

Safety Data Sheet

According to 1907/2006/EC, article 31 (REACH), according to Directive 67/548/EEC (DSD)
and according to 1272/2008/EC (CLP)

1 PRODUCT AND COMPANY IDENTIFICATION

KALIX CPN
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(office hours only)

Product Name: KALIX Mag Sulfate
Synonym(s): EPSOM SALT * MAGNESIUM SULFATE
HEPTAHYDRATE * SULFURIC ACID,
MAGNESIUM SALT, HYDRATE (1:1:7)
Recommended use: Agriculture / Horticulture – Micronutrient
Recommended Restrictions: None known
Product Description: Magnesium Sulfate Heptahydrate
Date of Revision: 5/3/2021
Emergency Phone: 24 Hour Transportation Emergency Number –
CHEMTREC 1-800-424-9300 U.S.A, Canada,
International

2 HAZARD IDENTIFICATION

Physical Hazards: Not classified.

Health Hazards: Not classified.

OSHA Defined Hazards: Not classified.

Label Elements:

Hazard Symbol: None.

Signal Word: None.

Hazard Statement: The Substance does not meet the criteria for classification.

Precautionary Statement:

Prevention: Observe good industrial hygiene practices.

Response: Wash hands after handling.

Storage: Store away from incompatible materials.

Disposal: Dispose of waste and residues in accordance with local authority requirements.

Hazard(s) not otherwise Classified (HNOC): Store in a cool and dry place. Store locked up.

Disposal: Dispose of contents and container in accordance with local, regional, national, and international regulations.

Aggravation of Pre-existing Conditions: Not classified.

Supplemental Information: Not applicable.

3 COMPOSITION / INFORMATION ON INGREDIENTS

Component	Common Names, Synonyms	CAS #	Weight %
Magnesium Sulfate - Crystal	EPSOM SALT MAGNESIUM SULFATE HEPTAHYDRATE SULFURIC ACID, MAGNESIUM SALT, HYDRATE (1:1:7)	10034-99-8	100

4 FIRST AID MEASURES

Description of Necessary Measures:

Skin Contact:	Wash off with soap and water. Get medical attention if irritation develops and persists.
Eye Contact:	Rinse with water. Get medical attention if irritation develops and persists.
Ingestion:	Rinse mouth. Get medical attention if symptoms occur.
Most Important Symptoms/Effects, Acute and Delayed:	Direct contact with eyes may cause temporary irritation.
Indication of Immediate Medical Attention and Special Treatment Needed:	Treat symptomatically.
General Information:	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5 FIRE FIGHTING MEASURES

Suitable extinguishing media: Water. Water fog. Foam. Dry chemical powder. Carbon dioxide (CO₂).

Unsuitable extinguishing media: Not known.

Specific hazards arising from the chemical: During fire, gases hazardous to health may be formed.

Special protective precautions for fire-fighters: Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Fire-fighting equipment/instructions: In the event of fire, cool tanks with water spray.

Specific methods: Cool containers exposed to flames with water until well after the fire is out.

6 ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures: Keep unnecessary personnel away. For personal protection, see section 8 of the MSDS.

Methods and Materials for Containment and Clean Up: Stop the flow of material, if this is without risk. Following product recovery, flush area with water. For waste disposal, see section 13 of the MSDS.

Environmental Precautions: Prevent further leakage or spillage if safe to do so.

7 HANDLING AND STORAGE

Precautions for Safe Handling: Observe good industrial hygiene practices.

Conditions for Safe Storage, Including any Incompatibilities: Store in original tightly closed container. Store away from incompatible materials (see Section 10 of the MSDS).

8 EXPOSURE CONTROL / PERSONAL PROTECTION

Occupational Exposure Limits: No exposure limits noted for ingredient(s).

Biological Limit Values: No biological exposure limits noted for the ingredient(s).

Appropriate Engineering Controls: Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Individual Protection Measures, such as Personal Protective Equipment:

Eye / Face Protection: If contact is likely, safety glasses with side shields are recommended.

Skin Protection:

Hand Protection: For prolonged or repeated skin contact use suitable protective gloves.

Other: Wear suitable protective clothing.

Respiratory Protection: In case of insufficient ventilation, wear suitable respiratory equipment.

Thermal Hazards: Wear appropriate thermal protective clothing, when necessary.

General Hygiene Considerations: Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Crystalline.

Physical State: Solid.

Form: Solid. Crystalline.

Color: White.

Odor: Odorless.

Odor Threshold: Not available.

pH: Not available.

Salt-Out / Crystalization Temp: Not available.

Melting Point / Freezing Point: 2055.2 °F (1124 °C)

Initial Boiling Point and Boiling Range: Not available.

Flash Point: Not available.

Evaporation Rate: Not available.

Flammability (Solid, Gas): Not available.

