

Martinal® OL-107 LEO

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)

Issue Date: 13/Dec/2018
 Print Date: 13/Dec/2018

Revision Number: 1.3
 Page 1 of 11

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

1.1. Product identifier

Product Name: Martinal® OL-107 LEO

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.

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

Issue Date: 13/Dec/2018
Print Date: 13/Dec/2018

Revision Number: 1.3
Page 2 of 11

Professional use

Recycling plastics
White pigment for paper and board, filler, etc.

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

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

Safety Data Sheet
Martinal® OL-107 LEO**Issue Date:** 13/Dec/2018
Print Date: 13/Dec/2018**Revision Number:** 1.3
Page 3 of 11

Standard (29 CFR 1910.1200)

Physical Hazards Not classified**Health Hazards** Not classified**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**

Substance

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

Legend

X / Y: Complies , - / N: Not Listed , Exempt

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	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
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	Not an expected route of exposure.
4.2. Most important symptoms and effects, both acute and delayed	May cause irritation to mucous membranes and respiratory tract. 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 (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**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 ³ Total Dust 5 mg/m ³ Respirable Dust
ACGIH	TLV/TWA 8-hr: 1 mg/m ³ (respirable fraction)
NIOSH	TWA: 5 mg/m ³ (respirable dust); 10 mg/m ³ TWA (total dust)
Canada - BC TWA	TWA: 1 mg/m ³ (respirable)
Canada - Manitoba - OEL - TWA	TWA: 1 mg/m ³ (respirable)
Canada - Newfoundland & Labrador - OEL - TWA	TWA: 1 mg/m ³ (respirable)
Canada - Nova Scotia - OEL - TWA	TWA: 1 mg/m ³ (respirable)
Canada - Prince Edward Island - OEL - TWA	TWA: 1 mg/m ³ (respirable)

HUBER

Safety Data Sheet

Martinal® OL-107 LEO

Issue Date: 13/Dec/2018
Print Date: 13/Dec/2018

Revision Number: 1.3
Page 6 of 11

TWA
Mexico

No se ha establecido

Biological Limit Values: None

Derived No Effect Level (DNEL)

Predicted No Effect Concentration (PNEC)

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 ~ 300 °C / 572 °F (1013 hPa)

Initial boiling point and boiling range > 2900 °C / 5252 °F (1013 hPa)

Issue Date: 13/Dec/2018
Print Date: 13/Dec/2018

Revision Number: 1.3
Page 7 of 11

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	No information available
Decomposition Temperature	No information available
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	Decomposition Temperature < / =0.3% : Al ₂ O ₃ 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

Issue Date: 13/Dec/2018
Print Date: 13/Dec/2018

Revision Number: 1.3
Page 8 of 11

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.

SECTION 12: Ecological information

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

Aluminum Hydroxide

WGK Classification (VwVwS) 5220 WKG: 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

Issue Date: 13/Dec/2018
Print Date: 13/Dec/2018

Revision Number: 1.3
Page 9 of 11

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 (VwVwS) 5220 WKG: 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

HUBER

Safety Data Sheet

Martinal® OL-107 LEO

Issue Date: 13/Dec/2018

Print Date: 13/Dec/2018

Revision Number: 1.3

Page 10 of 11

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	Y	KE-00980	Y	Y	Y	Y	Y

Legend

X / Y: Complies , - / N: Not Listed , Exempt

US Federal Regulations

EPA

CERCLA

Aluminum Hydroxide

CERCLA

Not listed

SARA 311/312 Hazardous
Categorization

Not listed

SARAH 302 RQ, lbs

Not listed

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 40 of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazardous Categorization

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

HUBER

Safety Data Sheet

Martinal® OL-107 LEO

Issue Date: 13/Dec/2018
Print Date: 13/Dec/2018

Revision Number: 1.3
Page 11 of 11

Issue Date: 13/Dec/2018
Print Date: 13/Dec/2018

Revision Number: 1.3

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

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