

AMMONIUM PERCHLORATE

AMP

CAUTIONARY RESPONSE INFORMATION

| | |
|---|---|
| Common Synonyms | Solid crystals White Odorless |
| | Sinks and mixes with water. |
| <p>Wear goggles and self-contained breathing apparatus. Keep people away. Isolate and remove discharged material. Notify local health and pollution control agencies. Protect water intakes.</p> | |
| Fire | May cause fire and explode on contact with combustibles. CONTAINERS MAY EXPLODE IN FIRE. POISONOUS GASES MAY BE PRODUCED IN FIRE. Wear goggles and self-contained breathing apparatus. Evacuate surrounding area. Combat large fires from protected location with unmanned hose holder or monitor nozzle. |
| Exposure | CALL FOR MEDICAL AID. SOLID Irritating to eyes and skin. Harmful if swallowed. Flush affected areas with plenty of water. IF IN EYES, hold eyelids open and flush with plenty of water. IF SWALLOWED and victim is CONSCIOUS, have victim drink water or milk. |
| 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. |

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| <p>1. CORRECTIVE RESPONSE ACTIONS Dilute and disperse Stop discharge</p> | <p>2. CHEMICAL DESIGNATIONS 2.1 CG Compatibility Group: Not listed 2.2 Formula: NH₄ClO₄ 2.3 IMO/UN Designation: 5.1/1442 2.4 DOT ID No.: 1442 2.5 CAS Registry No.: 7790-98-9 2.6 NAERG Guide No.: 143 2.7 Standard Industrial Trade Classification: 51481</p> |
| <p>3. HEALTH HAZARDS</p> <p>3.1 Personal Protective Equipment: Currently not available 3.2 Symptoms Following Exposure: Irritating to skin and mucous membranes. 3.3 Treatment of Exposure: Currently not available 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 rat LD₅₀ = 3500 mg/kg 3.8 Toxicity by Inhalation: Currently not available. 3.9 Chronic Toxicity: Not pertinent 3.10 Vapor (Gas) Irritant Characteristics: Not pertinent 3.11 Liquid or Solid Characteristics: Currently not available 3.12 Odor Threshold: Not pertinent 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</p> | |

4. FIRE HAZARDS

- 4.1 **Flash Point:**
Not flammable
- 4.2 **Flammable Limits in Air:** Not flammable
- 4.3 **Fire Extinguishing Agents:** Water flooding (from protected location)
- 4.4 **Fire Extinguishing Agents Not to Be Used:** Not pertinent
- 4.5 **Special Hazards of Combustion Products:** Toxic gases are produced in a fire.
- 4.6 **Behavior in Fire:** May explode when involved in fire or exposed to shock or friction.
- 4.7 **Auto Ignition Temperature:** Decomposes at 464°F
- 4.8 **Electrical Hazards:** Not pertinent
- 4.9 **Burning Rate:** Not flammable
- 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):** Currently not available
- 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:** No reaction
- 5.3 **Stability During Transport:** If contaminated with carbonaceous materials, can become an explosive which is sensitive to shock and friction. Readily detonates or explodes.
- 5.4 **Neutralizing Agents for Acids and Caustics:** Not pertinent
- 5.5 **Polymerization:** Not pertinent
- 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):** None
- 6.4 **Food Chain Concentration Potential:**
None
- 6.5 **GESAMP Hazard Profile:** Not listed

7. SHIPPING INFORMATION

- 7.1 **Grades of Purity:** Currently not available
- 7.2 **Storage Temperature:** Currently not available
- 7.3 **Inert Atmosphere:** Currently not available
- 7.4 **Venting:** Currently not available
- 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:** II
- 8.4 **Marine Pollutant:** No
- 8.5 **NFPA Hazard Classification:**

| | |
|---------------------------|----------------|
| Category | Classification |
| Health Hazard (Blue)..... | 1 |
| Flammability (Red)..... | 0 |
| Instability (Yellow)..... | 4 |
| Special (White)..... | OX |
- 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:** 117.49
- 9.3 **Boiling Point at 1 atm:** Not pertinent
- 9.4 **Freezing Point:** Not pertinent
- 9.5 **Critical Temperature:** Not pertinent
- 9.6 **Critical Pressure:** Not pertinent
- 9.7 **Specific Gravity:** 1.95 at 15°C (solid)
- 9.8 **Liquid Surface Tension:** Not pertinent
- 9.9 **Liquid Water Interfacial Tension:** Not pertinent
- 9.10 **Vapor (Gas) Specific Gravity:** Not pertinent
- 9.11 **Ratio of Specific Heats of Vapor (Gas):**
Not pertinent
- 9.12 **Latent Heat of Vaporization:** Not pertinent
- 9.13 **Heat of Combustion:** Not pertinent
- 9.14 **Heat of Decomposition:** Not pertinent
- 9.15 **Heat of Solution:** Not pertinent
- 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 |
| 34 | 12.560 | | N | | N | | N |
| 36 | 13.130 | | O | | O | | O |
| 38 | 13.690 | | T | | T | | T |
| 40 | 14.260 | | P | | P | | P |
| 42 | 14.830 | | E | | E | | E |
| 44 | 15.390 | | R | | R | | R |
| 46 | 15.960 | | T | | T | | T |
| 48 | 16.530 | | I | | I | | I |
| 50 | 17.090 | | N | | N | | N |
| 52 | 17.660 | | E | | E | | E |
| 54 | 18.230 | | N | | N | | N |
| 56 | 18.790 | | T | | T | | T |
| 58 | 19.360 | | E | | E | | E |
| 60 | 19.930 | | N | | N | | N |
| 62 | 20.490 | | T | | T | | T |
| 64 | 21.060 | | | | | | |
| 66 | 21.630 | | | | | | |
| 68 | 22.190 | | | | | | |
| 70 | 22.760 | | | | | | |
| 72 | 23.330 | | | | | | |
| 74 | 23.890 | | | | | | |
| 76 | 24.460 | | | | | | |
| 78 | 25.030 | | | | | | |
| 80 | 25.590 | | | | | | |
| 82 | 26.160 | | | | | | |
| 84 | 26.730 | | | | | | |