



**Hazard statements**

May cause cancer.  
 May damage fertility or the unborn child.  
 Causes damage to organs through prolonged or repeated exposure.

**Precautionary Statements - Prevention**

Obtain special instructions before use.  
 Do not handle until all safety precautions have been read and understood.  
 Wear protective gloves, protective clothing, eye protection and face protection.  
 Do not breathe dust.  
 Wash face, hands and any exposed skin thoroughly after handling.  
 Do not eat, drink or smoke when using this product.

**Precautionary Statements - Response**

IF exposed or concerned: Get medical advice/attention.

**Precautionary Statements - Storage**

Store locked up.

**Precautionary Statements - Disposal**

Dispose of contents and container in accordance with local, regional, national, and international regulations as applicable.

**Other information**

Toxic to aquatic life with long lasting effects.

**3. Composition/information on ingredients****Substance**

Not applicable.

**Mixture**

Chemical name	CAS No.	Weight-%
Gypsum (Ca(SO <sub>4</sub> ).2H <sub>2</sub> O)	13397-24-5	20 - 40
Bentonite	1302-78-9	10 - <20
Zinc oxide (ZnO)	1314-13-2	10 - <20
Disodium tetraborate pentahydrate	12179-04-3	5 - <10
Manganese oxide (MnO)	1344-43-0	3 - <5
Manganese sulfate monohydrate	10034-96-5	3 - <5
Quartz	14808-60-7	1 - <3

\*The exact percentage (concentration) of composition has been withheld as a trade secret.

**4. First-aid measures****Description of first aid measures**

<b>General advice</b>	IF exposed or concerned: Get medical advice/attention. Show this safety data sheet to the doctor in attendance.
<b>Inhalation</b>	Remove to fresh air.
<b>Eye contact</b>	Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.
<b>Skin contact</b>	Wash skin with soap and water.
<b>Ingestion</b>	Rinse mouth.

**Most important symptoms and effects, both acute and delayed**

<b>Symptoms</b>	No information available.
<b>Effects of Exposure</b>	May cause cancer. May cause adverse reproductive effects - such as birth defect, miscarriages, or infertility. Causes damage to organs through prolonged or repeated exposure.

**Indication of any immediate medical attention and special treatment needed**

<b>Note to physicians</b>	Treat symptomatically.
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**5. Fire-fighting measures**

<b>Suitable Extinguishing Media</b>	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
<b>Unsuitable extinguishing media</b>	Do not scatter spilled material with high pressure water streams.
<b>Specific hazards arising from the chemical</b>	No information available.
<b>Explosion data</b>	
<b>Sensitivity to mechanical impact</b>	None.
<b>Sensitivity to static discharge</b>	None.
<b>Special protective equipment and precautions for fire-fighters</b>	Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

**6. Accidental release measures****Personal precautions, protective equipment and emergency procedures**

<b>Personal precautions</b>	Ensure adequate ventilation.
<b>Other information</b>	Refer to protective measures listed in Sections 7 and 8.

**Methods and material for containment and cleaning up**

<b>Methods for containment</b>	Prevent further leakage or spillage if safe to do so.
<b>Methods for cleaning up</b>	Pick up and transfer to properly labeled containers.
<b>Prevention of secondary hazards</b>	Clean contaminated objects and areas thoroughly observing environmental regulations.

**7. Handling and storage****Precautions for safe handling**

<b>Advice on safe handling</b>	Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Do not eat, drink or smoke when using this product. Remove contaminated clothing and shoes.
<b>General hygiene considerations</b>	Do not eat, drink or smoke when using this product. Wash hands before breaks and immediately after handling the product.

**Conditions for safe storage, including any incompatibilities**

<b>Storage Conditions</b>	Store locked up.
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## 8. Exposure controls/personal protection

