



ADVANCED MATERIALS

Safety Data Sheet

Martinal® OL-104 LEO

GHS (Globally Harmonized System)

Measures on the Management of Toxic Chemical Substances Labelling and Safety Data Sheets. December 11, 2014.

Issue Date 02/May/2023

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Revision Number 1.3.2

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Section 1: Identification: Product identifier and chemical identity

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: J.M. Huber Corporation
3100 Cumberland Boulevard, Suite 600
Atlanta, GA 30339 USA
Tel: +1 678 247-7300

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

Poison control center phone number National Anti-Poison Center UK: +44 844 892 0111 (National Poisons Information Service)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Pure substance/mixture Substance

GHS Classification This product is not classified as hazardous according to the UN GHS guideline and labeling is not required

Hazards identification

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Physical Hazard 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.

2.3. Other hazards No information available.

SECTION 3: Composition/information on ingredients

3.1. Substance Substance

Chemical Name	CAS Number	Taiwan	Taiwan - GHS	EU REACH registration number	Weight-%
Aluminum Hydroxide	21645-51-2	Y	Not classified	01-2119529246-39	>99

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 In case of eye contact, remove contact lens and rinse immediately with plenty of

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water, also under the eyelids, for at least 15 minutes.

Skin Contact

Wash with plenty of soap and water.

Inhalation

If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.

Ingestion

Rinse mouth thoroughly with water.

Aspiration hazard

Not an expected route of exposure.

Notes to Physician

Treat symptomatically.

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 (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.
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

Engineering Controls:**Exposure Limit Values
Aluminum Hydroxide**

ACGIH
OSHA

TLV/TWA 8-hr: 1 mg/m³ (respirable fraction)
TWA: 15 mg/m³ Total Dust
5 mg/m³ Respirable Dust

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 Protection**

Wear safety glasses with side shields (or goggles)

Skin and Body Protection

Use suitable protective clothing, gloves and footwear, selected with regard for use conditions and exposure.

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Hand Protection	Impervious gloves: chemical resistant EN 420
Respiratory Protection:	In case of exposure to high levels of airborne dust, wear a respirator EN 149, P2 half masks.
Hygiene Measures	Handle in accordance with good industrial hygiene and safety practice Handle in accordance with good industrial hygiene and safety practice
Environmental Exposure	This product does not present any particular risk for the environment. Check the appropriate national and local regulations. Prevent entry into sewers and waterways.

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 (101.3 hPa)
Initial boiling point and boiling range	> 2900 °C / 5252 °F (101.3 hPa)
Freezing Point	Not applicable
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
Density	No data available
Relative Density	+/- 2.42 g/cm ³ (20 °C)
Water Solubility	Insoluble
Solubility in other solvents	No information available
Partition coefficient	No information available Not applicable Product/Substance is inorganic
Autoignition Temperature	No data available
Decomposition Temperature	200 °C (392 °F)
Viscosity	No information available.
Kinematic viscosity	Not applicable
Dynamic viscosity	Not applicable Solid
Explosive Properties	None
Oxidizing Properties	None
Particle Size	No information available
VOC Content (%)	Not applicable

9.2. Other information

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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 < / =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.
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11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008**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.
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Carcinogenicity	Based on available data, the classification criteria are not met.
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Information on Likely Routes of Exposure

Inhalation	Do not breathe dust
Ingestion	Ingestion is not a likely route of exposure
Skin	Avoid prolonged or repeated contact with skin

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	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
Aspiration hazard	Not an expected route of exposure.

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

- 12.1. Toxicity** 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. Endocrine disrupting properties** This product does not contain any known or suspected endocrine disruptors

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.

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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
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

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

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

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SECTION 16: Other information

Prepared by	Huber Engineered Materials Global Regulatory Affairs email: regulatory.affairs@huber.com.
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GHS Classification	This product is not classified as hazardous according to the UN GHS guideline and labeling is not required
Symbols/Pictograms	None
Signal Word	None
Hazard Statements	None
Hazards identification	
Physical Hazard	Not classified
Health Hazards	Not classified
Environmental Hazard	Not classified
Key literature references and sources for data	ChemADVISOR® LOLI Chemical data and global regulatory content. European Chemicals Agency, an agency of the European Union.
Abbreviations and acronyms	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

HUBER

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SARA (Superfund Amendments and Reauthorization Act of 1986)
TSCA (Toxic Substances Control Act)

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End of Safety Data Sheet