# SAFETY DATA SHEET

## 1. Identification

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|---|---|---|
| **Product identifier** | **KALIX 30-10-10** | |
| **Recommended use** | Agricultural / Horticultural Use - Micronutrient Fertilizer - Refer to product label | |
| **Recommended restrictions** | Refer to product label | |
| **Manufacturer** | | |
| **Company Name** | KALIX<br>1904 United Way, Suite #106<br>Medford, OR 97504 | |
| **Telephone** | During Business Hours | 1-541-973-2244 |
| **Emergency phone number** | CHEMTREC (24 hours):<br>USA, Canada, Puerto Rico<br>Virgin Islands<br>International Maritime | 1-800-424-9300<br>1-800-424-9300<br>1-703-527-3887 |

## 2. Hazard(s) identification

| | | |
|---|---|---|
| **Physical hazards** | Not classified. | |
| **Health hazards** | Acute toxicity, oral | Category 4 |
| | Serious eye damage/eye irritation | Category 2A |
| **Environmental hazards** | Not classified. | |
| **OSHA defined hazards** | Not classified. | |

**Label elements**

| | |
|---|---|
| **Signal word** | Warning |
| **Hazard statement** | Harmful if swallowed. Causes serious eye irritation. |
| **Precautionary statement** | |
| **Prevention** | Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Wear eye/face protection. |
| **Response** | If swallowed: Call a poison center/doctor if you feel unwell. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Rinse mouth. If eye irritation persists: Get medical advice/attention. |
| **Storage** | Store away from incompatible materials. |
| **Disposal** | Dispose of contents/container in accordance with local/regional/national/international regulations. |
| **Hazard(s) not otherwise classified (HNOC)** | None known. |
| **Supplemental information** | None. |

## 3. Composition/information on ingredients

**Mixtures**

| Chemical name | Common name and synonyms | CAS number | % |
|---|---|---|---|
| Urea | | 57-13-6 | 50 - < 60* |
| Potassium Nitrate | | 7757-79-1 | 20 - < 30* |
| Manganese EDTA, disodium salt | | 15375-84-5 | < 1* |
| Other components below reportable levels | | | 20 - < 30 |

*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

## 4. First-aid measures

**Inhalation** If dust from the material is inhaled, remove the affected person immediately to fresh air. Call a physician if symptoms develop or persist.

**Skin contact** Wash off with soap and water. Get medical attention if irritation develops and persists.

**Eye contact** Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.

**Ingestion** Rinse mouth. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Get medical advice/attention if you feel unwell. Get medical attention if symptoms occur.

**Most important symptoms/effects, acute and delayed** Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Severe eye irritation.

**Indication of immediate medical attention and special treatment needed** Provide general supportive measures and treat symptomatically. Keep victim warm. Keep victim under observation. Symptoms may be delayed.

**General information** Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance.

## 5. Fire-fighting measures

**Suitable extinguishing media** Water fog. Foam. Dry chemical powder. Carbon dioxide ($CO_2$).

**Unsuitable extinguishing media** Do not use water jet as an extinguisher, as this will spread the fire.

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

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

**Fire-fighting equipment/instructions** Use water spray to cool unopened containers.

**Specific methods** Use standard firefighting procedures and consider the hazards of other involved materials.

**General fire hazards** No unusual fire or explosion hazards noted.

## 6. Accidental release measures

**Personal precautions, protective equipment and emergency procedures** Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Use a NIOSH/MSHA approved respirator if there is a risk of exposure to dust/fume at levels exceeding the exposure limits. Wear appropriate protective equipment and clothing during clean-up. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Avoid inhalation of dust from the spilled material. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

**Methods and materials for containment and cleaning up** Stop the flow of material, if this is without risk. Dike far ahead of spill for later disposal. If sweeping of a contaminated area is necessary use a dust suppressant agent which does not react with the product. Collect dust using a vacuum cleaner equipped with HEPA filter. Following product recovery, flush area with water. Sweep up or vacuum up spillage and collect in suitable container for disposal. Minimize dust generation and accumulation. Prevent entry into waterways, sewer, basements or confined areas. For waste disposal, see section 13 of the SDS.

**Environmental precautions** Avoid discharge into drains, water courses or onto the ground.

## 7. Handling and storage

**Precautions for safe handling** Minimize dust generation and accumulation. Provide appropriate exhaust ventilation at places where dust is formed. Do not taste or swallow. Avoid breathing dust. Avoid contact with eyes.

Avoid prolonged exposure. Wear appropriate personal protective equipment. When using, do not eat, drink or smoke. Wash hands thoroughly after handling. Observe good industrial hygiene practices. Practice good housekeeping.