### Control Parameters

#### Exposure Limits

Chemical name	ACGIH TLV	OSHA PEL	NIOSH
Gypsum (Ca(SO <sub>4</sub> ).2H <sub>2</sub> O) 13397-24-5	TWA: 10 mg/m <sup>3</sup> inhalable particulate matter	TWA: 15 mg/m <sup>3</sup> total dust TWA: 5 mg/m <sup>3</sup> respirable fraction (vacated) TWA: 15 mg/m <sup>3</sup> total dust (vacated) TWA: 5 mg/m <sup>3</sup> respirable fraction	TWA: 10 mg/m <sup>3</sup> total dust TWA: 5 mg/m <sup>3</sup> respirable dust
Bentonite 1302-78-9	TWA: 1 mg/m <sup>3</sup> respirable particulate matter	-	-
Zinc oxide (ZnO) 1314-13-2	TWA: 2 mg/m <sup>3</sup> respirable particulate matter STEL: 10 mg/m <sup>3</sup> respirable particulate matter	TWA: 5 mg/m <sup>3</sup> fume TWA: 15 mg/m <sup>3</sup> total dust TWA: 5 mg/m <sup>3</sup> respirable fraction (vacated) TWA: 5 mg/m <sup>3</sup> fume (vacated) TWA: 10 mg/m <sup>3</sup> total dust (vacated) TWA: 5 mg/m <sup>3</sup> respirable fraction (vacated) STEL: 10 mg/m <sup>3</sup> fume	IDLH: 500 mg/m <sup>3</sup> Ceiling: 15 mg/m <sup>3</sup> dust TWA: 5 mg/m <sup>3</sup> dust and fume STEL: 10 mg/m <sup>3</sup> fume
Disodium tetraborate pentahydrate 12179-04-3	TWA: 2 mg/m <sup>3</sup> inhalable particulate matter STEL: 6 mg/m <sup>3</sup> inhalable particulate matter	(vacated) TWA: 10 mg/m <sup>3</sup>	TWA: 1 mg/m <sup>3</sup>
Manganese oxide (MnO) 1344-43-0	TWA: 0.02 mg/m <sup>3</sup> Mn respirable particulate matter TWA: 0.1 mg/m <sup>3</sup> Mn inhalable particulate matter	(vacated) Ceiling: 5 mg/m <sup>3</sup> Ceiling: 5 mg/m <sup>3</sup> Mn	IDLH: 500 mg/m <sup>3</sup> Mn TWA: 1 mg/m <sup>3</sup> Mn STEL: 3 mg/m <sup>3</sup> Mn
Manganese sulfate monohydrate 10034-96-5	TWA: 0.02 mg/m <sup>3</sup> Mn respirable particulate matter TWA: 0.1 mg/m <sup>3</sup> Mn inhalable particulate matter	(vacated) Ceiling: 5 mg/m <sup>3</sup> Ceiling: 5 mg/m <sup>3</sup> Mn	IDLH: 500 mg/m <sup>3</sup> Mn TWA: 1 mg/m <sup>3</sup> Mn STEL: 3 mg/m <sup>3</sup> Mn
Quartz 14808-60-7	TWA: 0.025 mg/m <sup>3</sup> respirable particulate matter	TWA: 50 µg/m <sup>3</sup> (vacated) TWA: 0.1 mg/m <sup>3</sup> respirable dust : (250)/( %SiO <sub>2</sub> + 5) mppcf TWA respirable fraction : (10)/( %SiO <sub>2</sub> + 2) mg/m <sup>3</sup> TWA respirable fraction	IDLH: 50 mg/m <sup>3</sup> respirable dust TWA: 0.05 mg/m <sup>3</sup> respirable dust

#### Biological occupational exposure limits

This product, as supplied, contains materials that do not have reportable biological exposure limits or are not subject to the reporting requirements of the local jurisdiction.

#### Appropriate engineering controls

##### Engineering controls

Showers  
Eyewash stations  
Ventilation systems.

#### Individual protection measures, such as personal protective equipment

##### Eye/face protection

Appropriate eye/face protection should be selected and used according to the chemical nature, hazards and use of this product and safety requirements of the local jurisdiction.

<b>Hand protection</b>	Wear suitable gloves.
<b>Skin and body protection</b>	Wear suitable protective clothing.
<b>Respiratory protection</b>	Appropriate respiratory protection should be selected and used according to the chemical nature, hazards and use of this product and safety requirements of the local jurisdiction. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

## 9. Physical and chemical properties

### Information on basic physical and chemical properties

<b>Appearance</b>	Gray
<b>Physical state</b>	Solid
<b>Color</b>	Gray
<b>Odor (includes odor threshold)</b>	Characteristic

