



TETRA Technologies, Inc.

Material Safety Data Sheet

This MSDS Sheet complies with the style format specified by ANSI Z400.1-1993

SECTION 1: CHEMICAL PRODUCT - COMPANY IDENTIFICATION

TETRA Technologies, Inc.

25025 IH-45 North
The Woodlands, Texas 77380
(713) 367-1983
(800) 327-7817

(800) 424-9300 - CHEMTREC (24 Hours Emergency Response)

SUBSTANCE: Potassium Chloride

TRADE NAME/SYNONYM: Potassium Chloride Solid

CHEMICAL FAMILY: Inorganic Salt

MSDS CREATION DATE: 05 FEB 96

MSDS REVISION DATE: 11 APR 96

SECTION 2: COMPOSITION, INFORMATION ON INGREDIENTS

COMPONENT: Potassium Chloride

CAS NUMBER: 7447-40-7

RTECS NUMBER: TS8050000

PERCENTAGE: > 98%

PROBABLE CONTAMINANTS: Sodium Chloride, Magnesium Chloride

SECTION 3: HAZARDS IDENTIFICATION

NFPA RATINGS: (SCALE 0-4): HEALTH=1, FIRE=0, REACTIVITY=0

EMERGENCY OVERVIEW: Odorless, colorless to white crystals or granular powder with a strong saline taste. Avoid breathing dust. Avoid contact with eyes, skin and clothing. Keep container tightly closed. Wash thoroughly after handling. Use only with adequate ventilation.

POTENTIAL HEALTH EFFECTS:

INHALATION:

Short Term Effects: May cause irritation.

Long Term Effects: No information available.

SKIN CONTACT:

Short Term Effects: May cause mild irritation.

Long Term Effects: No information available.

EYE CONTACT:



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Short Term Effects: May cause irritation.

Long Term Effects: No information available.

INGESTION:

Short Term Effects: May cause fever, vomiting, digestive disorders, frequent urination, difficulty swallowing, low blood pressure, irregular heartbeat, dizziness, numbness, kidney damage, paralysis and convulsions.

Long Term Effects: May cause effects as reported in short term exposure. Additional effects may include rash.

CARCINOGEN STATUS:

OSHA: No **NTP:** No **IARC:** No

SECTION 4: FIRST AID MEASURES

INHALATION:

Remove from exposure area to fresh air immediately. Perform artificial respiration if necessary. Keep person warm and at rest. Treat symptomatically and supportively. Get medical attention immediately.

SKIN CONTACT:

Remove contaminated clothing and shoes immediately. Wash affected area with soap or mild detergent and large amounts of water until no evidence of chemical remains (at least 15-20 minutes). Get medical attention immediately.

EYE CONTACT:

Wash eyes immediately with large amounts of water or normal saline solution, occasionally lifting upper and lower lids until no evidence of chemical remains (approximately 15-20 minutes). Get medical attention immediately.

INGESTION:

If vomiting occurs, keep head lower than hips to help prevent aspiration. Treat symptomatically and supportively. Get medical attention if needed.

NOTE TO PHYSICIAN:

No specific antidote. Treat symptomatically and supportively.

SECTION 5: FIRE FIGHTING MEASURES

FIRE AND EXPLOSION HAZARD:

Negligible fire hazard when exposed to heat or flame.

EXTINGUISHING MEDIA:

Extinguish using agent suitable for type of surrounding fire.

FIREFIGHTING:



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No acute hazard. Move container from fire area if possible. Avoid breathing vapors or dusts; keep upwind.

HAZARDOUS COMBUSTION PRODUCTS:

Thermal decomposition products may include toxic and corrosive fumes of chlorine, and potassium oxide.

SECTION 6: ACCIDENTAL RELEASE MEASURES

OCCUPATIONAL SPILL:

Sweep up and place in suitable (fiberboard) containers for reclamation or later disposal.

SECTION 7: HANDLING AND STORAGE

Observe all federal, state, and local regulations when storing this substance. Store away from incompatible substances.

SECTION 8: EXPOSURE CONTROLS, PERSONAL PROTECTION

EXPOSURE LIMITS:

No occupational exposure limits established by OSHA/ACGIH/NIOSH.

VENTILATION:

Provide local exhaust ventilation system.

EYE PROTECTION:

Employee must wear safety glasses with splash shields or safety goggles to prevent contact with this substance.

EMERGENCY WASH FACILITIES:

Where there is any possibility that an employee's eyes and/or skin may be exposed to this substance, the employer should provide an eye wash fountain and quick drench shower within the immediate work area for emergency use.

CLOTHING:

Employee must wear appropriate protective (impervious) clothing and equipment to prevent repeated or prolonged skin contact with this substance.

GLOVES:

Employee must wear appropriate protective gloves to prevent contact with this substance.

RESPIRATOR:

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The specific respirator selected must be based on contamination levels found in the work place and on the specific incident. They must not exceed the working limits of the respirator. They must also be jointly approved by the National Institute for Occupational Safety and Health and the Mine Safety and Health Administration (NIOSH-MSHA).

