



ADVANCED MATERIALS

# Safety Data Sheet

## Martinal® TM-2590

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

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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  
**Chemical Name** Aluminum Hydroxide  
**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	-
Surface treatment	-	Y	Registered	67/548/EEC: Xi, R38, S24, S37	<1

#### 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

**Manufacturer** 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  
EU Phone: +49-2271-90.22.78 (Germany)

**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

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(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** None

#### 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

#### 3.2. 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	--	-
Surface treatment	-	Y	Registered	67/548/EEC: Xi, R38, S24, S37	--	<1

## SECTION 4: First aid measures

#### 4.1. Description of first aid measures

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<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>	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

- 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**      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

ACGIH  
OSHA

NIOSH  
France  
France

Poland  
Switzerland  
United Kingdom

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  
TWA: 5 mg/m<sup>3</sup> (respirable dust); 10 mg/m<sup>3</sup> TWA (total dust)  
Not established (Non établi)  
Not established (Non établi)  
2.5 mg/m<sup>3</sup> (inhalable); 1.2 mg/m<sup>3</sup> (respirable)  
TWA: 3 mg/m<sup>3</sup>  
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

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**Biological Limit Values** None

**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>

## 8.2. Exposure controls

**Engineering Measures** Ensure adequate ventilation, especially in confined areas  
Provide a good standard of controlled ventilation (10 to 15 air changes per hour)

### Personal protective equipment

**Eye/Face Protection** Wear safety glasses with side shields (or goggles).

**Skin and Body Protection** Wear suitable protective clothing.

**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:

<b>Physical State</b>	Solid
<b>Color</b>	White
<b>Odor</b>	Odorless
<b>Odor Threshold</b>	No information available
<b>pH:</b>	Not available
<b>Melting point / Freezing point</b>	Not applicable
<b>Boiling Point</b>	No information available
<b>Freezing Point</b>	Not applicable
<b>Flash Point</b>	Non-combustible
<b>Evaporation Rate</b>	Not applicable.
<b>Flammability (solid, gas)</b>	Not applicable
<b>Upper flammability limit:</b>	--
<b>Lower flammability limit:</b>	--
<b>Vapor Pressure</b>	Not applicable
<b>Vapor Density</b>	Not applicable
<b>Vapor Density</b>	Not applicable

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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
Autoignition Temperature	Not applicable
Decomposition Temperature	200 °C (392 °F)
Viscosity	Not applicable.
Kinematic viscosity	Not applicable
Explosive Properties	Not applicable
Oxidizing Properties	Not oxidizing
Particle Size	No information available
VOC Content (%)	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

10.1. Reactivity	None
10.2. Chemical stability	Stable under normal conditions
10.3. Possibility of hazardous reactions	None under normal processing
10.4. Conditions to avoid	Incompatible materials
10.5. Incompatible materials	Strong acids
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.

### 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 <sub>2</sub> O <sub>3</sub> ) Aerosol Maximum attainable concentration

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**IARC** Not Listed

<b>Acute Toxicity</b>	Based on available data, the classification criteria are not met
<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

#### Information on Likely Routes of Exposure

<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

**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 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

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

TDG -Canada	Not regulated
DOT	Not regulated
ADR	Not regulated
RID	Not regulated
ADN	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

### 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
Surface treatment	-	Y	Y	Y	Y	Y	Y	Y		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

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## Surface treatment

EU REACH registration number Registered

## Germany

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

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**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** 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)  
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)

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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 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**