



**ADVANCED MATERIALS**

# Safety Data Sheet

## Martinal® TM-2590

OSHA HazCom Standard 29 CFR 1910.1200(g) and GHS Rev 03  
Canadian Workplace Hazardous Material Information System (WHMIS) 2015  
Mexico NOM-018-STPS-2000; NOM-018-STPS-2015  
GHS (Globally Harmonized System)

Issue Date 31/Jan/2023  
Print Date 22/May/2023

Revision Number 1.2  
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## SECTION 1: Identification of the substance/mixture and of the company/undertaking

### 1.1. Product identifier

**Product Name:** Martinal® TM-2590  
**Pure substance/mixture** Mixture

### 1.2. Relevant identified uses of the substance or mixture and uses advised against

**Recommended Use** Flame retardant Smoke suppressant  
**Uses advised against** None known.

### 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](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  
EU Phone: +49-2271-90.22.78 (Germany)

## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

**OSHA Regulatory Status** This material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200)

**Physical Hazards** Not classified

**Health Hazards** Not classified

**Environmental Hazard** Not classified

### 2.2. Label elements

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**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.

**Hazards not otherwise classified (HNOC)** Not classified.

## SECTION 3: Composition/information on ingredients

**Pure substance/mixture**

Mixture

Chemical Name	CAS Number	TSCA: United States	Canada (DSL)	Mexico	EU REACH registration number	OSHA Regulatory Status	WHMIS	Weight-%
Aluminum Hydroxide	21645-51-2	A	Y	Y	01-211952924-6-39	Not classified	--	-
Surface treatment	-	A	Y	Y	Registered	H315 - Causes skin irritation Category 2 H227 Flammable liquid Category 4	--	<1

**Legend**

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

## 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.

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<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>Ingestion</b>	Rinse mouth thoroughly with water.
<b>Inhalation</b>	If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.
<b>Aspiration hazard</b>	Not an expected route of exposure.
<b>4.2. Most important symptoms and effects, both acute and delayed</b>	Signs and symptoms may include coughing, gasping, choking and difficulty breathing.
<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

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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** Large Spill: Do not dry sweep dust. Wet dust with water before sweeping or use a vacuum to collect dust Small Spill: Vacuum or sweep material and place in a disposal container

**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)** Flame retardant.

## SECTION 8: Exposure controls/personal protection

**8.1. Control parameters****Occupational exposure limits****Aluminum Hydroxide**

OSHA

TWA: 15 mg/m<sup>3</sup> Total Dust

ACGIH

5 mg/m<sup>3</sup> Respirable Dust

Canada - Nova Scotia - OEL - TWA

TLV/TWA 8-hr: 1 mg/m<sup>3</sup> (respirable fraction)1 mg/m<sup>3</sup> TWA (respirable fraction)**PNEC (Predicted No Effect Concentration)**

No information available

**DNEL (Derived No Effect Level)**

Consumer - oral, long-term - local and systemic 4.74 mg/kg bw/day Worker - inhalative, long-term - local and systemic 10.74 mg/m<sup>3</sup>

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## SECTION 9: Physical and chemical properties

**9.1. Information on basic physical and chemical properties****Appearance:****Physical State** Solid**Color** White**Odor** Odorless**Odor Threshold** No information available**pH:** Not available**Melting point / Freezing point** Not applicable**Boiling Point** No information available**Freezing Point** Not applicable**Flash Point** Non-combustible**Evaporation Rate** Not applicable.**Flammability (solid, gas)** Not applicable**Upper flammability limit:** --**Lower flammability limit:** --**Vapor Pressure** Not applicable**Vapor Density** Not applicable**Vapor Density** Not applicable**Density** No data available**Relative Density** 2.4 g/cm<sup>3</sup>, 20° C**Water Solubility** Insoluble**Solubility in other solvents** No information available**Partition coefficient** Not applicable Not applicable Product/Substance is inorganic

