

POTASSIUM NITRATE

PNR

CAUTIONARY RESPONSE INFORMATION

Common Synonyms Dexol stump remover Potash nitrate Saltpeter	Solid, crystal or powder White Odorless
Very soluble.	
Wear full cover clothing, chemical safety glasses, and approved dust respirator. Notify local health and pollution control agencies. Protect water intakes.	
Fire	Nonflammable. Wear full protective clothing with self-contained breathing apparatus. Flood with large quantities of water. Strong oxidizer which may react spontaneously with low flash point organics or reducing agents. Increases flammability of combustible materials.
Exposure	CALL FOR MEDICAL AID. DUST Move victim to fresh air. SOLID Mildly irritating to skin, eyes and mucous membranes. Remove contaminated clothing and shoes. Flush affected areas with water. IF IN EYES, hold eyelids open and flush with plenty of water.
Water Pollution	Effect of low concentrations on aquatic life is unknown. May be dangerous if it enters water intakes. Notify local health and wildlife officials. Notify operators of nearby water intakes.

1. CORRECTIVE RESPONSE ACTIONS Stop discharge Dilute and disperse	2. CHEMICAL DESIGNATIONS 2.1 CG Compatibility Group: Not listed. 2.2 Formula: KNO ₃ 2.3 IMO/UN Designation: Currently not available 2.4 DOT ID No.: 1486 2.5 CAS Registry No.: 7757-79-1 2.6 NAERG Guide No.: 140 2.7 Standard Industrial Trade Classification: 52352
3. HEALTH HAZARDS	
3.1 Personal Protective Equipment: Full cover clothing and chemical goggles. Use approved respirator to protect against dust. 3.2 Symptoms Following Exposure: Exposure can cause mild irritation of eyes, nose and throat. 3.3 Treatment of Exposure: Get medical attention. INHALATION: Remove to fresh air. EYES: Flush with water for at least 15 min., lifting lids occasionally. SKIN: Remove contaminated clothing and shoes. Flush with water. 3.4 TLV-TWA: Not listed. 3.5 TLV-STEL: Not listed. 3.6 TLV-Ceiling: Not listed. 3.7 Toxicity by Ingestion: Grade 2; oral rabbit LD ₅₀ = 1.66 g/kg 3.8 Toxicity by Inhalation: Currently not available. 3.9 Chronic Toxicity: Currently not available. 3.10 Vapor (Gas) Irritant Characteristics: Not pertinent. 3.11 Liquid or Solid Characteristics: No appreciable hazard. Practically harmless to the skin. 3.12 Odor Threshold: Odorless 3.13 IDLH Value: Not listed. 3.14 OSHA PEL-TWA: Not listed. 3.15 OSHA PEL-STEL: Not listed. 3.16 OSHA PEL-Ceiling: Not listed. 3.17 EPA AEGL: Not listed	

4. FIRE HAZARDS

- 4.1 **Flash Point:** Not flammable.
4.2 **Flammable Limits in Air:** Not pertinent.
4.3 **Fire Extinguishing Agents:** Flood with large quantity of water.
4.4 **Fire Extinguishing Agents Not to Be Used:** Not pertinent.
4.5 **Special Hazards of Combustion Products:** May produce toxic nitrogen oxides upon decomposition.
4.6 **Behavior in Fire:** Strong oxidizer which may react explosively when mixed with reducing agents. Mixture may detonate by heat or shock. Increases the flammability of any combustible material.
4.7 **Auto Ignition Temperature:** Not pertinent.
4.8 **Electrical Hazards:** Not listed.
4.9 **Burning Rate:** Not pertinent.
4.10 **Adiabatic Flame Temperature:** Not pertinent.
4.11 **Stoichiometric Air to Fuel Ratio:** Not pertinent.
4.12 **Flame Temperature:** Not pertinent.
4.13 **Combustion Molar Ratio (Reactant to Product):** Not pertinent.
4.14 **Minimum Oxygen Concentration for Combustion (MOCC):** Not listed

5. CHEMICAL REACTIVITY

- 5.1 **Reactivity with Water:** No reaction.
5.2 **Reactivity with Common Materials:** Incompatible with reducing agents, combustible materials, and heat. Can be explosive when mixed with reducing agents.
5.3 **Stability During Transport:** Stable.
5.4 **Neutralizing Agents for Acids and Caustics:** Not pertinent.
5.5 **Polymerization:** Will not polymerize.
5.6 **Inhibitor of Polymerization:** Not pertinent.