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
<b>Melting point / freezing point</b>	No data available	None known
<b>Boiling point (or initial boiling point or boiling range)</b>	No data available	None known
<b>Flammability</b>	No data available	None known
<b>Flammability Limit in Air</b>		None known
<b>Upper flammability or explosive limits</b>	No data available	
<b>Lower flammability or explosive limits</b>	No data available	
<b>Flash point</b>	No data available	None known
<b>Autoignition temperature</b>	No data available	None known
<b>Decomposition temperature</b>	No data available	None known
<b>SADT (°C)</b>	No data available	None known
<b>pH</b>	No data available	None known
<b>pH (as aqueous solution)</b>	No data available	None known
<b>Kinematic viscosity</b>	No data available	None known
<b>Dynamic viscosity</b>	No data available	None known
<b>Solubility</b>	No data available	None known
<b>Water solubility</b>	No data available	None known
<b>Partition coefficient n-octanol/water (log value)</b>	No data available	None known
<b>Vapor pressure (includes evaporation rate)</b>	No data available	None known
<b>Evaporation rate</b>	No data available	None known
<b>Density and/or relative density</b>	No data available	None known
<b>Bulk density</b>	No data available	
<b>Liquid Density</b>	No data available	
<b>Relative vapor density</b>	No data available	None known
<b>Particle characteristics</b>		None known
<b>Particle Size</b>	No data available	
<b>Particle Size Distribution</b>	No data available	

### Other information

## 10. Stability and reactivity

<b>Reactivity</b>	No information available.
<b>Chemical stability</b>	Stable under normal conditions.
<b>Possibility of hazardous reactions</b>	None under normal processing.
<b>Conditions to avoid</b>	None known based on information supplied.

**Incompatible materials** None known based on information supplied.

**Hazardous decomposition products** None known based on information supplied.

## 11. Toxicological information

### Information on likely routes of exposure

#### Product Information

<b>Inhalation</b>	Specific test data for the substance or mixture is not available.
<b>Eye contact</b>	Specific test data for the substance or mixture is not available.
<b>Skin contact</b>	Specific test data for the substance or mixture is not available.
<b>Ingestion</b>	Specific test data for the substance or mixture is not available.

### Symptoms related to the physical, chemical and toxicological characteristics

<b>Symptoms</b>	No information available.
<b>Acute toxicity</b>	No information available.

### Numerical measures of toxicity

The following ATE values have been calculated for the mixture

ATEmix (oral)	8,584.60 mg/kg
ATEmix (dermal)	99,999.00 mg/kg
ATEmix (inhalation-gas)	99,999.00 ppm
ATEmix (inhalation-vapor)	99,999.00 mg/l
ATEmix (inhalation-dust/mist)	11.00 mg/l

### Component Information

Chemical name	CAS No.	Oral LD50	Dermal LD50	Inhalation LC50
Gypsum (Ca(SO <sub>4</sub> ).2H <sub>2</sub> O)	13397-24-5	> 3000 mg/kg ( Rat )	-	> 3.26 mg/L ( Rat ) 4 h
Bentonite	1302-78-9	> 5000 mg/kg ( Rat )	-	-
Zinc oxide (ZnO)	1314-13-2	> 5000 mg/kg ( Rat )	> 2000 mg/kg ( Rat )	> 5700 mg/m <sup>3</sup> ( Rat ) 4 h
Disodium tetraborate pentahydrate	12179-04-3	= 2403 mg/kg ( Rat )	-	-
Manganese oxide (MnO)	1344-43-0	> 2000 mg/kg ( Rat )	-	> 5.35 mg/L ( Rat ) 4 h
Manganese sulfate monohydrate	10034-96-5	= 2150 mg/kg ( Rat )	-	> 4.45 mg/L ( Rat ) 4 h

### Delayed and immediate effects as well as chronic effects from short and long-term exposure

<b>Skin corrosion/irritation</b>	No information available.
<b>Serious eye damage/eye irritation</b>	No information available.
<b>Respiratory or skin sensitization</b>	No information available.
<b>Germ cell mutagenicity</b>	No information available.
<b>Carcinogenicity</b>	Contains a known or suspected carcinogen. Classification based on data available for ingredients. May cause cancer.

The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical name	CAS No.	ACGIH	IARC	NTP	OSHA
Quartz	14808-60-7	A2	Group 1	Known	X

<b>Reproductive toxicity</b>	Classification based on data available for ingredients. May damage fertility or the unborn child.
<b>STOT - single exposure</b>	No information available.
<b>STOT - repeated exposure</b>	Causes damage to organs through prolonged or repeated exposure.
<b>Aspiration hazard</b>	No information available.
<b>Other adverse effects</b>	No information available.
<b>Interactive effects</b>	No information available.

