

**Martinal® TM 3620**

Japan-JIS Z 7253:2012  
Occupational Safety and Health Act  
GHS (Globally Harmonized System)

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**1. PRODUCT AND COMPANY IDENTIFICATION**

<b>Product Name:</b>	Martinal® TM 3620
<b>Pure substance/mixture</b>	Substance
<b>Aluminum Hydroxide</b>	
<b>CAS Number</b>	21645-51-2
<b>Weight-%</b>	>99
<b>Recommended Use</b>	Additive : Flame retardant
<b>Company:</b>	MARTINSWERK GmbH Kölner Strasse 110 50127 Bergheim Germany Tel. : +49-2271-90.22.78 Fax. : +49-2271-90.27.17
<b>Internet</b>	<a href="http://www.hubermaterials.com">www.hubermaterials.com</a>
<b>E-mail</b>	<a href="mailto:hubermaterials@huber.com">hubermaterials@huber.com</a>
<b>Emergency Telephone Number</b>	CHEMTREC: +1 800 424 9300 or International +1 703 527 3887 +81 03-3560-7316

**2. HAZARD IDENTIFICATION**

<b>Japan GHS Classification</b>	
<b>Physical Hazards</b>	Not classified
<b>Health Hazard</b>	Not classified
<b>Environmental Hazards</b>	Not classified
<b>GHS label elements</b>	
<b>Symbols/Pictograms</b>	None
<b>Signal Word</b>	None
<b>Hazard statements</b>	None
<b>Precautionary Statements</b>	
<b>Prevention</b>	Do not handle until all safety precautions have been read and understood Employ good industrial hygiene practice Do not breathe dust
<b>Response</b>	IF exposed or concerned: Get medical advice/attention

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Wash with plenty of soap and water

**Storage**Store away from incompatible materials.  
Keep in a dry place**Disposal**

Dispose of contents/container to an approved waste disposal plant

**Additional Information:**

None

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

**Pure substance/mixture**

Substance

Chemical Name	CAS Number	Japan	Japan GHS Classification	REACH registration number	Weight-%
Aluminum Hydroxide	21645-51-2	(1)-17 (ENCS); ISHL	Not classified	01-2119529246-39	>99

### 4. FIRST AID MEASURES

**If inhaled:** Remove victim to fresh air and keep at rest in a position comfortable for breathing**IF ON SKIN:** Wash with plenty of soap and water  
Take off contaminated clothing and wash before reuse**IF IN EYES:** In case of eye contact, remove contact lens and rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes  
Call a physician if irritation develops and persists**If swallowed:** Rinse mouth thoroughly with water**Self-Protection of the First Aider** Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves**Notes to Physician** Treat symptomatically.

### 5. FIRE-FIGHTING MEASURES

**Suitable Extinguishing Media** Water spray (fog)  
Foam  
Dry chemical  
Carbon dioxide (CO<sub>2</sub>)**Unsuitable Extinguishing Media** Do not use water jetstream**Special hazards arising from the substance or mixture** Avoid dust formation

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<b>Fire-fighting measures</b>	In case of fire and/or explosion do not breathe fumes Water mist may be used to cool closed containers Keep unauthorized personnel away
<b>Special Protective Equipment for Firefighters</b>	Wear self-contained breathing apparatus and protective suit

## 6. ACCIDENTAL RELEASE MEASURES

<b>Protective Equipment and Precautions for Firefighters</b>	Avoid dust formation Ensure adequate ventilation Use personal protection recommended in Section 8 Avoid contact with eyes and skin. Wear suitable personal protection equipment. Keep unauthorized personnel away
<b>Environmental Precautions</b>	Keep out of drains, sewers, ditches and waterways Disposal considerations See section 13 for more information
<b>Methods and material for containment and cleaning up</b>	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 Minimize use of water during clean-up Recommended filter type: High efficiency particulate air filter (HEPA filter)
<b>Other Information</b>	Not applicable

## 7. HANDLING AND STORAGE

<b>Handling</b>	
<b>Technical measures</b>	Provide adequate ventilation as well as local exhaust at critical locations Ensure adequate ventilation Use personal protection equipment See section 8 for more information
<b>Advice on safe handling</b>	Minimize dust generation and accumulation
<b>Conditions for safe storage, including any incompatibilities</b>	Keep containers tightly closed in a cool, well-ventilated place
<b>Hygiene Measures</b>	Wash hands thoroughly after handling
<b>Storage</b>	
<b>Packaging compatibilities</b>	Keep/store only in original container

