



ADVANCED MATERIALS

# Safety Data Sheet

## Martinal® OL-104 GO

This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006  
COMMISSION REGULATION (EU) No. 2020/878

Issue Date 15/Feb/2023

Print Date 20/Feb/2023

Revision Number 1.3.1

Page 1 of 12

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

### 1.1. Product identifier

**Product Name:** Martinal® OL-104 GO  
**Chemical Name** Aluminum Hydroxide (surface modified)  
**Pure substance/mixture** Mixture

Chemical Name	CAS Number	EC No	EU REACH registration number	(CLP) Regulation (EC 1272/2008)	Weight-%
Aluminum Hydroxide	21645-51-2	244-492-7	01-2119529246-39	Not classified	>98

### 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

**Issue Date** 15/Feb/2023  
**Print Date** 20/Feb/2023**Revision Number** 1.3.1  
**Page** 2 of 12

White pigment for paper and board, filler, etc.

**Professional use**

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

**Uses advised against**

No information available.

**1.3. Details of the supplier of the safety data sheet****Manufacturer**

MARTINSWERK GmbH  
Kölner Strasse 110  
50127 Bergheim  
Germany : +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

**Poison control center phone number**

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

**SECTION 2: Hazards identification**

Issue Date 15/Feb/2023  
Print Date 20/Feb/2023

Revision Number 1.3.1  
Page 3 of 12

**2.1. Classification of the substance or mixture**

(CLP) Regulation (EC 1272/2008) Not classified

**Hazards identification**

Physical Hazard	Not classified
Health Hazards	Not classified
Environmental Hazard	Not classified

**2.2. Label elements**

Symbols/Pictograms	None
Signal Word	None
Hazard Statements	This product is not classified as hazardous according to the UN GHS guideline and labeling is not required This material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200)

**Precautionary Statements**

Prevention	Employ good industrial hygiene practice Wash hands thoroughly after handling
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	Disposal should be in accordance with applicable regional, national and local laws and regulations.

Additional Information: None.

2.3. Other hazards No information available.

**SECTION 3: Composition/information on ingredients**

3.1. Substance Not applicable

3.2. Mixture Mixture

Chemical Name	CAS Number	EC No	EU REACH registration number	(CLP) Regulation (EC 1272/2008)	Annex	Weight-%
Aluminum Hydroxide	21645-51-2	244-492-7	01-2119529246-39	Not classified	--	>98

## SECTION 4: First aid measures

### 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>Inhalation</b>	If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.
<b>Ingestion</b>	Rinse mouth thoroughly with water.
<b>Aspiration hazard</b>	Not an expected route of exposure.
<b>Notes to Physician</b>	Treat symptomatically.
<b>4.2. Most important symptoms and effects, both acute and delayed</b>	Dust contact with the eyes can lead to mechanical irritation. Contact with dust can cause mechanical irritation or drying of the skin.
<b>4.3. Indication of any immediate medical attention and special treatment needed</b>	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**

**ACGIH**  
**OSHA**

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

**NIOSH**  
**France**

TWA: 5 mg/m<sup>3</sup> (respirable dust); 10 mg/m<sup>3</sup> TWA (total dust)  
Not established (Non établi)

**France**

Not established (Non établi)

**Poland**

2.5 mg/m<sup>3</sup> (inhalable); 1.2 mg/m<sup>3</sup> (respirable)

**Switzerland**

TWA: 3 mg/m<sup>3</sup>

**Issue Date** 15/Feb/2023  
**Print Date** 20/Feb/2023

**Revision Number** 1.3.1  
**Page** 6 of 12

**United Kingdom** 10 mg.m-3 (inhalable); 4 mg.m-3 (respirable)

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

**Biological Limit Values** None

**DNEL/DMEL and PNEC values**

**PNEC (Predicted No Effect Concentration)**

## 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  
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** When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.  
Recommended filter type:  
(FFP2)  
(FFP3)

**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:**

**Issue Date** 15/Feb/2023  
**Print Date** 20/Feb/2023

**Revision Number** 1.3.1  
**Page** 7 of 12

<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 / Freezing point</b>	~ 300 °C / 572 °F (101.3 hPa)
<b>Initial boiling point and boiling range</b>	> 2900 °C / 5252 °F (101.3 hPa)
<b>Freezing 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>	No information available
<b>Upper flammability limit:</b>	--
<b>Lower flammability limit:</b>	--
<b>Vapor Pressure</b>	Not applicable
<b>Vapor Density</b>	Not applicable
<b>Density</b>	No data available
<b>Relative Density</b>	+/- 2.42 g/cm <sup>3</sup> (20 °C)
<b>Water Solubility</b>	Insoluble
<b>Solubility in other solvents</b>	No information available
<b>Partition coefficient</b>	No information available Not applicable Product/Substance is inorganic
<b>Autoignition Temperature</b>	No data available No information available
<b>Decomposition Temperature</b>	No data available No information available
<b>Viscosity</b>	No information available.
<b>Kinematic viscosity</b>	Not applicable
<b>Dynamic viscosity</b>	Not applicable Solid
<b>Explosive Properties</b>	None
<b>Oxidizing Properties</b>	None
<b>Particle Size</b>	No information available
<b>VOC Content (%)</b>	Not applicable

