



**Martinal® OL-104C; Martinal® OL-107C**

Prepared in accordance with GB/T 16483-2008, GB/T 24774-2009, GB 13690 – 2009, GB/T 17519–2013  
GHS (Globally Harmonized System)

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**Section 1: PRODUCT AND COMPANY IDENTIFICATION**

**Product Name:** Martinal® OL-104C; Martinal® OL-107C

**Chemical Name** Aluminum Hydroxide (surface modified)

**Pure substance/mixture** Mixture

**Aluminum Hydroxide**

**CAS Number** 21645-51-2

**Weight-%** >98

**Recommended Use** Additive : Flame retardant

**Uses advised against** No information available

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**Section 2: HAZARDS IDENTIFICATION**

**GHS Classification** Not classified.

**Physical Hazard** Not classified.

**Health Hazard** Not classified.

**Environmental Hazard** Not classified.

**Label Elements**

**Symbols/Pictograms** None

**Signal Word** None

**Precautionary Statements**

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<b>Prevention</b>	Avoid release to the environment Observe good industrial hygiene practices. Avoid breathing dust. Use mechanical ventilation (dilution and local exhaust) to control exposure
<b>Response</b>	Wash hands thoroughly after handling IF ON SKIN: Wash with plenty of soap and water IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing
<b>Spills and Leaks</b>	Collect spillage
<b>Storage</b>	Store in a dry place Store away from incompatible materials.
<b>Disposal</b>	Dispose in accordance with local, state and national regulations
<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

**Additional Information:** None.

## Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

Pure substance/mixture Mixture

Chemical Name	CAS Number	China (IECSC)	China classification	TSCA: United States	EU REACH registration number	Weight-%
Aluminum Hydroxide	21645-51-2	Y	Not classified.	A	01-2119529246-39	>98

## Section 4: 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>	Hold eyelids apart and flush eyes with a steady, gentle stream of water for several minutes.
<b>Skin Contact</b>	Wash skin with soap and water

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<b>Inhalation</b>	IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing
<b>Ingestion</b>	Rinse mouth with water. Do not induce vomiting.
<b>Notes to Physician</b>	Treat symptomatically
<b>Personal Protective Equipment For First Aid Responders</b>	Wear suitable protective clothing IF exposed or concerned: Get medical advice/attention
<b>Expected acute symptoms and delayed symptoms</b>	None known

## Section 5: FIRE FIGHTING MEASURES

<b>Flammable Properties</b>	None known
<b>Suitable Extinguishing Media</b>	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
<b>Unsuitable extinguishing media:</b>	None known
<b>Specific Hazards Arising from the Chemical</b>	None known
<b>Unusual fire &amp; explosion hazards:</b>	None
<b>Protective measures:</b>	Use protective equipment that is appropriate for surrounding materials.
<b>Protective Equipment and Precautions for Firefighters</b>	Wear self-contained breathing apparatus and protective suit

## Section 6: SPILLAGE, ACCIDENTAL RELEASE MEASURES

<b>Personal Precautions</b>	Avoid dust formation. When exposed to high concentrations of airborne dust, wear a SCBA in accordance with national legislation
<b>Environmental Precautions</b>	This product does not present any particular risk to the environment. Refer to applicable national, state and local regulations prior to washing in drain.
<b>Methods for cleaning up</b>	Pick up mechanically and / or by rinsing with water. Avoid dry sweeping and use a sprinkler system or exhaust ventilation to prevent dust formation.
<b>Other Information:</b>	None known

## Section 7: HANDLING AND STORAGE

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**Handling** Avoid dust formation. Avoid breathing dust. Handle in accordance with good industrial hygiene and safety practice.

**Storage** Store in a dry area. Keep containers closed and protect from physical damage.

## Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

**Exposure Limits** Provide adequate ventilation as well as local exhaust at critical locations

### Aluminum Hydroxide

ACGIH  
NIOSH  
OSHA

TLV/TWA 8-hr: 1 mg/m<sup>3</sup> (respirable fraction)  
TWA: 5 mg/m<sup>3</sup> (respirable dust); 10 mg/m<sup>3</sup> TWA (total dust)  
TWA: 15 mg/m<sup>3</sup> (Total Dust)  
5 mg/m<sup>3</sup> (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/Face Protection**

Wear safety glasses with side shields (or goggles)

#### **Skin and Body Protection**

Wear suitable protective clothing

#### **Hand Protection**

Impervious gloves

#### **Respiratory Protection**

When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

#### **Hygiene Measures**

Handle in accordance with good industrial hygiene and safety practice Handle in accordance with good industrial hygiene and safety practice