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

<b>Exposure Limits</b>	Provide adequate ventilation as well as local exhaust at critical locations
<b>Aluminum Hydroxide</b> Japan	TWA: 2 mg/m <sup>3</sup>
<b>Engineering Measures</b>	Ensure adequate ventilation, especially in confined areas

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## Personal Protective Equipment

<b>Respiratory Protection</b>	In case of inadequate ventilation wear respiratory protection
<b>Hand protection</b>	For operations where prolonged or repeated skin contact may occur, impervious gloves should be worn
<b>Eye Protection</b>	Wear safety glasses with side shields (or goggles)
<b>Skin and Body Protection</b>	Wear suitable protective clothing. Chemical resistant apron.
<b>Hygiene Measures</b>	Handle in accordance with good industrial hygiene and safety practice Wash thoroughly after handling Avoid contact with eyes and skin Do not breathe dust

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Appearance:</b>	
<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
<b>Melting point / Freezing point</b>	~ 300 °C / 572 °F (101.3 hPa)
<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>	Not flammable
<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>Decomposition Temperature</b>	200 °C (392 °F)
<b>Dynamic viscosity</b>	Not applicable Solid
<b>Explosive Properties</b>	None
<b>Oxidizing Properties</b>	None
<b>Other information:</b>	No data available

## 10. STABILITY AND REACTIVITY

<b>Reactivity</b>	Stable under normal conditions
<b>Chemical stability</b>	Stable under normal conditions

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<b>Possibility of hazardous reactions</b>	None known
<b>Conditions to avoid</b>	Decomposition Temperature < / =0.3% : Al <sub>2</sub> O <sub>3</sub> Water
<b>Incompatible materials</b>	Strong oxidizing agents
<b>Hazardous decomposition products</b>	None known

## 11. TOXICOLOGICAL INFORMATION

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

### Information on Likely Routes of Exposure

<b>Inhalation</b>	Do not breathe dust
<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>Ingestion</b>	Ingestion is not a likely route of exposure
<b>Aspiration hazard</b>	Not an expected route of exposure.

**Symptoms** 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>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>Skin Corrosion/Irritation</b>	Based on available data, the classification criteria are not met
<b>Skin Sensitization</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>Target Organ Effects</b>	Based on available data, the classification criteria are not met.
<b>Specific target organ toxicity - Single exposure</b>	Based on available data, the classification criteria are not met.

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**Specific target organ toxicity - Repeated exposure** - Based on available data, the classification criteria are not met.

## 12. ECOLOGICAL INFORMATION

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

**Persistence and degradability** No data available

**Bioaccumulation** No data available.

**Mobility in soil** No data available

**Hazardous to the ozone layer** No data available

## 13. DISPOSAL CONSIDERATIONS

**Disposal** Dispose of in accordance with federal, state and local regulations

**Contaminated packaging** Empty containers should be taken to an approved waste handling site for recycling or disposal

## 14. TRANSPORT INFORMATION

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

<b>IATA</b>	Not regulated
<b>IMDG/IMO</b>	Not regulated
<b>ICAO</b>	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

## 15. REGULATORY INFORMATION

**Global Inventories**

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Pure substance/mixture                      Substance

Chemical Name	CAS Number	EC No	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	01-211952 9246-39	Y	Y	Y	(1)-17 (ENCS); ISHL	KE-00980	Y	Y	Y	Y	A

**Legend**

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

- KECL - Korean Existing and Evaluated Chemical Substances
- IECSC - China Inventory of Existing Chemical Substances
- PICCS - Philippines Inventory of Chemicals and Chemical Substances
- AICS - Australian Inventory of Chemical Substances
- TSCA (Toxic Substances Control Act)
- DSL (Domestic Substance List)
- NDSL (Non-Domestic Substances List)
- Japan - ISHL Notifiable Substances
- ENCS - Japan Existing and New Chemical Substances

## 16. OTHER INFORMATION

**Prepared by**

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**Reason for Revision**

This SDS complies with the requirements of JIS Z 7250:2010 and JIS Z 7252:2009 (Japan)

**Bibliography**

NITE GHS Classified list  
Japan Society for occupational health (2015) recommendation of allowable concentrations, etc.  
ACGIH TLV: American Conference of Governmental Industrial Hygienists - Threshold Limit Value

**Abbreviations and acronyms**

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)  
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  
PNEC (Predicted No Effect Concentration)

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TSCA (Toxic Substances Control Act)

**Disclaimer**

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**End of Safety Data Sheet**