

**Martinal® OL-104 LE; Martinal® OL-107 LE; Martinal® OL-111 LE**

GHS (Globally Harmonized System)

Issue Date 29/Jul/2022

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Revision Number 1.3.3

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**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1. Product identifier****Product Name:** Martinal® OL-104 LE; Martinal® OL-107 LE; Martinal® OL-111 LE**Pure substance/mixture** SubstanceAluminum 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****2.1. Classification of the substance or mixture****GHS Classification** Not a hazardous substance or mixture according to the Globally Harmonized System (GHS)**Hazards identification****Physical Hazard** 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

**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.**2.3. Other hazards** No information available.**SECTION 3: Composition/information on ingredients****Pure substance/mixture** Substance

Chemical Name	CAS Number	TSCA: United States	EC No	EU REACH registratio n number	GHS Classificatio n	Weight-%
Aluminum Hydroxide	21645-51-2	A	244-492-7	01-211952 9246-39.	Not classified	>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 water, also under the eyelids, for at least 15 minutes.

**Skin Contact** Wash with plenty of soap and water.

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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	Inhalation of dust may cause irritation of the respiratory system. Eye irritation.
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.
Flammable Properties	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

ACGIH

OSHA

TLV/TWA 8-hr: 1 mg/m<sup>3</sup> (respirable fraction)TWA: 15 mg/m<sup>3</sup> Total Dust5 mg/m<sup>3</sup> Respirable Dust

#### Biological Limit Values

None

#### Recommended monitoring procedures

Refer also to national guidance documents for information on currently recommended monitoring procedures

**DNEL (Derived No Effect Level)** No information available

**PNEC (Predicted No Effect Concentration)** No information available

### 8.2. Exposure controls

#### 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

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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** Wear suitable gloves.

**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

<b>Physical State</b>	Solid. Powder.
<b>Color</b>	White
<b>Odor</b>	Odorless
<b>Odor Threshold</b>	No information available
<b>pH:</b>	+/- 9, (, 10%, Water, )
<b>Melting Point / Melting Range</b>	Not applicable
<b>Boiling Point</b>	Not applicable
<b>Flash Point</b>	Not applicable Product/Substance is inorganic Solid
<b>Evaporation Rate</b>	Not applicable
<b>Flammability (solid, gas)</b>	Not flammable
<b>Vapor Pressure</b>	Not applicable
<b>Vapor Density</b>	Not applicable
<b>Solubility in other solvents</b>	No information available
<b>Water Solubility</b>	Insoluble
<b>Partition coefficient</b>	No information available

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Explosive Properties	None
Oxidizing Properties	None
Decomposition Temperature	200 °C (392 °F)

## 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 <sub>2</sub> O <sub>3</sub> . 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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### 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
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 <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.
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**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 - 21645-51-2

**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.

**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

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### Mode of Transportation (Road, Water, Air, Rail)

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

### 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

#### 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	01-211952924-6-39	Y	Y	Y	(1)-17 (ENCS); ISHL	KE-00980	Y	Y	Y	Y	A

#### Legend

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

## SECTION 16: Other information

#### Prepared by

Huber Engineered Materials Global Regulatory Affairs  
email: regulatory.affairs@huber.com

#### Reason for Revision

GHS (Globally Harmonized System).

#### GHS Classification

This product is not classified as hazardous according to the UN GHS guideline



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and labeling is not required

### Labeling

**Symbols/Pictograms** None

**Signal Word** None

**Hazard Statements** None

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

### 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  
PNEC (Predicted No Effect Concentration)  
GHS (Globally Harmonized System)  
TSCA (Toxic Substances Control Act)

### 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**