#### **Environmental Exposure Controls**

Dispose of in accordance with local regulations

## Section 9: PHYSICAL AND CHEMICAL PROPERTIES

### 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)

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<b>Initial boiling point and boiling range</b>	> 2900 °C / 5252 °F (101.3 hPa)
<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>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>	Not applicable Product/Substance is inorganic
<b>Autoignition Temperature</b>	No information available
<b>Decomposition Temperature</b>	No information available
<b>Dynamic viscosity</b>	Not applicable Solid
<b>Explosive Properties</b>	None
<b>Oxidizing Properties</b>	None

## 9.2. Other information

No data available

## Section 10: STABILITY AND REACTIVITY

<b>Stability</b>	Stable under normal conditions
<b>Conditions to avoid:</b>	Incompatible materials Dust formation Decomposition Temperature Al <sub>2</sub> O <sub>3</sub> Water
<b>Incompatible materials</b>	Strong acids
<b>Hazardous decomposition products</b>	None under normal processing
<b>Hazardous Reactions</b>	None under normal processing
<b>Hazardous polymerization:</b>	None under normal processing

## Section 11: TOXICOLOGICAL INFORMATION

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

### Product Information

### Information on Likely Routes of Exposure

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<b>Eyes</b>	Avoid contact with eyes Dust contact with the eyes can lead to mechanical irritation
<b>Skin</b>	Avoid prolonged or repeated contact with skin Contact with dust can cause mechanical irritation or drying of the skin
<b>Inhalation</b>	Do not breathe dust
<b>Ingestion</b>	Ingestion is not a likely route of exposure
<b>Aspiration hazard</b>	Not an expected route of exposure.
<b>Symptoms</b>	Low hazard for usual industrial or commercial handling

### 11.1. Information on toxicological effects

#### 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

<b>Reproductive Effects</b>	Based on available data, the classification criteria are not met.
<b>Reproductive Toxicity</b>	Based on available data, the classification criteria are not met.
<b>Carcinogenicity</b>	Based on available data, the classification criteria are not met.
<b>Specific target organ toxicity - Single exposure</b>	No information available.
<b>Specific target organ toxicity - Repeated exposure</b>	No information available.

## Section 12: ECOLOGICAL INFORMATION

<b>Ecotoxicity</b>	Not considered to be harmful to aquatic life. Avoid release to the environment.
<b>Persistence/Degradability:</b>	The methods for determining biodegradability are not applicable to inorganic substances.
<b>Bioaccumulative Potential</b>	Not likely to bioaccumulate.
<b>Partition coefficient</b>	Not available
<b>Bioconcentration factor (BCF)</b>	No data available.
<b>Mobility in soil</b>	No information available.

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**Page** 7 of 10**Results of PBT and vPvB assessment** This substance does not meet the criteria for classification as PBT or vPvB.**Other Adverse Effects** No information available

## Section 13: DISPOSAL CONSIDERATIONS

**Waste from Residues/Unused Products** Dispose of in accordance with local regulations**Contaminated Packaging:** Empty containers should be taken to an approved waste handling site for recycling or disposal.

## Section 14: TRANSPORT INFORMATION

**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

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## 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

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



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## Section 16: OTHER INFORMATION

<b>Prepared by</b>	Huber Engineered Materials Global Regulatory Affairs email: regulatory.affairs@huber.com
<b>Reason for Revision</b>	GB/T 16483-2008 GB/T 24774-2009 GB 13690 – 2009 GB/T 17519–2013
<b>GHS Classification</b>	Not classified.
<b>Physical Hazard</b>	Not classified.
<b>Health Hazard</b>	Not classified.
<b>Environmental Hazard</b>	Not classified.
<b>Label Elements</b>	
<b>Symbols/Pictograms</b>	None
<b>Signal Word</b>	None
<b>Abbreviations and acronyms</b>	IARC (International Agency for Research on Cancer) IATA (International Air Transport Association) IMDG (International Maritime Dangerous Goods) IUCRID (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) SCBA (Self-Contained Breathing Apparatus) Positive Pressure GHS (Globally Harmonized System) ADR (European Agreement Concerning the International Carriage of Dangerous Goods by Road) RID (Agreement Concerning the International Carriage of Dangerous Goods by Rail) SARA (Superfund Amendments and Reauthorization Act of 1986)

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TSCA (Toxic Substances Control Act)

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**End of Safety Data Sheet**