## 9.2. Other information

### 9.2.1. Information with regard to physical hazard classes

Not applicable

### 9.2.2. Other safety characteristics

Not applicable

## SECTION 10: Stability and reactivity

<b>10.1. Reactivity</b>	No data available
<b>10.2. Chemical stability</b>	Stable under normal conditions
<b>10.3. Possibility of hazardous reactions</b>	None under normal processing
<b>10.4. Conditions to avoid</b>	Incompatible materials Dust formation Decomposition Temperature : Al <sub>2</sub> O <sub>3</sub> Water
<b>10.5. Incompatible materials</b>	Incompatible with strong acids and bases

**Issue Date** 15/Feb/2023  
**Print Date** 20/Feb/2023

**Revision Number** 1.3.1  
**Page** 8 of 12

**10.6. Hazardous decomposition** None under normal use conditions  
products

## SECTION 11: Toxicological information

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

### 11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

#### Aluminum Hydroxide

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

**Reproductive Effects** 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** No information available.

**Specific target organ toxicity - Repeated exposure** No information available.

#### Information on Likely Routes of Exposure

<b>Inhalation</b>	Do not breathe dust
<b>Ingestion</b>	Ingestion is not a likely route of exposure
<b>Skin</b>	Avoid prolonged or repeated contact with skin Contact with dust can cause mechanical irritation or drying of the skin
<b>Eyes</b>	Avoid contact with eyes Dust contact with the eyes can lead to mechanical irritation
<b>Aspiration hazard</b>	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.

**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)**

HUBER

## Safety Data Sheet

Martinal® OL-104 GO

Issue Date 15/Feb/2023

Print Date 20/Feb/2023

Revision Number 1.3.1

Page 10 of 12

<b>TDG -Canada</b>	Not regulated
<b>DOT</b>	Not regulated
<b>IATA</b>	Not regulated
<b>IMDG/IMO</b>	Not regulated
<b>ICAO</b>	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

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

### Global Inventories

Pure substance/mixture Mixture

Chemical Name	CAS Number	EC No	Australia (AIC)	Canada (DSL)	China (IECSC)	Japan	S. Korea (KECL)	Mexico	Thailand (TECI)	New Zealand	Philippines (PICCS)	Taiwan	TSCA: United States
Aluminum Hydroxide	21645-51-2	244-492-7	Y	Y	Y	(1)-17 (ENCS); ISHL	KE-00980	Y	55-1-02594	Y	Y	Y	A

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

### REACH No.

#### Aluminum Hydroxide

EU REACH registration number 01-2119529246-39

Turkish KKDIK pre-registration 05-0000193352-73-0000

#### Germany

Very low solubility Not considered to be harmful to aquatic life

#### Aluminum Hydroxide

WGK Classification (AwSV) 5220 WGK: nwg

### 15.2. Chemical safety assessment

A Chemical Safety Assessment has been carried out for this substance

**SECTION 16: Other information**

**Reason for Revision** This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006 & COMMISSION REGULATION (EU) No. 2020/878

**Issue Date** 15/Feb/2023  
**Print Date** 20/Feb/2023  
**Revision Number** 1.3.1

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

**(CLP) Regulation (EC 1272/2008)** Not classified

**Labeling**

**Symbols/Pictograms** None

**Signal Word** None

**Hazard Statements** This product is not classified as hazardous according to the UN GHS guideline and labeling is not required. This material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

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

**Abbreviations and acronyms**

IARC (International Agency for Research on Cancer)  
IUCLID (International Uniform Chemical Information Database)  
WHMIS (Workplace Hazardous Materials Information System)  
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)  
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)  
IATA (International Air Transport Association)  
IMDG (International Maritime Dangerous Goods)  
DOT (Department of Transportation)  
TDG (Transport of Dangerous Goods) Canada  
PNEC (Predicted No Effect Concentration)  
SCBA (Self-Contained Breathing Apparatus) Positive Pressure  
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

HUBER

## Safety Data Sheet

Martinal® OL-104 GO

**Issue Date** 15/Feb/2023  
**Print Date** 20/Feb/2023

**Revision Number** 1.3.1  
**Page 12 of 12**

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**