**Conditions for safe storage, including any incompatibilities** Store in original tightly closed container. Keep container tightly closed. Store in a well-ventilated place. Store away from incompatible materials (see Section 10 of the SDS).

## 8. Exposure controls/personal protection

**Occupational exposure limits**

**US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR1910.1000)**

| Components | Type | Value |
|---|---|---|
| Manganese EDTA, disodium salt (CAS 15375-84-5) | Ceiling | 5 mg/m3 |

**US. NIOSH: Pocket Guide to Chemical Hazards**

| Components | Type | Value | Form |
|---|---|---|---|
| Manganese EDTA, disodium salt (CAS 15375-84-5) | STEL | 3 mg/m3 | Fume. |
| | TWA | 1 mg/m3 | Fume. |

**US. AIHA Workplace Environmental Exposure Level (WEEL) Guides**

| Components | Type | Value | Form |
|---|---|---|---|
| Urea (CAS 57-13-6) | TWA | 10 mg/m3 | Total particulate. |

**Biological limit values** No biological exposure limits noted for the ingredient(s).

**Appropriate engineering controls** Ventilation should be sufficient to effectively remove and prevent buildup of any dusts or fumes that may be generated during handling or thermal processing. If engineering measures are not sufficient to maintain concentrations of dust particulates below the Occupational Exposure Limit (OEL), suitable respiratory protection must be worn. Provide eyewash station.

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

**Eye/face protection** Face shield is recommended. Wear safety glasses with side shields (or goggles). Use tight fitting goggles if dust is generated.

**Skin protection**

**Hand protection** Wear appropriate chemical resistant gloves.

**Other** Wear suitable protective clothing.

**Respiratory protection** Use a NIOSH/MSHA approved respirator if there is a risk of exposure to dust/fume at levels exceeding the exposure limits. Respiratory protection not required.

**Thermal hazards** Wear appropriate thermal protective clothing, when necessary.

**General hygiene considerations** Keep away from food and drink. 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** Powder.

**Physical state** Solid.

**Form** Solid. Powder.

**Color** Light blue

**Odor** Not available.

**Odor threshold** Not available.

**pH** Not available.

**Salt-Out / Crystallization Temp** Not available.

**Melting point/freezing point** Not available.

**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** | Not available. |
| **Vapor density** | Not available. |
| **Relative density** | Not available. |
| **Solubility(ies)** | |
| **Solubility (water)** | Not available. |
| **Partition coefficient (n-octanol/water)** | Not available. |
| **Auto-ignition temperature** | Not available. |
| **Decomposition temperature** | Not available. |
| **Viscosity** | Not available. |

## 10. Stability and reactivity

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|---|---|
| **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** | Hazardous polymerization does not occur. |
| **Conditions to avoid** | Contact with incompatible materials. Avoid dispersal of dust in the air (i.e., clearing dust surfaces with compressed air). |
| **Incompatible materials** | Strong oxidizing agents. |
| **Hazardous decomposition products** | No hazardous decomposition products are known. |

## 11. Toxicological information

**Information on likely routes of exposure**

| | |
|---|---|
| **Ingestion** | Harmful if swallowed. |
| **Inhalation** | Prolonged inhalation may be harmful. Inhalation of dusts may cause respiratory irritation. |
| **Skin contact** | No adverse effects due to skin contact are expected. |
| **Eye contact** | Causes serious eye irritation. Dust in the eyes will cause irritation. |
| **Symptoms related to the physical, chemical and toxicological characteristics** | Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Severe eye irritation. |

**Information on toxicological effects**

**Acute toxicity** Harmful if swallowed. Not known.

| **Product** | **Species** | **Test Results** |
|---|---|---|
| KALIX 30-10-10 | | |
| **Acute** | | |
| *Oral* | | |
| LD50 | Rabbit | 4696.8403 mg/kg estimated |
| | Rat | 13794.4219 mg/kg estimated |
| | Sheep | 52465.3164 mg/kg estimated |

| **Components** | **Species** | Urea (CAS 57-13-6) | |
|---|---|---|---|
| Potassium Nitrate (CAS 7757-79-1) | | **Acute** | |
| **Acute** | | *Oral* | |
| *Oral* | | LD50 | Rat |
| LD50 | Rabbit | | |

**Test Results**

1166 mg/kg

8471 mg/kg

| Components | Species | Test Results |
|---|---|---|
| | Sheep | 28500 mg/kg |

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

**Skin corrosion/irritation** Prolonged skin contact may cause temporary irritation.

**Serious eye damage/eye irritation** Causes serious eye irritation. Dust in the eyes will cause irritation.

**Respiratory or skin sensitization**

**Respiratory sensitization** Not available.

**Skin sensitization** This product is not expected to cause skin sensitization.

**Germ cell mutagenicity** No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

**Carcinogenicity** This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

**OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)**

Not listed.

