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.

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|--|---|
| 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 | Inhalation of dust may cause irritation of the respiratory system. Eye irritation. |
| 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. |
| Flammable Properties | 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. |

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- 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 Hydroxide

ACGIH
OSHA

TLV/TWA 8-hr: 1 mg/m³ (respirable fraction)
TWA: 15 mg/m³ Total Dust
5 mg/m³ Respirable Dust

Biological Limit Values: None

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

DNEL (Derived No Effect Level) No information available

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

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Personal protective equipment

| | |
|---------------------------------|--|
| Eye/Face Protection | Wear safety glasses with side shields (or goggles). |
| Skin and Body Protection | Wear suitable protective clothing. |
| Hand Protection | Wear suitable gloves. |
| 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****9.1. Information on basic physical and chemical properties**

| | |
|--------------------------------------|---|
| Physical State | Solid. Powder. |
| Color | White |
| Odor | Odorless |
| Odor Threshold | No information available |
| pH: | +/- 9, (, 10%, Water,) |
| Melting Point / Melting Range | Not applicable |
| Boiling Point | Not applicable |
| Flash Point: | Not applicable Product/Substance is inorganic Solid |
| Evaporation Rate | Not applicable |
| Flammability (solid, gas) | Not flammable |
| Vapor Pressure | Not applicable |
| Vapor Density | Not applicable |
| Solubility in other solvents | No information available |
| Water Solubility | Insoluble |
| Partition coefficient | No information available |

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Explosive Properties None
Oxidizing Properties None
Decomposition Temperature 200 °C (392 °F)

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 Decomposition Temperature. < / =0.3%. ∴ Al₂O₃ . Water.
10.5. Incompatible materials None known.
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.

Information on Likely Routes of Exposure

Inhalation Do not breathe dust
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
Ingestion Ingestion is not a likely route of exposure
Aspiration hazard Not an expected route of exposure.

11.1. Information on toxicological effects

Aluminum Hydroxide

Oral LD50 > 2000 mg/kg Rat
Inhalation LC50 Rat > 2.3 mg/l (Al₂O₃) Aerosol Maximum attainable concentration
IARC Not Listed

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

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

SECTION 12: Ecological information

12.1. Ecotoxicity Very low solubility. Not considered to be harmful to aquatic life.

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WGK Classification (AwSV) 5220 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.

Partition coefficient Not available.

Bioconcentration factor (BCF) No data available.

12.4. Mobility in soil No information available.

12.5. Results of PBT and vPvB assessment This substance does not meet the criteria for classification as PBT or vPvB.

12.6. Other adverse effects No information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

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

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

Aluminum Hydroxide - 21645-51-2

European Waste Catalog 060299

SECTION 14: Transport information

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

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DOT 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 (AIC) | Canada (DSL) | China (IECSC) | Japan | S. Korea (KECL) | Mexico | New Zealand | Philippines (PICCS) | Taiwan | TSCA: United States |
|--------------------|------------|-----------|---------------------------|-----------------|--------------|---------------|---------------------|-----------------|--------|-------------|---------------------|--------|---------------------|
| Aluminum Hydroxide | 21645-51-2 | 244-492-7 | 01-211952924-6-39 | Y | Y | Y | (1)-17 (ENCS); ISHL | KE-00980 | 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
 email: regulatory.affairs@huber.com

Reason for Revision GHS (Globally Harmonized System).

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

HUBER

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Labeling

Symbols/Pictograms None

Signal Word None

Hazard Statements None

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)
IUCLID (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
PNEC (Predicted No Effect Concentration)
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