



**ADVANCED MATERIALS**

# Safety Data Sheet

## Martinal® TM 3620

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 3620

**Pure substance/mixture** Substance

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	>99

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

**Recommended Use** Additive : Flame retardant

**Industrial use** Thermally conductive additive

**Professional use** --

**Consumer use** Not applicable

**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 : +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

**Poison control center phone number** National Anti-Poison Center UK: +44 844 892 0111 (National Poisons Information Service)

## SECTION 2: Hazards identification

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

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

**Hazards identification**

<b>Physical Hazard</b>	Not classified
<b>Health Hazards</b>	Not classified
<b>Environmental Hazard</b>	Not classified

**2.2. Label elements**

<b>Symbols/Pictograms</b>	None
<b>Signal Word</b>	None
<b>Hazard Statements</b>	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**

<b>Prevention</b>	Employ good industrial hygiene practice Wash hands thoroughly after handling
<b>Response</b>	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
<b>Storage</b>	Keep in a dry place Store away from incompatible materials
<b>Disposal</b>	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** Substance

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	--	>99

**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	TLV/TWA 8-hr: 1 mg/m <sup>3</sup> (respirable fraction)
OSHA	TWA: 15 mg/m <sup>3</sup> Total Dust 5 mg/m <sup>3</sup> Respirable Dust
NIOSH	TWA: 5 mg/m <sup>3</sup> (respirable dust); 10 mg/m <sup>3</sup> TWA (total dust)
France	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>
United Kingdom	10 mg.m-3 (inhalable); 4 mg.m-3 (respirable)

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

**Biological Limit Values** None

### 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:

<b>Physical State</b>	Solid Powder
<b>Color</b>	White
<b>Odor</b>	Odorless
<b>Odor Threshold</b>	No information available
<b>pH:</b>	8.0

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Melting point / Freezing point	~ 300 °C / 572 °F (101.3 hPa)
Initial boiling point and boiling range	> 2900 °C / 5252 °F (101.3 hPa)
Freezing Point	Not applicable
Flash Point	Not applicable Product/Substance is inorganic Solid
Evaporation Rate	Not applicable.
Flammability (solid, gas)	Not flammable
Upper flammability limit:	--
Lower flammability limit:	--
Vapor Pressure	Not applicable
Vapor Density	Not applicable
Density	No data available
Relative Density	+/- 2.42 g/cm <sup>3</sup> (20 °C)
Water Solubility	Insoluble
Solubility in other solvents	No information available
Partition coefficient	No information available Not applicable Product/Substance is inorganic
Autoignition Temperature	No data available
Decomposition Temperature	200 °C (392 °F)
Viscosity	No information available.
Kinematic viscosity	Not applicable
Dynamic viscosity	Not applicable Solid
Explosive Properties	None
Oxidizing Properties	None
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	No data available
10.2. Chemical stability	Stable under normal conditions
10.3. Possibility of hazardous reactions	None under normal processing
10.4. Conditions to avoid	Decomposition Temperature < / =0.3% : Al <sub>2</sub> O <sub>3</sub> Water
10.5. Incompatible materials	None known
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**

<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

**Chronic Toxicity**

Based on available data, the classification criteria are not met.

**Skin Corrosion/Irritation**

Based on available data, the classification criteria are not met

**Skin Sensitization**

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.

**Target Organ Effects**

Based on available data, the classification criteria are not met.

**Specific target organ toxicity -  
Single exposure**

Based on available data, the classification criteria are not met.

**Specific target organ toxicity -  
Repeated exposure**

Based on available data, the classification criteria are not met.

**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**

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

TDG -Canada	Not regulated
DOT	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 Substance

Chemical Name	CAS Number	EC No	Australia (AIIIC)	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

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## 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** 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)

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### Disclaimer

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**End of Safety Data Sheet**