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<b>Autoignition Temperature</b>	Not applicable
<b>Decomposition Temperature</b>	200 °C (392 °F)
<b>Viscosity</b>	Not applicable.
<b>Kinematic viscosity</b>	Not applicable
<b>Explosive Properties</b>	Not applicable
<b>Oxidizing Properties</b>	Not oxidizing
<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>	None
<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
<b>10.5. Incompatible materials</b>	Strong acids
<b>10.6. Hazardous decomposition products</b>	None known

## SECTION 11: Toxicological information

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

**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

**Acute Toxicity** Based on available data, the classification criteria are not met

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<b>Chronic Toxicity</b>	Based on available data, the classification criteria are not met.
<b>Chronic Effects</b>	Based on available data, the classification criteria are not met.
<b>Respiratory Sensitization</b>	Based on available data, the classification criteria are not met
<b>Serious eye damage/eye irritation</b>	Based on available data, the classification criteria are not met
<b>Skin Corrosion/Irritation</b>	Prolonged or repeated contact may dry skin and cause irritation
<b>Skin Sensitization</b>	Based on available data, the classification criteria are not met
<b>Germ cell mutagenicity</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>	This product does not contain any carcinogens or potential carcinogens as listed by OSHA, IARC or NTP.
<b>Target Organ Effects</b>	No information available.
<b>Specific target organ toxicity - Single exposure</b>	No information available.
<b>Specific target organ toxicity - Repeated exposure</b>	No information available.
<b>Mixture versus substance information</b>	No information available
<b>Information on Likely Routes of Exposure</b>	
<b>Inhalation</b>	Avoid inhalation of the product
<b>Ingestion</b>	Ingestion is not a likely route of exposure
<b>Skin</b>	Avoid contact with skin and clothing Prolonged exposure may cause skin irritation
<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

- |  |   |
|--|---|
| <b>11.2.1. Endocrine disrupting properties</b> | This product does not contain any known or suspected endocrine disruptors |
| <b>11.2.2. Other information</b>               | Not applicable  |

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## 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** Not readily biodegradable.

**12.3. Bioaccumulative potential** No data available.

**Partition coefficient** Not applicable

**Bioconcentration factor (BCF)** Not available.

**12.4. Mobility in soil** None.

**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.

**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



HUBER

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

<b>TDG -Canada</b>	Not regulated
<b>DOT</b>	Not regulated
<b>ADR</b>	Not regulated
<b>RID</b>	Not regulated
<b>ADN</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

### Global Inventories

Pure substance/mixture

Mixture

Chemical Name	CAS Number	EC No	EU REACH registration number	Australia (AIIIC)	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
Surface treatment	-	Y	Registered	Y	Y	Y	Y	Y	Y	Y	Y	Y	A

#### Legend

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

### US Federal Regulations

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CERCLA

Not listed

SARA 302

Not listed

**CWA (Clean Water Act)**

Not listed

**CAA (Clean Air Act)**

Not listed

**U.S. State Right-to-Know Regulations**

Chemical Name	CAS Number	California Proposition 65	Massachusetts	Minnesota	New Jersey	Pennsylvania
Aluminum Hydroxide	21645-51-2	N	N	N	N	N
Surface treatment	-	N	N	N	N	N

**Legend** Y: Listed ; N: Not Listed**California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65)**

This product does not contain any Proposition 65 chemicals

**CANADA****WHMIS**

This product has been classified in accordance with the hazard criteria of the Hazardous Products Regulations (HPR) and the SDS contains all the information required by the HPR

## SECTION 16: Other information

<b>Prepared by</b>	Huber Engineered Materials (HEM) Global Regulatory Affairs regulatory.affairs@huber.com
<b>Issue Date</b>	31/Jan/2023
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<b>Revision Number</b>	1.2
<b>Reason for Version</b>	OSHA (Occupational Safety and Health Administration of the US Department of Labor).
<b>Training Advice</b>	Do not handle until all safety precautions have been read and understood.
<b>Abbreviations and acronyms</b>	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)

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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  
GHS (Globally Harmonized System)  
SARA (Superfund Amendments and Reauthorization Act of 1986)  
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**