**Reproductive toxicity** This product is not expected to cause reproductive or developmental effects.

**Specific target organ toxicity - single exposure** Not classified.

**Specific target organ toxicity - repeated exposure** Not classified.

**Aspiration hazard** Not available.

**Chronic effects** Prolonged inhalation may be harmful.

## 12. Ecological information

**Ecotoxicity** The 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 |
|---|---|---|---|
| KALIX 30-10-10 | | | |
| **Aquatic** | | | |
| Crustacea | EC50 | Daphnia | 9224.8994 mg/l, 48 hours estimated |
| Fish | LC50 | Fish | 2694.0879 mg/l, 96 hours estimated |

| Components | | Species | Test Results |
|---|---|---|---|
| Potassium Nitrate (CAS 7757-79-1) | | | |
| **Aquatic** | | | |
| Fish | LC50 | Bluegill (Lepomis macrochirus) | 1200 mg/l, 96 hours |
| *Acute* | | | |
| Fish | LC50 | Fish | 1378 - 3000 mg/l |
| Urea (CAS 57-13-6) | | | |
| **Aquatic** | | | |
| Crustacea | EC50 | Water flea (Daphnia magna) | 3910 mg/l, 48 hours |
| Fish | LC50 | Carp (Leuciscus idus melanotus) | > 10000 mg/l, 48 hours |
| | | Guppy (Poecilia reticulata) | 16200 - 18300 mg/l, 96 hours |
| | | Harlequinfish, red rasbora (Rasbora heteromorpha) | 12000 mg/l, 96 hours |
| | | Mozambique tilapia (Tilapia mossambica) | 590 - 730 mg/l, 96 hours |

* 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.

**Bioaccumulative potential** Not available.

**Partition coefficient n-octanol / water (log Kow)**

| | |
|---|---|
| Urea | -2.11 |

**Mobility in soil** No data 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 considerations

**Disposal instructions** Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Dispose of contents/container in accordance with local/regional/national/international regulations.

**Local disposal regulations** Dispose in accordance with all applicableregulations.

**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** This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

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

Not regulated.

**CERCLA Hazardous Substance List (40 CFR 302.4)**

Manganese EDTA, disodium salt (CAS 15375-84-5) Listed.

**SARA 304 Emergency release notification**

Not regulated.

**OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)**

Not listed.

**Superfund Amendments and Reauthorization Act of 1986 (SARA)**

**Hazard categories** Immediate Hazard - Yes
Delayed Hazard - No
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - No

**SARA 302 Extremely hazardous substance**

Not listed.

**SARA 311/312 Hazardous chemical** No

**SARA 313 (TRI reporting)**

| Chemical name | CAS number | % by wt. |
|---|---|---|
| Potassium Nitrate | 7757-79-1 | 20 - < 30 |

**Other federal regulations**

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

Manganese EDTA, disodium salt (CAS 15375-84-5)

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

Not regulated.

**Safe Drinking Water Act (SDWA)** Not regulated.

**US state regulations**

**US. Massachusetts RTK - Substance List**

Potassium Nitrate (CAS 7757-79-1)

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

Manganese EDTA, disodium salt (CAS 15375-84-5)
Potassium Nitrate (CAS 7757-79-1)

**US. Pennsylvania Worker and Community Right-to-Know Law**

Potassium Nitrate (CAS 7757-79-1)

**US. Rhode Island RTK**

Manganese EDTA, disodium salt (CAS 15375-84-5)
Potassium Nitrate (CAS 7757-79-1)

**US. California Proposition 65**

WARNING: This product contains a chemical known to the State of California to cause cancer and birth defects or other reproductive harm.

## 16. Other information, including date of preparation or last revision

| | |
|---|---|
| **Issue date** | 1-28-2019 |
| **Version #** | 01 |
| **Disclaimer** | The information provided in this Safety Data Sheet is correct to the best of Manufacturer's knowledge, information and belief at the date of its publication; however, it is provided only as a guidance for safe handling, use, processing, storage, transportation, disposal and release of the Product. No warranties of any kind, either expressed or implied, including warranties of merchantability or fitness for a particular purpose, are made with respect to the Product or the information provided herein, or that the Product or information herein may be used without infringing the intellectual property rights of others. The information provided in this Safety Data Sheet relates only to the specific Product designated and may not be valid if the Product is used in combination with other materials or in any other process, unless specified herein. The user assumes all risk and liability for loss, injury, damage or expense due to any use, handling, storage or disposal of the Product, and Manufacturer recommends that the user conducts its owns tests of the Product to determine suitability of the Product for user's particular use. |