



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

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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

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(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

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| 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
OSHA

TLV/TWA 8-hr: 1 mg/m³ (respirable fraction)

TWA: 15 mg/m³ Total Dust

5 mg/m³ Respirable Dust

NIOSH

TWA: 5 mg/m³ (respirable dust); 10 mg/m³ TWA (total dust)

France

Not established (Non établi)

France

Not established (Non établi)

Russia

6 mg/m³ TWA (aerosol)

Switzerland

TWA: 3 mg/m³

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

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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.

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| 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 |

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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

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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

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| 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 | 01-211952 9246-39-0 016 | 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

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(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