Upper / Lower Flammability or Explosive Limits:**Flammability Limit – Lower (%):** Not available.**Flammability Limit – Upper (%):** Not available.**Explosive Limit – Lower (%):** Not available.**Explosive Limit – Upper (%):** Not available.**Vapor Pressure:** < 0 kPa at 25 °C

< 0.13 hPa at 20 degrees Celsius estimated

Vapor Destiny: Not available.**Relative Density:** Not available.**Solubility(ies):** 246 g/l at 20 degrees Celsius estimated**Partition Coefficient (n-octanol / water):** Not available.**Auto-ignition Temperature:** Not available.**Decomposition Temperature:** Not available.**Viscosity:** Not available.**Other Information:****Bulk Density:** 63 - 67 lb/ft³ (Typical)**Molecular Formula:** H₂O₄S₇H₂O₇Mg**Molecular Weight:** 120.37 g/mol

246.47

pH in Aqueous Solution: 6.2 - 6.6 (5% Solution)**Structural Formula:** MgSO₄ + 7H₂O**10 STABILITY AND REACTIVITY****Reactivity:** The product is stable and non-reactive under normal conditions of use, storage and transport.**Chemical Stability:** Material is stable under normal conditions.**Possibility of Hazardous Reactions:** No dangerous reaction known under conditions of normal use.**Conditions to Avoid:** Contact with incompatible materials.**Incompatible Materials:** Strong oxidizing agents.**Hazardous Decomposition Products:** Thermal decomposition products may include toxic sulfur oxides.**11 TOXICOLOGICAL INFORMATION****Information on Likely Routes of Exposure:****Ingestion:** Not available.**Inhalation:** Due to lack of data the classification is not possible.**Skin Contact:** Due to lack of data the classification is not possible.**Eye Contact:** Due to lack of data the classification is not possible.**Symptoms Related to the Physical, Chemical and Toxicological Characteristics:** Direct contact with eyes may cause temporary irritation.**Information on Toxicological Effects:**

Acute Toxicity:

Product	Species	Test Results
Magnesium Sulfate – Crystal (CAS 10034-99-8) Acute Oral LD50	Rabbit Rat	>5000 mg/kg >3000 mg/kg
<i>Other</i> LD50	Mouse Rat	645 mg/kg 1200 mg/kg

*Estimates for product may be based on additional component data now shown.

Skin Corrosion / Irritation: Due to lack of data the classification is not possible.

Serious Eye Damage / Irritation: Due to lack of data the classification is not possible.

Respiratory Sensitization: Due to lack of data the classification is not possible.

Skin Sensitization: Due to lack of data the classification is not possible.

Germ Cell Mutagenicity: No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Carcinogenicity: Due to lack of data the classification is not possible.

Reproductive Toxicity: Due to lack of data the classification is not possible.

STOT-Single Exposure: Due to lack of data the classification is not possible.

STOT-Repeated Exposure: Due to lack of data the classification is not possible.

Aspiration Hazard: Due to lack of data the classification is not possible.

Further Information: This product has no known adverse effect on human health.

12 ECOLOGICAL INFORMATION

Ecotoxicity: This Product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Product	Species	Test Results
Magnesium Sulfate – Crystal (CAS 10034-99-8) <i>Acute</i>		
Algae	EC50 Algae	>2700 mg/l, 72 hr
Crustacea	EC50 Daphnia magna	>1700 mg/l, 24 hr
Aquatic		
Crustacea	EC50 Tubificid worm (Tubifex tubifex)	149.6 – 191.35 mg/l, 48 hours
Fish	LC50 Fathead minnow (Pimephales promelas)	2610 – 3080 mg/l, 96 hours
<i>Acute</i>		
Fish	LC50 Ide, silver or golden orfe (Leuciscus Idus)	>14000 mg/l, 48 hr

*Estimates for product may be based on additional component data not shown.

Persistence and Degradability: No data is available on the degradability of this product.

Bio Accumulative Potential: Not available.

Mobility in Soil: Not available.

Other Adverse Effects: No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13 DISPOSAL CONSIDERATION

Disposal Instructions: Collect and reclaim or dispose in sealed containers at licensed waste disposal site.

Hazardous Waste Code: The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

Waste from Residues / Unused Products: Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

Contaminated Packaging: Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14 TRANSPORT INFORMATION

DOT: Not regulated as dangerous goods.

IATA: Not regulated as dangerous goods.

IMDG: Not regulated as dangerous goods.

15 REGULATORY INFORMATION

US federal regulations

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

SARA 304 Emergency release notification

Not regulated.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard Categories:

Immediate Hazard - No

Delayed Hazard - No

Fire Hazard - No

Pressure Hazard - No

Reactivity Hazard – No

SARA 302 Extremely Hazardous Substance: No

SARA 311/312 Hazardous Chemical: No

Other Federal Regulations:

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act Not regulated.

(SDWA)

Drug Enforcement Administration (DEA). List 2, Essential Chemicals (21 CFR 1310.02(b) and 1310.04(f)(2) and Chemical Code Number

Not listed.

Food and Drug Administration (FDA):

Total food additive

Direct food additive

GRAS food additive

US State Regulations:

US. Massachusetts RTK - Substance List

Not regulated.

US. New Jersey Worker and Community Right-to-Know Act

Not regulated.

US. Pennsylvania RTK - Hazardous Substances

Not regulated.

US. Rhode Island RTK

Not regulated.

US. California Proposition 65

Not Listed.

16 OTHER INFORMATION

Prepared by: KALIX CPN

Date of Preparation: 5/3/2021

Version: 1

Date of Revision: 5/3/2021

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