

**Martifin® OL-104LE; Martifin® OL-107; Martifin® OL-111; Martifin® ON-313**

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  
Globally Harmonized System (GHS)

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**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1. Product identifier**

**Product Name:** Martifin® OL-104LE; Martifin® OL-107; Martifin® OL-111; Martifin® ON-313  
**Pure substance/mixture** Substance

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

**Recommended Use** Additive. ∴ Flame retardant.

**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.

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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

**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](http://www.hubermaterials.com)

**E-mail**

[hubermaterials@huber.com](mailto: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

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**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 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.**Hazards not otherwise classified (HNOC)** Not classified.**SECTION 3: Composition/information on ingredients****Pure substance/mixture** Substance

Chemical Name	CAS Number	TSCA: United States	Canada (DSL)	Mexico	REACH registration number	OSHA Regulatory Status	WHMIS	Weight-%
Aluminum Hydroxide	21645-51-2	A	Y	Y	01-211952924-6-39-0016	Not classified	--	>99

**Legend**

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

**SECTION 4: First aid measures**

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#### 4.1. Description of first aid measures

<b>General Advice</b>	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.
<b>Eye Contact</b>	In case of eye contact, remove contact lens and rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.
<b>Skin Contact</b>	Wash with plenty of soap and water.
<b>Ingestion</b>	Rinse mouth thoroughly with water.
<b>Inhalation</b>	If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.
<b>Aspiration hazard</b>	Not an expected route of exposure.

**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 (CO<sub>2</sub>).

**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 Hydroxide

OSHA	TWA: 15 mg/m <sup>3</sup> Total Dust 5 mg/m <sup>3</sup> Respirable Dust
ACGIH	TLV/TWA 8-hr: 1 mg/m <sup>3</sup> (respirable fraction)
NIOSH	TWA: 5 mg/m <sup>3</sup> (respirable dust); 10 mg/m <sup>3</sup> TWA (total dust)
Canada - BC TWA	TWA: 1 mg/m <sup>3</sup> (respirable)
Canada - Manitoba - OEL - TWA	TWA: 1 mg/m <sup>3</sup> (respirable)
Canada - Newfoundland & Labrador - OEL - TWA	TWA: 1 mg/m <sup>3</sup> (respirable)
Canada - Nova Scotia - OEL - TWA	TWA: 1 mg/m <sup>3</sup> (respirable)
Canada - Prince Edward Island - OEL - TWA	TWA: 1 mg/m <sup>3</sup> (respirable)

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Mexico

No se ha establecido

**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. Wear suitable gloves tested to EN 374.

**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** Solid Powder

**Color** White

**Odor** Odorless

**Odor Threshold** No information available

**pH:** +/- 9 ( 10% Water )

**Melting point / Freezing point** Not applicable

**Initial boiling point and boiling range** Not applicable

**Flash Point:** Not applicable. Product/Substance is inorganic. Solid.

**Evaporation Rate** Not applicable.

**Flammability (solid, gas)** Not flammable

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Upper flammability limit:	
Lower flammability limit:	
Vapor Pressure	Not applicable
Vapor Density	Not applicable
Relative Density	+/- 2.42 g/cm <sup>3</sup> (20 °C)
Water Solubility	Insoluble
Solubility in other solvents	No information available
Partition coefficient	Not applicable Product/Substance is inorganic No information available
Decomposition Temperature	~ 200 °C
Dynamic viscosity	Not applicable Solid
Explosive Properties	None
Oxidizing Properties	None
9.2. Other information	No data available

## 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 Dust formation Decomposes at 200 °C Al <sub>2</sub> O <sub>3</sub> Water
10.5. Incompatible materials	None known
10.6. Hazardous decomposition products	None

## SECTION 11: Toxicological information

General Information	Users are advised to consider national Occupational Exposure Limits or other equivalent values.
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### 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

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**Aspiration hazard**

Not an expected route of exposure.

**11.1. Information on toxicological effects****Aluminum Hydroxide****Oral LD50**

&gt; 2000 mg/kg Rat

**Inhalation LC50**Rat > 2.3 mg/l (Al<sub>2</sub>O<sub>3</sub>) 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.

**SECTION 12: Ecological information****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

**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



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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  
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

### Global Inventories

Pure substance/mixture Substance

Chemical Name	CAS Number	EC No	REACH registration number	Australia (AICS)	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 9246-39-0 016	Y	Y	Y	(1)-17 (ENCS); ISHL	KE-00980	Y	Y	Y	Y	A

Legend

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### 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 311/312 Hazardous

Not listed

Categorization

SARAH 302 RQ, lbs

Not listed

##### **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	California CPR	Massachusetts	Minnesota	New Jersey	Pennsylvania
Aluminum Hydroxide	21645-51-2	No		No	No	No	No

##### **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:**

07/May/2020

##### **Print Date:**

07/May/2020

##### **Revision Number:**

1.3.2

##### **Reason for Version**

OSHA (Occupational Safety and Health Administration of the US Department of Labor).

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### Training Advice

Do not handle until all safety precautions have been read and understood.

### Abbreviations and acronyms

International Agency for Research on Cancer (IARC)  
International Air Transport Association (IATA)  
International Maritime Dangerous Goods (IMDG)  
International Uniform Chemical Information Database (IUCLID)  
Workplace Hazardous Materials Information System (WHMIS) status and classification  
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)  
Reportable Quantity (RQ) (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 (air)  
(IMDG) International Maritime Dangerous Goods  
Positive Pressure Self-Contained Breathing Apparatus (SCBA)  
Predicted No Effect Concentration (PNEC)  
Globally Harmonized System (GHS)

### 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**