## 12. Ecological information

**Ecotoxicity** Toxic to aquatic life with long lasting effects.

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Gypsum (Ca(SO <sub>4</sub> ).2H <sub>2</sub> O) 13397-24-5	-	LC50: =2980mg/L (96h, <i>Lepomis macrochirus</i> ) LC50: >1970mg/L (96h, <i>Pimephales promelas</i> )	-	-
Bentonite 1302-78-9	-	LC50: =19000mg/L (96h, <i>Oncorhynchus mykiss</i> )	-	-
Zinc oxide (ZnO) 1314-13-2	-	LC50: =1.55mg/L (96h, <i>Danio rerio</i> )	-	-
Disodium tetraborate pentahydrate 12179-04-3	EC50: =158mg/L (96h, <i>Desmodesmus subspicatus</i> ) EC50: 2.6 - 21.8mg/L (96h, <i>Pseudokirchneriella subcapitata</i> )	LC50: =340mg/L (96h, <i>Limanda limanda</i> )	-	LC50: 1085 - 1402mg/L (48h, <i>Daphnia magna</i> )

**Persistence and degradability** No information available.

### Bioaccumulation

#### Component Information

Chemical name	Partition coefficient
Disodium tetraborate pentahydrate 12179-04-3	-1.53

**Other adverse effects** No information available.

## 13. Disposal considerations

### Disposal methods

**Waste from residues/unused** Dispose of in accordance with local regulations. Dispose of waste in accordance with

<b>products</b>	environmental legislation.
<b>Contaminated packaging</b>	Do not reuse empty containers.
<b>California Hazardous Waste Status</b>	This product contains one or more substances that are listed with the State of California as a hazardous waste.

## 14. Transport information

### DOT

Not regulated

### IATA

<b>UN number or ID number</b>	UN3077
<b>UN proper shipping name</b>	Environmentally hazardous substance, solid, n.o.s.
<b>Transport hazard class(es)</b>	9
<b>Packing group</b>	III
<b>Technical Name</b>	Zinc oxide (ZnO), Manganese sulfate monohydrate
<b>Description</b>	UN3077, Environmentally hazardous substance, solid, n.o.s. (Zinc oxide (ZnO), Manganese sulfate monohydrate), 9, III
<b>Special Provisions</b>	A97, A158, A179, A197, A215
<b>ERG Code</b>	9L
<b>Notes</b>	<b>May be shipped as not regulated in quantities not more than 5 L / 5 kg in accordance with IATA SP A197.</b>

### IMDG

<b>UN number or ID number</b>	UN3077
<b>UN proper shipping name</b>	Environmentally hazardous substance, solid, n.o.s.
<b>Transport hazard class(es)</b>	9
<b>Packing group</b>	III
<b>EmS-No.</b>	F-A, S-F
<b>Special Provisions</b>	274, 335, 375, 966, 967, 969
<b>Marine pollutant</b>	P
<b>Marine pollutant name</b>	Zinc oxide (ZnO), Manganese sulfate monohydrate
<b>Description</b>	UN3077, Environmentally hazardous substance, solid, n.o.s. (Zinc oxide (ZnO), Manganese sulfate monohydrate), 9, III, Marine pollutant
<b>Notes</b>	<b>May be shipped as not regulated in quantities not more than 5 L / 5 kg in accordance with IMDG Special Provision 375.</b>

## 15. Regulatory information

Contact supplier for inventory compliance status

## 16. Other information

<b>NFPA</b>	<b>Health hazards</b> 0	<b>Flammability</b> 0	<b>Instability</b> 0	<b>Special hazards</b> -
<b>HMIS</b>	<b>Health hazards</b> 0	<b>Flammability</b> 0	<b>Physical hazards</b> 0	<b>Personal protection</b> -
<i>Chronic Hazard Star Legend</i>	* = Chronic Health Hazard			

