



**Martinal® TM-3810**

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-3810  
**Pure substance/mixture** Mixture

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

**Recommended Use** Flame retardant. Industrial.  
**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.huberadvancedmaterials.com](http://www.huberadvancedmaterials.com)

**Contact E-Mail** [www.huberadvancedmaterials.com/contact](http://www.huberadvancedmaterials.com/contact)

**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**

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

**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  
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** This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.  
This product does not contain any known or suspected endocrine disruptors

## SECTION 3: Composition/information on ingredients

**3.1. Substance** --

**3.2. Mixture** Mixture

Chemical Name	CAS NUMBER:	EC No	(CLP) Regulation (EC 1272/2008)	Weight-%
Surface Treated Aluminum Hydroxide	21645-51-2	244-492-7	Not classified	100

## 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

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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.

**Inhalation**

If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.

**Ingestion**

Rinse mouth thoroughly with water.

**Aspiration hazard**

Not an expected route of exposure.

**Notes to Physician**

Treat symptomatically.

**4.2. Most important symptoms and effects, both acute and delayed**

Signs and symptoms may include coughing, gasping, choking and difficulty breathing.

**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 (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.

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## 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

##### Surface Treated Aluminum Hydroxide

<b>ACGIH</b>	TLV/TWA 8-hr: 1 mg/m <sup>3</sup> (respirable fraction)
<b>OSHA</b>	TWA: 15 mg/m <sup>3</sup> (Total Dust) 5 mg/m <sup>3</sup> (Respirable Dust)
<b>NIOSH</b>	TWA: 5 mg/m <sup>3</sup> (respirable dust); 10 mg/m <sup>3</sup> TWA (total dust)
<b>France</b>	Not established (Non établi)
<b>France</b>	Not established (Non établi)
<b>Germany</b>	1.25 mg/m <sup>3</sup> 10 mg/m <sup>3</sup>
<b>Poland</b>	2.5 mg/m <sup>3</sup> (inhalable); 1.2 mg/m <sup>3</sup> (respirable)
<b>Switzerland</b>	TWA: 3 mg/m <sup>3</sup>
<b>United Kingdom</b>	10 mg.m-3 (inhalable); 4 mg.m-3 (respirable)

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<b>Recommended monitoring procedures</b>	Refer also to national guidance documents for information on currently recommended monitoring procedures
<b>Biological Limit Values</b>	None
<b>DNEL (Derived No Effect Level)</b>	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.

**Hand Protection** Protective gloves.

**Respiratory Protection** In case of inadequate ventilation wear respiratory protection. Use NIOSH/MSHA approved respiratory protection equipment when airborne exposures exceeds established guidelines. In case of exposure to high levels of airborne mist, wear a respirator in compliance with national legislation. EN 149, P2 Half-mask.

**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>	Off-white
<b>Odor</b>	Odorless
<b>pH:</b>	Not available

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<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>	Not applicable
<b>Flammability</b>	Not applicable
<b>Upper flammability limit:</b>	--
<b>Lower flammability limit:</b>	--
<b>Vapor Pressure</b>	Not applicable
<b>Relative Vapor Density</b>	Not applicable
<b>Relative Vapor Density</b>	Not applicable
<b>Density</b>	No data available
<b>Relative Density</b>	2.4 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 Not applicable Product/Substance is inorganic
<b>Autoignition Temperature</b>	Not applicable
<b>Decomposition Temperature</b>	Not applicable
<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 Characteristics</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

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## 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

#### Surface Treated Aluminum Hydroxide

LD50s and LC50s	> 5000 mg/kg Oral LD50
Oral LD50	> 2000 mg/kg Rat
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
<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

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<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

### Surface Treated Aluminum Hydroxide

**Aquatic toxicity** Not considered to be harmful to aquatic life  
**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

**12.7. Other Adverse Effects** None known

## SECTION 13: Disposal considerations

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## 13.1. Waste treatment methods

<b>Disposal Methods</b>	Disposal should be in accordance with applicable regional, national and local laws and regulations.
<b>Contaminated Packaging</b>	Empty containers should be taken to an approved waste handling site for recycling or disposal.
<b>Waste codes</b>	Waste codes should be assigned by the user based on the application for which the product was used

### Surface Treated Aluminum Hydroxide

European Waste Catalog	060299
WGK Classification (AwSV)	5220. WGK: nwg

## SECTION 14: Transport information

### 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

<b>14.1. UN number or ID number</b>	None
<b>14.2. UN proper shipping name</b>	None
<b>14.3. Transport hazard class(es)</b>	None
<b>14.4. Packing group</b>	None
<b>14.5. Environmental hazards</b>	No
<b>14.6. Special precautions for user</b>	Not applicable

**14.7. Maritime transport in bulk according to IMO instruments**  
Not applicable

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## 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
Surface Treated Aluminum Hydroxide	21645-51-2	244-492-7	Y	Y	Y	(1)-17 (ENCS); ISHL	KE-00980	Y	55-1-02595	Y	Y	Y	A

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

#### REACH No.

#### Surface Treated Aluminum Hydroxide

EU REACH registration number 01-2119529246-39

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

#### Germany

Not considered to be harmful to aquatic life

#### Surface Treated 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  
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(CLP) Regulation (EC 1272/2008) Not classified.

#### Labeling

Symbols/Pictograms

None

Signal Word

None

Hazard Statements

None

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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)  
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**