FIRE RETARDANT ADDITIVES

Safety Data Sheet

Micral® 1500

This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006
COMMISSION REGULATION (EU) No. 2015/830

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product Name: **Micral® 1500**

Pure substance/mixture Substance

Chemical Name	CAS Number	EC No	REACH registration number	(CLP) Regulation (EC 1272/2008)	TSCA: United States	Weight-%
Aluminum Hydroxide	21645-51-2	244-492-7	01-2119529246-39-0016	Not classified	Y	100

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

Recommended Use Flame retardant

1.3. Details of the supplier of the safety data sheet

Company:

J.M. Huber Corporation
3100 Cumberland Boulevard, Suite 600
Atlanta, GA 30339 USA
Tel: +1 678 247-7300

MARTINSWERK GmbH
Kölner Strasse 110
50127 Bergheim
Germany
Tel. : +49-2271-90.22.78
Fax. : +49-2271-90.27.17

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

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

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 No information available.

SECTION 3: Composition/information on ingredients

3.1. Substances Substance

Chemical Name	CAS Number	EC No	REACH registration number	(CLP) Regulation (EC 1272/2008)	Annex	TSCA: United States	Weight-%
Aluminum Hydroxide	21645-51-2	244-492-7	01-2119529246-39-0016	Not classified	--	Y	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 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 (CO2).

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 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

Aluminum Hydroxide

ACGIH	TLV/TWA 8-hr: 1 mg/m^3 (respirable fraction)
OSHA	TWA: 15 mg/m^3 Total Dust 5 mg/m^3 Respirable Dust
NIOSH	TWA: 5 mg/m^3 (respirable dust); 10 mg/m^3 TWA (total dust)
France	Not established (Non établi)
France	Not established (Non établi)
Russia	6 mg/m^3 TWA (aerosol)
Switzerland	TWA: 3 mg/m^3
United Kingdom	10 mg.m-3 (inhalable); 4 mg.m-3 (respirable)

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

Biological Limit Values: None

Derived No Effect Level (DNEL) Consumer - oral, long-term - local and systemic 4.74 mg/kg bw/day
Worker - inhalative, long-term - local and systemic 10.74 mg/m³

Predicted No Effect Concentration (PNEC) No information available

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

Respiratory Protection In case of inadequate ventilation wear respiratory protection.

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

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:	
Physical State	Solid Powder
Odor	Odorless
Odor Threshold	No information available
pH:	8.4 - 10.2 5% Water suspension
Melting point / Freezing point	ca 300 °C / 572 °F (1013 kPa)
Initial boiling point	5396 °F (2980 °C) 101,3 kPa
Flash Point:	Not applicable.
Evaporation Rate	Not applicable.

Flammability (solid, gas)	Not applicable
Upper flammability limit:	
Lower flammability limit:	
Vapor Pressure	Not applicable
Vapor Density	Not applicable
Relative Density	2.4 g/cm3, 20° C
Water Solubility	Insoluble
Solubility in other solvents	No information available
Partition coefficient	No information available
Autoignition Temperature	Not applicable
Decomposition Temperature	392 °F (200 °C)
Viscosity	Not applicable.
Explosive Properties	None
Oxidizing Properties	Not applicable

VOC Content (%)	Not applicable

SECTION 10: Stability and reactivity

10.1. Reactivity	None
10.2. Chemical stability	Stable under normal conditions
10.3. Possibility of hazardous reactions	None under normal processing
10.4. Conditions to avoid	Incompatible materials.
10.5. Incompatible materials	Strong acids
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.

Information on Likely Routes of Exposure

Inhalation	Do not breathe dust Inhalation of dust in high concentration may cause irritation of respiratory system
Skin	Contact with dust can cause mechanical irritation or drying of the skin
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.

11.1. Information on toxicological effects

Aluminum Hydroxide

Oral LD50	> 2000 mg/kg Rat
Inhalation LC50	Rat > 2.3 mg/l (Al2O3) 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.
Respiratory Sensitization	No information available
Serious eye damage/eye irritation	Non-irritant Rabbit
Skin Corrosion/Irritation	Non-irritant Rabbit
Skin Sensitization	Based on available data, the classification criteria are not met Not a skin sensitizer Guinea pig
Mutagenicity	in vitro Not genotoxic in bacteria and mammalian cell systems. in vivo Mutagenicity (micronucleus test) Rat Negative (weight of evidence approach)
Germ cell mutagenicity	No information available.
Reproductive Effects	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	Not classified.
Specific target organ toxicity - Repeated exposure	No information available.
Mixture versus substance information	No information available

SECTION 12: Ecological information

12.1. Ecotoxicity Not considered to be harmful to aquatic life.

Aluminum Hydroxide
WGK Classification (VwVwS) 5220 WKG: 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.

Partition coefficient No information available

Bioconcentration factor (BCF) Not 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. Other adverse effects No information available

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.

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 (VwVwS) 5220 WKG: nwg

SECTION 14: Transport information

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

TDG -Canada 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

Pure substance/mixture Substance

Chemical Name	CAS Number	EC No	REACH registration number	Australia (AICS)	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	01-2119529246-39-0016	Y	Y	Y	Y	KE-00980	Y	Y	Y	Y	Y

Legend X / Y: Complies , - / N: Not Listed , Exempt

National Regulations

Germany

Aluminum Hydroxide
WGK Classification (VwVwS) 5220 WKG: nwg

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. 2015/830

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Prepared by Huber Engineered Materials Global Regulatory Affairs
email: regulatory.affairs@huber.com.

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

Labeling

Symbols/Pictograms None

Signal Word None

Hazard Statements None

Training Advice Do not handle until all safety precautions have been read and understood.

Abbreviations and acronyms

International Agency for Research on Cancer (IARC)
International Air Transport Association (IATA)
International Maritime Dangerous Goods (IMDG)
International Uniform Chemical Information Database (IUCLID)
Workplace Hazardous Materials Information System (WHMIS) status and classification
EPA SARA Title III Section 312 (40 CFR 370) Hazard Classification
DOT (Department of Transportation)
OSHA (Occupational Safety and Health Administration of the US Department of Labor)
TWA - Time-Weighted Average
The Classification, Labeling and Packaging of Substances and Mixtures (CLP) 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)
Reportable Quantity (RQ) (RQ/% in mixture)
STEL - Short Term Exposure Limit
TLV® - Threshold Limit Value
Derived No Effect Level (DNEL)
SVHC: Substances of Very High Concern for Authorization:
Land transport (ADR/RID)
Biochemical oxygen demand (BOD)
Chemical oxygen demand (COD)
ICAO (air)
(IMDG) International Maritime Dangerous Goods
Positive Pressure Self-Contained Breathing Apparatus (SCBA)
Predicted No Effect Concentration (PNEC)
Globally Harmonized System (GHS)

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