### Key or legend to abbreviations and acronyms used in the safety data sheet

List may include phrases which are not applicable to this product

### Legend

ACGIH	American Conference of Governmental Industrial Hygienists
ADN	Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways (Europe)
ADR	Agreement concerning the International Carriage of Dangerous Goods by Road (Europe)
AIIC	Australian Inventory of Industrial Chemicals
ATE	Acute Toxicity Estimate
ASTM	American Society for the Testing of Materials

bar	Biological Reference Values for Chemical Compounds in the Work Area
BAT	Biological tolerance values for occupational exposure
BEL	Biological exposure limits
bw	Body weight
Ceiling	Maximum limit value
CMR	Carcinogen, Mutagen or Reproductive Toxicant
DOT	Department of Transportation (United States)
DSL	Domestic Substances List (Canada)
EmS	Emergency Schedule
ENCS	Existing and New Chemical Substances (Japan)
EPA	Environmental Protection Agency
GHS	Globally Harmonized System
HMIS	Hazardous Materials Identification System
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IBC	International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk
ICAO	International Civil Aviation Organization
IECSC	Inventory of Existing Chemical Substances in China
IMDG	International Maritime Dangerous Goods
IMO	International Maritime Organization
ISO	International Organization for Standardization
KECI	Korean Existing Chemicals Inventory
LC50	Lethal Concentration to 50% of a test population
LD50	Lethal Dose to 50% of a test population (Median Lethal Dose)
MARPOL	International Convention for the Prevention of Pollution from Ships
NFPA	National Fire Protection Association
NIOSH	National Institute for Occupational Safety and Health
n.o.s.	Not Otherwise Specified
NOAEC	No Observed Adverse Effect Concentration
NOAEL	No Observed Adverse Effect Level
NOELR	No Observable Effect Loading Rate
NTP	National Toxicology Program (United States)
NZIoC	New Zealand Inventory of Chemicals
OECD	Organization for Economic Cooperation and Development
OEL	Occupational exposure limits
OSHA	Occupational Safety and Health Administration of the US Department of Labor
PBT	Persistent, Bioaccumulative and Toxic substance
PICCS	Philippines Inventory of Chemicals and Chemical Substances
PMT	Persistent, Mobile and Toxic
PPE	Personal protective equipment
QSAR	Quantitative Structure Activity Relationship
RID	Agreement concerning the International Carriage of Dangerous Goods by Rail (Europe)
SADT	Self-Accelerating Decomposition Temperature
SAR	Structure-activity relationship
SARA	Superfund Amendments and Reauthorization Act
SDS	Safety Data Sheet
SL	Surface Limit
STEL	Short Term Exposure Limit
STOT RE	Specific target organ toxicity - Repeated exposure
STOT SE	Specific target organ toxicity - Single exposure
TCSI	Taiwan Chemical Substance Inventory
TDG	Transport of Dangerous Goods (Canada)
TSCA	Toxic Substances Control Act (United States)
TWA	Time-Weighted Average
UN	United Nations
VOC	Volatile organic compounds
vPvB	Very Persistent and Very Bioaccumulative
vPvM	Very Persistent and Very Mobile
As	Allergenic substance
DS	Dermal Sensitizer

Ot	Ototoxicant
pOt	Ototoxicant - potential to cause hearing disorders
PS	Photosensitizer
RS	Respiratory Sensitizer
S	Sensitizer
poS	Sensitizer - capable of causing occupational asthma
Sa	Simple asphyxiant
Sd	Skin designation
pSd	Skin designation - potential for cutaneous absorption
Sdv	Skin designation - vacated
Sk	Skin notation
dSk	Skin notation - danger of cutaneous absorption
pSk	Skin notation - potential for cutaneous absorption

**Key literature references and sources for data used to compile the SDS**

Agency for Toxic Substances and Disease Registry (ATSDR)  
 U.S. Environmental Protection Agency ChemView Database  
 European Food Safety Authority (EFSA)  
 Environmental Protection Agency  
 Acute Exposure Guideline Level(s) (AEGL(s))  
 U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act  
 U.S. Environmental Protection Agency High Production Volume Chemicals  
 Food Research Journal  
 Hazardous Substance Database  
 International Uniform Chemical Information Database (IUCLID)  
 National Institute of Technology and Evaluation (NITE)  
 Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)  
 NIOSH (National Institute for Occupational Safety and Health)  
 National Library of Medicine's ChemID Plus (NLM CIP)  
 National Library of Medicine's PubMed database (NLM PUBMED)  
 U.S. National Toxicology Program (NTP)  
 New Zealand's Chemical Classification and Information Database (CCID)  
 Organization for Economic Co-operation and Development Environment, Health, and Safety Publications  
 Organization for Economic Co-operation and Development High Production Volume Chemicals Program  
 Organization for Economic Co-operation and Development Screening Information Data Set  
 World Health Organization

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**Revision Note** No information available.

**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**