Safety Data Sheet

Martinal® ON-310S; Martinal® ON-313S; Martinal® ON-320; Martinal®, ON-904; Martinal® ON-906; Martinal® ON-908; Martinal® ON-921; Martinal® ON-935

Prepared in accordance with GB/T 16483-2008, GB/T 24774-2009, GB 30000.1-2024, GB/T 17519–2013 GHS (Globally Harmonized System)

Section 1: PRODUCT AND COMPANY IDENTIFICATION

Product Name:	Martinal® ON-310S; Martinal® ON-313S; Martinal® ON-320; Martinal®, ON-904; Martinal® ON-906; Martinal® ON-908; Martinal® ON-921; Martinal® ON-935
Chemical Name	Aluminum Hydroxide
Pure substance/mixture	Substance
Aluminum Hydroxide	
Weight-%	>99
CAS NUMBER:	21645-51-2
Recommended Use	Additive Flame retardant
Uses advised against	None known
Company:	MARTINSWERK GmbH Kölner Strasse 110 50127 Bergheim Germany Tel. : +49-2271-90.22.78 Fax. : +49-2271-90.27.17
Emergency Telephone	CHEMTREC: 1 800 424 9300 or International +1 703 527 3887
E-mail	www.huberadvancedmaterials.com/contact
Internet	www.huberadvancedmaterials.com

Section 2: HAZARDS IDENTIFICATION

GHS Classification	Not classified.
Physical Hazard	Not classified.
Health Hazard	Not classified.
Environmental Hazard	Not classified.
Label Elements	
Symbols/Pictograms	None

Signal Word None

Precautionary Statements

Prevention None

Response None

Spills and Leaks Collect spillage

Storage Store in a dry place

Disposal Dispose in accordance with local, state and national regulations

General Advice None

Additional Information: None.

Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

Pure substance/mixture Substance

Chemical Name	CAS NUMBER:	China (IECSC)	China classification	Weight-%
Aluminum Hydroxide	21645-51-2	Y	Not classified.	>99

Section 4: FIRST AID MEASURES

General Advice None

Eye Contact Hold eyelids apart and flush eyes with a steady, gentle stream of water for several minutes.

Skin Contact Wash skin with soap and water

Inhalation IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing

Ingestion Rinse mouth with water. Do not induce vomiting.

Notes to Physician Treat symptomatically

Personal Protective Equipment Wear suitable protective clothing
For First Aid Responders IF exposed or concerned: Get medical advice/attention

Expected acute symptoms and delayed symptoms	None known

Section 5: FIRE FIGHTING MEASURES

Flammable Properties	None known
Suitable Extinguishing Media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Unsuitable extinguishing media:	None known
Specific Hazards Arising from the Chemical	None known
Unusual fire & explosion hazards:	None
Protective measures:	Use protective equipment that is appropriate for surrounding materials.
Protective Equipment and Precautions for Firefighters	Wear self-contained breathing apparatus and protective suit

Section 6: SPILLAGE, ACCIDENTAL RELEASE MEASURES

Personal Precautions	Avoid dust formation. When exposed to high concentrations of airborne dust, wear a SCBA in accordance with national legislation
Environmental Precautions	This product does not present any particular risk to the environment. Refer to applicable national, state and local regulations prior to washing in drain.
Methods for cleaning up	Pick up mechanically and / or by rinsing with water. Avoid dry sweeping and use a sprinkler system or exhaust ventilation to prevent dust formation.
Other Information:	None known

Section 7: HANDLING AND STORAGE

Handling	Avoid dust formation. Avoid breathing dust. Handle in accordance with good industrial hygiene and safety practice.
Storage	Store in a dry area. Keep containers closed and protect from physical damage.

Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

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

Aluminum Hydroxide

ACGIH	TLV/TWA 8-hr: 1 mg/m³ (respirable fraction)
NIOSH	TWA: 5 mg/m³ (respirable dust); 10 mg/m³ TWA (total dust)
OSHA	TWA: 15 mg/m³ (Total Dust) 5 mg/m³ (Respirable Dust)

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 Impervious gloves

Respiratory Protection When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

Hygiene Measures Handle in accordance with good industrial hygiene and safety practice Handle in accordance with good industrial hygiene and safety practice

Environmental Exposure Controls Dispose of in accordance with local regulations

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance:	
Physical State	Solid Powder
Color	White
Odor	Odorless
Odor Threshold	No information available
pH:	+/- 9 (10% Water)
Melting point / Freezing point	~ 300 °C / 572 °F (101.3 hPa)
Initial boiling point and boiling range	> 2900 °C / 5252 °F (101.3 hPa)
Flash Point	Not applicable. Product/Substance is inorganic. Solid.
Evaporation Rate	Not applicable
Flammability	Not flammable
Upper flammability limit:	

Lower flammability limit:	
Vapor Pressure	Not applicable
Relative Vapor Density	Not applicable
Relative Density	+/- 2.42 g/cm³ (20 °C)
Water Solubility	Insoluble
Solubility in other solvents	No information available
Partition coefficient	Not applicable Product/Substance is inorganic
Autoignition Temperature	
Decomposition Temperature	200 °C (392 °F)
Dynamic viscosity	Not applicable Solid
Explosive Properties	None
Oxidizing Properties	None

9.2. Other information

No data available

Section 10: STABILITY AND REACTIVITY

Stability	Stable under normal conditions
Conditions to avoid:	Decomposes at 200 °C : Al_2O_3 Water
Incompatible materials	Strong acids
Hazardous decomposition products	None under normal processing
Hazardous Reactions	None under normal processing
Hazardous polymerization:	None under normal processing

Section 11: TOXICOLOGICAL INFORMATION

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

Product Information

Information on Likely Routes of Exposure

Eyes	Avoid contact with eyes Dust contact with the eyes can lead to mechanical irritation
Skin	Avoid prolonged or repeated contact with skin Contact with dust can cause mechanical irritation or drying of the skin

Inhalation	Do not breathe dust
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
IARC	Not Listed

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

Section 12: ECOLOGICAL INFORMATION

Ecotoxicity	Not considered to be harmful to aquatic life. Avoid release to the environment.
Aluminum Hydroxide	
Aquatic toxicity	Not considered to be harmful to aquatic life
Persistence/Degradability:	The methods for determining biodegradability are not applicable to inorganic

substances.

Bioaccumulative Potential	Not likely to bioaccumulate.
Partition coefficient	Not available
Bioconcentration factor (BCF)	No data available.
Mobility in soil	No information available.
Results of PBT and vPvB assessment	This substance does not meet the criteria for classification as PBT or vPvB.
Other Adverse Effects	No information available

Section 13: DISPOSAL CONSIDERATIONS

Waste from Residues/Unused Products	Dispose of in accordance with local regulations
Contaminated Packaging:	Empty containers should be taken to an approved waste handling site for recycling or disposal.

Section 14: TRANSPORT INFORMATION

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

China Dangerous Goods	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	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

Section 15: REGULATORY INFORMATION

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

Global Inventories

Chemical Name	CAS NUMBER:	EC No	EU REACH registration number	Australia (AIIC)	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	01-2119529246-39	Y	Y	Y	(1)-17 (ENCS); ISHL	KE-00980	Y	Y	Y	Y	A

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

Section 16: OTHER INFORMATION

Prepared by	Huber Engineered Materials Global Regulatory Affairs (Email – HEM.HAMRegulatory@huber.com)
Reason for Revision	GB/T 16483-2008 GB/T 24774-2009 GB 30000.1-2024 GB/T 17519–2013
GHS Classification	Not classified.
Physical Hazard	Not classified.
Health Hazard	Not classified.
Environmental Hazard	Not classified.
Label Elements	
Symbols/Pictograms	None
Signal Word	None
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) SCBA (Self-Contained Breathing Apparatus) Positive Pressure GHS (Globally Harmonized System) ADR (European Agreement Concerning the International Carriage of Dangerous Goods by Road) RID (Agreement Concerning the International Carriage of Dangerous Goods by Rail)

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SARA (Superfund Amendments and Reauthorization Act of 1986)
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