



FIRE RETARDANT ADDITIVES

## Safety Data Sheet

## Micral® 932

OSHA HazCom Standard 29 CFR 1910.1200(g) and GHS Rev 03  
Canadian Workplace Hazardous Material Information System (WHMIS) 1988 & 2015  
Mexico NOM-018-STPS-2000; NOM-018-STPS-2015  
Globally Harmonized System (GHS)

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

## 1.1. Product identifier

Product Name: Micral® 932

Pure substance/mixture: Substance

Aluminum Hydroxide

CAS Number: 21645-51-2  
Weight-%: 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

Internet: www.hubermaterials.com

E-mail: hubermaterials@huber.com

1.4. Emergency telephone number: CHEMTREC: +1 800 424 9300 or International +1 703 527 3887

**SECTION 2: Hazards identification**

## 2.1. Classification of the substance or mixture

OSHA Regulatory Status: This material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200)

Physical Hazards: Not classified

Health Hazards: Not classified

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Environmental Hazard: Not classified

## 2.2. Label elements

Symbols/Pictograms: None

Signal Word: None

Hazard Statements: None

Hazard Statements: None

## Precautionary Statements

Prevention: Employ good industrial hygiene practice  
Do not handle until all safety precautions have been read and understood.  
Do not breathe dust  
Wear protective gloves/protective clothing/eye protection/face protection

Response: IF ON SKIN: Wash with plenty of soap and water

Storage: Store away from incompatible materials

Disposal: Dispose of contents/containers in accordance with local regulations

Additional Information: None.

Hazards not otherwise classified (HNOC): Not classified.

**SECTION 3: Composition/information on ingredients**

Pure substance/mixture: Substance

Chemical Name	CAS Number	TSCA: United States	Canada (DSL)	Mexico	REACH registration number	OSHA Regulatory Status	WHMIS	Weight-%
Aluminum Hydroxide	21645-51-2	Y	Y	Y	01-211952924-6-39-0016	Not classified	Not regulated	100

## Legend

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

**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: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact

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	lenses, if present and easy to do. Continue rinsing.
<b>Skin Contact</b>	Wash with plenty of soap and water.
<b>Ingestion</b>	Rinse mouth thoroughly with water.
<b>Inhalation</b>	If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.
<b>Aspiration hazard</b>	Not an expected route of exposure.
<b>4.2. Most important symptoms and effects, both acute and delayed</b>	Signs and symptoms may include coughing, gasping, choking and difficulty breathing.
<b>4.3. Indication of any immediate medical attention and special treatment needed</b>	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 (CO<sub>2</sub>).

**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

<b>6.1. Personal precautions, protective equipment and emergency procedures</b>	Ensure adequate ventilation. Use personal protection recommended in Section 8. Avoid dust formation. Keep unauthorized personnel away.
<b>For non-emergency personnel</b>	Keep unauthorized personnel away.

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<b>For emergency responders</b>	Keep unauthorized personnel away. Use personal protection recommended in Section 8.
<b>6.2. Environmental precautions</b>	Avoid runoff to waterways and sewers.
<b>6.3. 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
<b>6.4. Reference to other sections</b>	Section 8: Exposure controls and personal protection. See Section 13 for additional waste treatment information.

### SECTION 7: Handling and storage

<b>7.1. Precautions for safe handling</b>	Minimize dust generation and accumulation. Provide local exhaust ventilation. Handle in accordance with good industrial hygiene and safety practice.
<b>7.2. Conditions for safe storage, including any incompatibilities</b>	Store away from incompatible materials. Keep container tightly closed and dry.
<b>7.3. Specific end use(s)</b>	Flame retardant.

### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

##### Occupational exposure limits

##### Aluminum Hydroxide

OSHA	TWA: 15 mg/m <sup>3</sup> Total Dust 5 mg/m <sup>3</sup> Respirable Dust
ACGIH	TLV/TWA 8-hr: 1 mg/m <sup>3</sup> (respirable fraction)
NIOSH	TWA: 5 mg/m <sup>3</sup> (respirable dust); 10 mg/m <sup>3</sup> TWA (total dust)
Canada - BC TWA	TWA: 1 mg/m <sup>3</sup> (respirable)
Canada - Manitoba - OEL - TWA	TWA: 1 mg/m <sup>3</sup> (respirable)
Canada - Newfoundland & Labrador - OEL - TWA	TWA: 1 mg/m <sup>3</sup> (respirable)
Canada - Nova Scotia - OEL - TWA	TWA: 1 mg/m <sup>3</sup> (respirable)
Canada - Prince Edward Island - OEL - TWA	TWA: 1 mg/m <sup>3</sup> (respirable)
TWA	
Mexico	No se ha establecido

**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/m<sup>3</sup>

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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.**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:**

<b>Physical State</b>	Solid Powder
<b>Odor</b>	Odorless
<b>Odor Threshold</b>	No information available
<b>pH:</b>	8.4 - 10.2 5% Water suspension
<b>Melting point / Freezing point</b>	ca 300 °C / 572 °F (1013 kPa)
<b>Initial boiling point</b>	5396 °F (2980 °C) 101,3 kPa
<b>Flash Point:</b>	Not applicable.
<b>Evaporation Rate</b>	Not applicable.
<b>Flammability (solid, gas)</b>	Not applicable
<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>	2.4 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>	No information available
<b>Autoignition Temperature</b>	Not applicable

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<b>Decomposition Temperature</b>	392 °F (200 °C)
<b>Viscosity</b>	Not applicable.
<b>Explosive Properties</b>	None
<b>Oxidizing Properties</b>	Not applicable

**VOC Content (%)** Not applicable**9.2. Other information** No data available.**SECTION 10: Stability and reactivity**

<b>10.1. Reactivity</b>	None
<b>10.2. Chemical stability</b>	Stable under normal conditions
<b>10.3. Possibility of hazardous reactions</b>	None under normal processing
<b>10.4. Conditions to avoid</b>	Incompatible materials
<b>10.5. Incompatible materials</b>	Strong acids
<b>10.6. Hazardous decomposition products</b>	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**

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

**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



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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 Aquatic toxicity

Acute  
Crustacea  
Daphnia Magna (Water Flea) 0.72 mg/l 48 hour pH 7.5  
Fish EC50  
Pimephales promelas (fathead minnow) 1.16 mg/l pH 7.8  
Pimephales promelas (fathead minnow) >218644 1 µg/L 96 hour

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	Chronic Fish LC50: Pimephales promelas (fathead minnow) 145190 1.16 7 day
	Other LC50 Lymnaea stagnalis >2099 µg/L 30 day EC50 Aeromonas sp 1923 9 µg/L 17 day
WGK Classification (VwVwS)	5220 WGK: 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 WGK: nwg

## SECTION 14: Transport information

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

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TDG -Canada	Not regulated
DOT	Not regulated
ADR	Not regulated
RID	Not regulated
ADN	Not regulated
IATA	Not regulated
IMDG/MO	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

## 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	01-211952-9246-39-0016	Y	Y	Y	Y	KE-00980	Y	Y	Y	Y	Y

## Legend

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

## US Federal Regulations

## EPA

## CERCLA

## Aluminum Hydroxide

## CERCLA

## SARA 311/312 Hazardous

## Categorization

## SARAH 302 RQ, lbs

Not listed

Not listed

Not listed

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SARA 304  
Not regulated

CWA (Clean Water Act)  
Not regulated

CAA (Clean Air Act)  
Not regulated

## U.S. State Right-to-Know Regulations

Chemical Name	CAS Number	California Proposition 65	California CPR	Massachusetts	Minnesota	New Jersey	Pennsylvania
Aluminum Hydroxide	21645-51-2	No		No	No	No	No

## California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65)

This product does not contain any Proposition 65 chemicals

## CANADA

## WHMIS:

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR

## Aluminum Hydroxide

Not regulated

## SECTION 16: Other information

## Prepared by

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regulatory.affairs@huber.com

## Issue Date:

16/Nov/2017

## Print Date:

16/Nov/2017

## Revision Number:

1.2

## Reason for Version

Published with new date. No changes.

## 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  
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA)  
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

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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