6. WATER POLLUTION

- 6.1 **Aquatic Toxicity:** Currently not available
6.2 **Waterfowl Toxicity:** Currently not available
6.3 **Biological Oxygen Demand (BOD):** Currently not available
6.4 **Food Chain Concentration Potential:** Currently not available
6.5 **GESAMP Hazard Profile:**
Bioaccumulation: 0
Damage to living resources: 0
Human Oral hazard: 1
Human Contact hazard: 0
Reduction of amenities: 0

7. SHIPPING INFORMATION

- 7.1 **Grades of Purity:** 99.99%; CP; technical.
7.2 **Storage Temperature:** Ambient.
7.3 **Inert Atmosphere:** No requirement.
7.4 **Venting:** Not listed.
7.5 **IMO Pollution Category:** Currently not available
7.6 **Ship Type:** Currently not available
7.7 **Barge Hull Type:** Currently not available

8. HAZARD CLASSIFICATIONS

- 8.1 **49 CFR Category:** Oxidizer
8.2 **49 CFR Class:** 5.1
8.3 **49 CFR Package Group:** III
8.4 **Marine Pollutant:** No
8.5 **NFPA Hazard Classification:**
- | Category | Classification |
|---------------------------|----------------|
| Health Hazard (Blue)..... | 0 |
| Flammability (Red)..... | 0 |
| Instability (Yellow)..... | 0 |
- 8.6 **EPA Reportable Quantity:** Not listed.
8.7 **EPA Pollution Category:** Not listed.
8.8 **RCRA Waste Number:** Not listed
8.9 **EPA FWPCA List:** Not listed

9. PHYSICAL & CHEMICAL PROPERTIES

- 9.1 **Physical State at 15° C and 1 atm:** Solid
9.2 **Molecular Weight:** 101.11
9.3 **Boiling Point at 1 atm:** 752°F = 400°C = 673°K (decomposes)
9.4 **Freezing Point:** 633.2°F = 334°C = 607°K
9.5 **Critical Temperature:** Currently not available
9.6 **Critical Pressure:** Currently not available
9.7 **Specific Gravity:** 2.109
9.8 **Liquid Surface Tension:** Currently not available
9.9 **Liquid Water Interfacial Tension:** Currently not available
9.10 **Vapor (Gas) Specific Gravity:** Currently not available
9.11 **Ratio of Specific Heats of Vapor (Gas):** Currently not available
9.12 **Latent Heat of Vaporization:** Currently not available
9.13 **Heat of Combustion:** Currently not available
9.14 **Heat of Decomposition:** Currently not available
9.15 **Heat of Solution:** Currently not available
9.16 **Heat of Polymerization:** Not pertinent.
9.17 **Heat of Fusion:** Currently not available
9.18 **Limiting Value:** Currently not available
9.19 **Reid Vapor Pressure:** Currently not available

NOTES

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9.20 SATURATED LIQUID DENSITY		9.21 LIQUID HEAT CAPACITY		9.22 LIQUID THERMAL CONDUCTIVITY		9.23 LIQUID VISCOSITY	
Temperature (degrees F)	Pounds per cubic foot	Temperature (degrees F)	British thermal unit per pound-F	Temperature (degrees F)	British thermal unit inch per hour-square foot-F	Temperature (degrees F)	Centipoise
	N O T P E R T I N E N T		N O T P E R T I N E N T		N O T P E R T I N E N T		N O T P E R T I N E N T

9.24 SOLUBILITY IN WATER		9.25 SATURATED VAPOR PRESSURE		9.26 SATURATED VAPOR DENSITY		9.27 IDEAL GAS HEAT CAPACITY	
Temperature (degrees F)	Pounds per 100 pounds of water	Temperature (degrees F)	Pounds per square inch	Temperature (degrees F)	Pounds per cubic foot	Temperature (degrees F)	British thermal unit per pound-F
32 212	13.300 246.000		N O T P E R T I N E N T		N O T P E R T I N E N T		N O T P E R T I N E N T