



Issue Date: 19/Aug/2021

Print Date: 19/Aug/2021

Revision Number: 1.3.2

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier

Product Name: Martinal® ON-310S; Martinal® ON-313S; Martinal® ON-320; Martinal®, ON-904; Martinal® ON-906; Martinal® ON-908; Martinal® ON-921; Martinal® ON-935

Pure substance/mixture Substance

Aluminum 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

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

Health Hazards Not classified

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Environmental Hazard Not classified

2.2. Label elements

Symbols/Pictograms None

Signal Word 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.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Pure substance/mixture Substance

| Chemical Name | CAS Number | TSCA: United States | REACH registration number | Weight-% |
|--------------------|------------|---------------------|---------------------------|----------|
| Aluminum Hydroxide | 21645-51-2 | A | 01-2119529246-39 | >99 |

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

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.

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| | |
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| 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. |
| Notes to Physician | Treat symptomatically. |
| 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. |

5. FIRE-FIGHTING 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.

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.

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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.

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.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Occupational exposure limits

Aluminum Hydroxide

NIOSH
ACGIH
OSHA

TWA: 5 mg/m³ (respirable dust); 10 mg/m³ TWA (total dust)
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

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.

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| 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. |

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Appearance:

| | |
|--|--|
| Physical State | Solid Powder |
| Color | White |
| Odor | Odorless |
| Odor Threshold | No information available |
| pH: | +/- 9 (10% Water) |
| Melting point / Freezing point | ~ 300 °C / 572 °F (101.3 hPa) |
| Initial boiling point and boiling range | > 2900 °C / 5252 °F (101.3 hPa) |
| Flash Point: | Not applicable. Product/Substance is inorganic. Solid. |
| Evaporation Rate | Not applicable. |
| Flammability (solid, gas) | Not flammable |
| Upper flammability limit: | |
| Lower flammability limit: | |
| Vapor Pressure | Not applicable |
| Vapor Density | Not applicable |
| Relative Density | +/- 2.42 g/cm ³ (20 °C) |
| Water Solubility | Insoluble |
| Solubility in other solvents | No information available |
| Partition coefficient | Not applicable Product/Substance is inorganic |
| Autoignition Temperature | |
| Decomposition Temperature | 200 °C (392 °F) |
| Dynamic viscosity | Not applicable Solid |
| Explosive Properties | None |
| Oxidizing Properties | None |

9.2. Other information

No data available

10. STABILITY AND REACTIVITY

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| 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% : Al ₂ O ₃ Water |
| 10.5. Incompatible materials | None known |
| 10.6. Hazardous decomposition products | None known |

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 (Al ₂ O ₃) Aerosol Maximum attainable concentration |
| IARC | Not Listed |

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

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

12. ECOLOGICAL INFORMATION

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

Aluminum Hydroxide

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.

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

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 Hydroxide

European Waste Catalog 060299
WGK Classification (AwSV) 5220 WGK: nwg

14. TRANSPORT INFORMATION

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

TDG -Canada Not regulated
DOT Not regulated
IATA Not regulated

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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

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

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

Physical Hazard Not classified

Health Hazards Not classified

Environmental Hazard Not classified

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Labeling

Symbols/Pictograms None

Signal Word 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)
International Uniform Chemical Information Database (IUCLID)
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)
The Classification, Labeling and Packaging of Substances and Mixtures (CLP) 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)
Derived No Effect Level (DNEL)
SVHC: Substances of Very High Concern for Authorization:
Land transport (ADR/RID)
Biochemical oxygen demand (BOD)
Chemical oxygen demand (COD)
ICAO (International Civil Aviation Organization)
IMDG (International Maritime Dangerous Goods)
Positive Pressure Self-Contained Breathing Apparatus (SCBA)
Predicted No Effect Concentration (PNEC)
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