



ADVANCED MATERIALS

Safety Data Sheet

Martinal® TM-2590

Japan-JIS Z 7253:2019
Occupational Safety and Health Act
GHS (Globally Harmonized System)

Issue Date 31/Jan/2023

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1. PRODUCT AND COMPANY IDENTIFICATION

Product Name:	Martinal® TM-2590
Chemical Name	Aluminum Hydroxide
Pure substance/mixture	Mixture
<u>Aluminum Hydroxide</u>	
CAS Number	21645-51-2
Weight-%	-
<u>Surface Treatment</u>	
CAS Number	--
Weight-%	1-2
Recommended Use	Flame retardant Smoke suppressant
Uses advised against	None known
Company:	J.M. Huber Corporation 3100 Cumberland Boulevard, Suite 600 Atlanta, GA 30339 USA Tel: +1 678 247-7300
Internet	www.hubermaterials.com
E-mail	hubermaterials@huber.com
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2. HAZARD IDENTIFICATION

Japan GHS Classification	
Physical Hazards	Not classified
Health Hazard	Not classified
Environmental Hazards	Not classified
GHS label elements	
Symbols/Pictograms	None
Signal Word	None
Hazard statements	Based on available data, the classification criteria are not met
Precautionary Statements	

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Prevention	Do not handle until all safety precautions have been read and understood Employ good industrial hygiene practice Do not breathe dust
Response	IF exposed or concerned: Get medical advice/attention 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 Mixture

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

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 (CO2)
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Unsuitable Extinguishing Media Do not use water jetstream

Special hazards arising from the substance or mixture Avoid dust formation

Fire-fighting measures In case of fire and/or explosion do not breathe fumes
Water mist may be used to cool closed containers
Keep unauthorized personnel away

Special Protective Equipment for Firefighters Wear self-contained breathing apparatus and protective suit

6. ACCIDENTAL RELEASE MEASURES

Protective Equipment and Precautions for Firefighters 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

Environmental Precautions Keep out of drains, sewers, ditches and waterways
Disposal considerations
See section 13 for more information

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 Minimize use of water during clean-up
Recommended filter type: High efficiency particulate air filter (HEPA filter)

Other Information Not applicable

7. HANDLING AND STORAGE

Handling

Technical measures Provide adequate ventilation as well as local exhaust at critical locations
Ensure adequate ventilation
Use personal protection equipment
See section 8 for more information

Advice on safe handling Minimize dust generation and accumulation

Conditions for safe storage, including any incompatibilities Keep containers tightly closed in a cool, well-ventilated place

Hygiene Measures Wash hands thoroughly after handling

Storage

Packaging compatibilities Keep/store only in original container

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Limits Provide adequate ventilation as well as local exhaust at critical locations

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Aluminum Hydroxide

Japan

TWA: 2 mg/m³**Engineering Measures**

Ensure adequate ventilation, especially in confined areas

Personal Protective Equipment**Respiratory Protection**

In case of inadequate ventilation wear respiratory protection

Hand protection

For operations where prolonged or repeated skin contact may occur, impervious gloves should be worn

Eye Protection

Wear safety glasses with side shields (or goggles)

Skin and Body ProtectionWear suitable protective clothing.
Chemical resistant apron.**Hygiene Measures**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**

Physical State	Solid
Color	White
Odor	Odorless
Odor Threshold	No information available
Melting Point / Melting Range	No data available
Boiling Point	No information available
Freezing Point	No information available
Autoignition Temperature	Not applicable
Evaporation Rate	Not applicable
Flammability (solid, gas)	Not applicable
Explosive Properties	Not applicable
Vapor Pressure	Not applicable
Water Solubility	Insoluble
Partition coefficient	Not applicable Product/Substance is inorganic
Viscosity	Not applicable
Specific Gravity	No data available
Oxidizing Properties	Not oxidizing
Decomposition Temperature	200 °C (392 °F)
Flash Point	Non-combustible.
pH:	Not available
Melting point / Freezing point	Not applicable
Vapor Density	Not applicable
Relative Density	2.4 g/cm ³ , 20° C
Solubility in other solvents	No information available
VOC Content (%)	Not applicable

10. STABILITY AND REACTIVITY

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Reactivity	Stable under normal conditions
Chemical stability	Stable under normal conditions
Possibility of hazardous reactions	None known
Conditions to avoid	Decomposition Temperature < / =0.3% : Al ₂ O ₃ Water
Incompatible materials	Strong oxidizing agents
Hazardous decomposition products	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

Inhalation	Avoid inhalation of the product
Skin	Avoid contact with skin and clothing Prolonged exposure may cause skin irritation
Eyes	Avoid contact with eyes Dust contact with the eyes can lead to mechanical irritation
Ingestion	Ingestion is not a likely route of exposure
Aspiration hazard	Not an expected route of exposure.
Symptoms	Low hazard for usual industrial or commercial handling

11.1. Information on toxicological effects

Aluminum Hydroxide

Oral LD50	> 2000 mg/kg Rat
Inhalation LC50	Rat > 2.3 mg/l (Al ₂ O ₃) Aerosol Maximum attainable concentration
IARC	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.
Chronic Effects	Based on available data, the classification criteria are not met.
Serious eye damage/eye irritation	Based on available data, the classification criteria are not met
Respiratory Sensitization	Based on available data, the classification criteria are not met
Skin Corrosion/Irritation	Prolonged or repeated contact may dry skin and cause irritation

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Skin Sensitization	Based on available data, the classification criteria are not met
Germ cell mutagenicity	Based on available data, the classification criteria are not met.
Reproductive Toxicity	Based on available data, the classification criteria are not met.
Carcinogenicity	This product does not contain any carcinogens or potential carcinogens as listed by OSHA, IARC or NTP.
Target Organ Effects	No information available.
Specific target organ toxicity - Single exposure	No information available.
Specific target organ toxicity - Repeated exposure	No information available.
Mixture versus substance information	No information available.

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)

ADR	Not regulated
RID	Not regulated
ADN	Not regulated
IATA	Not regulated
IMDG/IMO	Not regulated
ICAO	Not regulated

14.1. UN number None**14.2. UN proper shipping name** None

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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

Pure substance/mixture Mixture

Chemical Name	CAS Number	EC No	EU 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
Surface Treatment	--	--	Registered	Y	Y	Y	Y	Y	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

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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)

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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)
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