



Safety Data Sheet

ADVANCED MATERIALS

Martifin® OL-004

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 1.1.1
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SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product Name: Martifin® OL-004
Pure substance/mixture Mixture

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

Recommended Use Additive : White pigment for paper and board, filler, etc.
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

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

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

Physical Hazards 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

Hazard Statements None

Precautionary Statements

Prevention Employ good industrial hygiene practice
Do not handle until all safety precautions have been read and understood
Do not breathe dust
Wear protective gloves/protective clothing/eye protection/face protection

Response IF ON SKIN: Wash with plenty of soap and water

Storage Store away from incompatible materials

Disposal Dispose of contents/containers in accordance with local regulations

Additional Information: None.

Hazards not otherwise classified (HNOC) Not classified.

SECTION 3: Composition/information on ingredients

Pure substance/mixture Mixture

| Chemical Name | CAS Number | TSCA: United States | Canada (DSL) | Mexico | EU REACH registration number | OSHA Regulatory Status | WHMIS | Weight-% |
|--------------------|------------|---------------------|--------------|--------|------------------------------|------------------------|-------|----------|
| Aluminum Hydroxide | 21645-51-2 | A | Y | Y | 01-211952924-6-39 | Not classified | -- | 66 - 69 |

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

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| | 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 | No information available. |
| 4.2. Most important symptoms and effects, both acute and delayed | Treat symptomatically. |
| 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

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- 6.1. Personal precautions, protective equipment and emergency procedures** Ensure adequate ventilation. Use personal protection recommended in Section 8. 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** Provide local exhaust ventilation. Handle in accordance with good industrial hygiene and safety practice.
- 7.2. Conditions for safe storage, including any incompatibilities** 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

OSHA

ACGIH

Canada - Nova Scotia - OEL - TWA

TWA: 15 mg/m³ Total Dust

5 mg/m³ Respirable Dust

TLV/TWA 8-hr: 1 mg/m³ (respirable fraction)

1 mg/m³ TWA (respirable fraction)

PNEC (Predicted No Effect Concentration) No information available

DNEL (Derived No Effect Level) No information available

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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

9.1. Information on basic physical and chemical properties

Appearance:

| | |
|--|-----------------------------------|
| Physical State | Liquid (suspension) |
| Color | White |
| Odor | Odorless |
| Odor Threshold | No information available |
| pH: | 9-10 |
| Melting point / Freezing point | <= 0 °C / 32 °F (Water) |
| Initial boiling point and boiling range | >= 100 °C / 212 °F (Water) |
| Freezing Point | Not applicable |
| Flash Point | No data available |
| Evaporation Rate | No data available. |
| Flammability (solid, gas) | Not flammable |
| Upper flammability limit: | No data available |
| Lower flammability limit: | No data available |
| Vapor Pressure | ca 25 mbar (Water) |
| Vapor Density | No data available |
| Density | No data available |
| Relative Density | +/- 1.6 g/cm ³ (20 °C) |
| Water Solubility | Insoluble (Solid) |
| Solubility in other solvents | No information available |

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|---------------------------|---|
| Partition coefficient | No information available No data available |
| Autoignition Temperature | No data available |
| Decomposition Temperature | No data available |
| Viscosity | No information available. |
| Kinematic viscosity | No data available |
| Dynamic viscosity | No data available ca 150 mPa.s (Epprecht Rheometer) |
| Explosive Properties | None |
| Oxidizing Properties | No data available |
| 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 |
| 10.4. Conditions to avoid | Decomposition Temperature Al ₂ O ₃ Water +/- pH |
| 10.5. Incompatible materials | No information available |
| 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 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 |

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| Acute Toxicity | Low hazard for usual industrial or commercial handling |
| Carcinogenicity | Based on available data, the classification criteria are not met. |
| Specific target organ toxicity - Single exposure | No information available. |
| Specific target organ toxicity - Repeated exposure | No information available. |

Information on Likely Routes of Exposure

| | |
|--------------------------|---|
| Inhalation | Avoid breathing vapor or mist |
| Ingestion | Ingestion is not a likely route of exposure |
| Skin | Avoid prolonged or repeated contact with skin |
| Eyes | Avoid contact with eyes |
| Aspiration hazard | No information available. |

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

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|-----------------------|--|
| 12.1. Toxicity | Not considered to be harmful to aquatic life |
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Aluminum Hydroxide

WGK Classification (AwSV) 5220 WGK: nwg

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| 12.2. Persistence and degradability | The methods for determining biodegradability are not applicable to inorganic substances. |
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|--|------------------------------|
| 12.3. Bioaccumulative potential | Not likely to bioaccumulate. |
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| Bioconcentration factor (BCF) | No data available. |
|--------------------------------------|--------------------|

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|-------------------------------|---------------------------|
| 12.4. Mobility in soil | No information available. |
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| 12.5. Results of PBT and vPvB | This substance does not meet the criteria for classification as PBT or vPvB. |
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assessment

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

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| 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 |

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

14.2. UN proper shipping name None

14.3. Transport hazard class(es) None

14.4. Packing group None

14.5. Environmental hazards No

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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 Mixture

| 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 Hydroxide | 21645-51-2 | 244-492-7 | 01-211952 9246-39 | Y | Y | Y | (1)-17 (ENCS); ISHL | KE-00980 | Y | Y | Y | Y | A |

Legend

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

US Federal Regulations

EPA

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40n of the Code of Federal Regulations, Part 372.

Aluminum Hydroxide

CERCLA Not listed

SARA 302 Not listed

SARA 311/312 Hazardous Categorization

None

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 Hydroxide | 21645-51-2 | N | N | N | N | N |

Legend Y: Listed ; N: Not Listed

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California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65)

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 |
| Print Date | 31/May/2023 |
| Revision Number | 1.1.1 |
| 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 | <p>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 GHS (Globally Harmonized System) SARA (Superfund Amendments and Reauthorization Act of 1986) TSCA (Toxic Substances Control Act)</p> |
| 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 |

HUBER

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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