

Martinal® OL-104 LEO

This material safety datasheet has been prepared according to Brazilian legislation and ABNT NBR 14725:2014 Globally Harmonized System (GHS)

Issue Date: 28/Feb/2021
Print Date: 28/Feb/2021

Revision Number: 1.3.1

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

1.1. Product identifier

Product Name: Martinal® OL-104 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

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

Brazil Ministry of Transport

This product is not part of the Hazardous Products Classification established by the Brazilian Federal Department of Transportation's Administrative Ruling 204 from 5/20/1997.

2.1. Classification of the substance or mixture

Safety Data Sheet
Martinal® OL-104 LEO

Issue Date: 28/Feb/2021
Print Date: 28/Feb/2021

Revision Number: 1.3.1
Page 2 of 10

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

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 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	REACH registration number	GHS Classification	Weight-%
Aluminum Hydroxide	21645-51-2	A	01-2119529246-39	Not classified.	>99

Additional information TSCA A: Component is listed on Inventory as Active

SECTION 4: First aid measures

Issue Date: 28/Feb/2021
Print Date: 28/Feb/2021

Revision Number: 1.3.1
Page 3 of 10

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.
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 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

Flammable Properties None known

5.1. Extinguishing media

Suitable Extinguishing Media	Water spray (fog). Foam. Dry chemical. Carbon dioxide (CO ₂).
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 - 21645-51-2

OSHA	TWA: 15 mg/m ³ Total Dust 5 mg/m ³ Respirable Dust
NIOSH	TWA: 5 mg/m ³ (respirable dust); 10 mg/m ³ TWA (total dust)
ACGIH	TLV/TWA 8-hr: 1 mg/m ³ (respirable fraction)
Mexico	Not established

Predicted No Effect Concentration (PNEC) No information available

Biological Limit Values: None

8.2. Exposure controls

Issue Date: 28/Feb/2021
Print Date: 28/Feb/2021

Revision Number: 1.3.1
Page 5 of 10

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.

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

Physical State	Solid.
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	Not available
Flash Point:	Not applicable Product/Substance is inorganic Solid
Evaporation Rate	Not applicable
Flammability (solid, gas)	Not flammable
Vapor Pressure	Not applicable

Issue Date: 28/Feb/2021
Print Date: 28/Feb/2021

Revision Number: 1.3.1
Page 6 of 10

Relative Density	+/- 2.42 g/cm ³ (20 °C)
Water Solubility	Insoluble
Partition coefficient	Not available
Decomposition Temperature	200 °C (392 °F)
Viscosity	Not applicable
Explosive Properties	None
Oxidizing Properties	None
VOC Content (%)	Not applicable
Solubility in other solvents	No information available
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.
Eyes	Avoid contact with eyes. Dust contact with the eyes can lead to mechanical

Issue Date: 28/Feb/2021
Print Date: 28/Feb/2021

Revision Number: 1.3.1
Page 7 of 10

irritation.

Ingestion

Ingestion is not a likely route of exposure.

Aspiration hazard

Not an expected route of exposure.

Symptoms related to the physical, chemical and toxicological characteristics

Signs and symptoms may include coughing, gasping, choking and difficulty breathing. Contact with eyes may cause irritation.

Symptoms

Low hazard for usual industrial or commercial handling

11.1. Information on toxicological effects**Aluminum Hydroxide - 21645-51-2**

Oral LD50	> 2000 mg/kg Rat
Inhalation LC50	Rat > 2.3 mg/l (Al ₂ O ₃) Aerosol Maximum attainable concentration
IARC	Not Listed

Acute Toxicity

Based on available data, the classification criteria are not met

Chronic Toxicity

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

Chronic Effects

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

Respiratory Sensitization

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

Skin Sensitization

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

Germ cell mutagenicity

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

Reproductive Toxicity

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

Carcinogenicity

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

Specific target organ toxicity - Single exposure

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

Specific target organ toxicity - Repeated exposure

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

Mixture versus substance information

No information available.

SECTION 12: Ecological information

12.1. Ecotoxicity

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

Aluminum Hydroxide - 21645-51-2

WGK Classification (AwSV) 5220 WGK: nwg

Issue Date: 28/Feb/2021
Print Date: 28/Feb/2021

Revision Number: 1.3.1
Page 8 of 10

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)

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

Issue Date: 28/Feb/2021
 Print Date: 28/Feb/2021

Revision Number: 1.3.1
 Page 9 of 10

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 (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	Y	Y	Y	(1)-17 (ENCS); ISHL	KE-00980	Y	Y	Y	Y	A

Legend

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

Information on risks and safety as written on the label

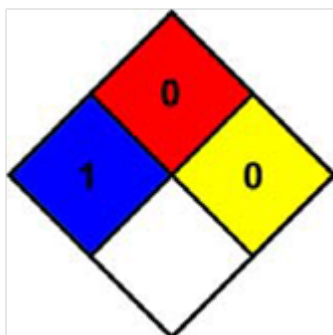
Health - Blue

Flammability - Red

Physical Hazard - Yellow

Special - White

Diamante de Hommel



4- Extreme
 3- High
 2- Moderate
 1- Low
 0- Minimum

SECTION 16: Other information

Prepared by	Huber Engineered Materials (HEM) Global Regulatory Affairs regulatory.affairs@huber.com
Reason for Version	Brasil: ABNT NRB 14725-4: 2014.
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