FOR FIREFIGHTING AND OTHER IMMEDIATELY DANGEROUS TO LIFE OR HEALTH CONDITIONS:

Any self-contained breathing apparatus that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode,

Any supplied-air respirator that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode in combination with an auxiliary self-contained breathing apparatus operated in pressure-demand or other positive-pressure mode.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

DESCRIPTION: Odorless, colorless to white crystals or granular powder with a strong saline taste.

MOLECULAR WEIGHT: 74.55

MOLECULAR FORMULA: KCl

BOILING POINT: 2,572° F (1,411° C)

MELTING POINT: 1,422° F (772° C)

SPECIFIC GRAVITY: 1.988 @ 25° C

WATER SOLUBILITY: 25.6 weight percent @ 20° C

pH: 5.4 - 8.6 @ 5% solution

SOLVENT SOLUBILITY: Soluble in glycerol, alkalis; slightly soluble in alcohol; insoluble in acetone.

SECTION 10: STABILITY AND REACTIVITY**REACTIVITY:**

Stable under normal temperatures and pressures.

CONDITIONS TO AVOID:

No reports found.

INCOMPATIBILITIES:

Strong Acids: May release toxic chloride gases.

Bromine Trifluoride: May react violently, possible explosion.

Steel: May be corrosive when wet.

Sulfuric Acid And Potassium Permanganate: Possible explosion.

HAZARDOUS DECOMPOSITION:

Thermal decomposition products may include toxic and corrosive fumes of chlorine, and potassium oxide.

POLYMERIZATION:



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Hazardous polymerization has not been reported to occur under normal temperatures and pressures.

SECTION 11: TOXICOLOGICAL INFORMATION

TOXICITY DATA:

Potassium Chloride:

LD₅₀: 2,600 mg/kg, oral, rat

LD₅₀: 142 mg/kg, intravenous, rat

LD₅₀: 660 mg/kg, intraperitoneal, rat

Mutagenic data - See Registry of Toxic Effects of Chemical Substances (RTECS) file.

CARCINOGEN STATUS: None.

LOCAL EFFECTS: No data available.

ACUTE TOXICITY LEVEL: Moderately toxic by ingestion.

TARGET EFFECTS: Poisoning may affect the heart.

INHALATION:

Acute Exposure: May cause irritation.

Chronic Exposure: Inhalation in potash mines and plants has been reported to result in lesions of the nasal septum due to potassium chloride.

SKIN CONTACT:

Acute Exposure: May cause slight irritation.

Chronic Exposure: No data available.

EYE CONTACT:

Acute Exposure: May cause irritation. Tested in rabbit eyes, application of 500 mg for 24 hours resulted in mild irritation. Concentrated solutions may cause a stinging sensation.

Chronic Exposure: No data available.

INGESTION:

Acute Exposure: May cause gastrointestinal irritation with nausea, vomiting, abdominal discomfort, and diarrhea.

Chronic Exposure: Repeated and prolonged ingestion of excessive amounts may cause effects as in acute exposure. Skin rashes have been reported rarely.

SECTION 12: ECOLOGICAL INFORMATION



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ENVIRONMENTAL IMPACT RATING (0-4): No data available.
ACUTE AQUATIC TOXICITY: No data available.
DEGRADABILITY: No data available.
LOG BIOCONCENTRATION FACTOR (BCF): No data available.
LOG OCTANOL/WATER PARTITION COEFFICIENT: No data available.

SECTION 13: DISPOSAL INFORMATION:

Observe all federal, state and local regulations when disposing of this substance.

SECTION 14: TRANSPORT INFORMATION

DOT Shipping Name-ID Number: Non-regulated

SECTION 15: REGULATORY INFORMATION

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| TSCA STATUS: | Yes |
| DSL STATUS: | Yes |
| EINECS STATUS: | Yes |
| 40 CFR 302.4 CERCLA SECTION 103: | No |
| 40 CFR 355.30 SARA SECTION 302: | No |
| 40 CFR 355.40 SARA SECTION 304: | No |
| 40 CFR 372.65 SARA SECTION 313: | No |
| 29 CFR 1910.119 OSHA Process Safety: | No |
| California Proposition 65: | No |
| 40 CFR 370.21 SARA HAZARD CATEGORIES, SARA SECTIONS 311/312 | |
| ACUTE HAZARD: | Yes |
| CHRONIC HAZARD: | No |
| FIRE HAZARD: | No |
| REACTIVITY HAZARD: | No |
| SUDDEN RELEASE HAZARD: | No |



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SECTION 16: OTHER INFORMATION

Individuals handling this product should be informed of the recommended safety precautions and should have access to this information.

This information relates to the specific material designated and may not be valid for such material used in combination with any other materials or in any other processes. Such information is to the best of our knowledge and belief, accurate and reliable as of the date compiled. However, no representation, warranty or guarantee is made as to its accuracy, reliability, or completeness. It is the user's responsibility to satisfy themselves as to the suitability and completeness of such information for their own particular use. We do not accept liability for any loss or damage that may occur from the use of this information nor do we offer warranty against patent infringement.

TETRA reserves the right to refuse shipment of this material to any consumer who fails to demonstrate the ability to consistently handle and use it safely and in compliance with all applicable laws, rules and regulations. Such demonstration may require on-site inspection of any or all storage, processing, packaging, and other handling systems that come in contact with it.

Customers are responsible for compliance with local, state, and federal regulations that may be pertinent in the storage, application, and disposal of this product.