

# URANYL SULFATE

URS

CAUTIONARY RESPONSE INFORMATION				4. FIRE HAZARDS	7. SHIPPING INFORMATION
Common Synonyms Uranium sulfate Uranium sulfate trihydrate Uranyl sulfate trihydrate	Solid	Yellow	Odorless	<p>4.1 Flash Point: Not flammable</p> <p>4.2 Flammable Limits in Air: Not flammable</p> <p>4.3 Fire Extinguishing Agents: Not pertinent</p> <p>4.4 Fire Extinguishing Agents Not to Be Used: Not pertinent</p> <p>4.5 Special Hazards of Combustion Products: Currently not available</p> <p>4.6 Behavior in Fire: Currently not available</p> <p>4.7 Auto Ignition Temperature: Not pertinent</p> <p>4.8 Electrical Hazards: Not pertinent</p> <p>4.9 Burning Rate: Not pertinent</p> <p>4.10 Adiabatic Flame Temperature: Currently not available</p> <p>4.11 Stoichiometric Air to Fuel Ratio: Not pertinent</p> <p>4.12 Flame Temperature: Currently not available</p> <p>4.13 Combustion Molar Ratio (Reactant to Product): Not pertinent</p> <p>4.14 Minimum Oxygen Concentration for Combustion (MOCC): Not listed</p>	<p>7.1 Grades of Purity: Commercial; Pure</p> <p>7.2 Storage Temperature: Ambient</p> <p>7.3 Inert Atmosphere: No requirement</p> <p>7.4 Venting: Open</p> <p>7.5 IMO Pollution Category: Currently not available</p> <p>7.6 Ship Type: Currently not available</p> <p>7.7 Barge Hull Type: Currently not available</p>
Keep people away. Avoid contact with solid and dust. Notify local health and pollution control agencies. Protect water intakes.				8. HAZARD CLASSIFICATIONS	
Fire	Not flammable.				<p>8.1 49 CFR Category: Not listed</p> <p>8.2 49 CFR Class: Not pertinent</p> <p>8.3 49 CFR Package Group: Not listed</p> <p>8.4 Marine Pollutant: No</p> <p>8.5 NFPA Hazard Classification: Not listed</p> <p>8.6 EPA Reportable Quantity: Not listed</p> <p>8.7 EPA Pollution Category: Not listed</p> <p>8.8 RCRA Waste Number: Not listed</p> <p>8.9 EPA FWPCA List: Not listed</p>
Exposure	<p>CALL FOR MEDICAL AID. DUST Irritating to eyes, nose and throat. If inhaled will cause coughing or difficult breathing. If in eyes, hold eyelids open and flush with plenty of water. If breathing has stopped, give artificial respiration. If breathing is difficult, give oxygen.</p> <p>SOLID Irritating to skin and eyes. Harmful if swallowed. Remove contaminated clothing and shoes. 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 and have victim induce vomiting. IF SWALLOWED and victim is UNCONSCIOUS OR HAVING CONVULSIONS, do nothing except keep victim warm.</p>				9. PHYSICAL & CHEMICAL PROPERTIES
Water Pollution	<p>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.</p>				<p>9.1 Physical State at 15° C and 1 atm: Solid</p> <p>9.2 Molecular Weight: 420.2</p> <p>9.3 Boiling Point at 1 atm: Not pertinent (decomposes)</p> <p>9.4 Freezing Point: Not pertinent</p> <p>9.5 Critical Temperature: Not pertinent</p> <p>9.6 Critical Pressure: Not pertinent</p> <p>9.7 Specific Gravity: 3.28 at 20°C (solid)</p> <p>9.8 Liquid Surface Tension: Not pertinent</p> <p>9.9 Liquid Water Interfacial Tension: Not pertinent</p> <p>9.10 Vapor (Gas) Specific Gravity: Not pertinent</p> <p>9.11 Ratio of Specific Heats of Vapor (Gas): Not pertinent</p> <p>9.12 Latent Heat of Vaporization: Not pertinent</p> <p>9.13 Heat of Combustion: Not pertinent</p> <p>9.14 Heat of Decomposition: Not pertinent</p> <p>9.15 Heat of Solution: Not pertinent</p> <p>9.16 Heat of Polymerization: Not pertinent</p> <p>9.17 Heat of Fusion: Currently not available</p> <p>9.18 Limiting Value: Currently not available</p> <p>9.19 Reid Vapor Pressure: Currently not available</p>
1. CORRECTIVE RESPONSE ACTIONS	<p>Dilute and disperse Stop discharge</p>				NOTES
<p>2. CHEMICAL DESIGNATIONS</p> <p>2.1 CG Compatibility Group: Not listed.</p> <p>2.2 Formula: UO<sub>2</sub>SO<sub>4</sub>·3H<sub>2</sub>O</p> <p>2.3 IMO/UN Designation: Not listed</p> <p>2.4 DOT ID No.: Not listed</p> <p>2.5 CAS Registry No.: Currently not available</p> <p>2.6 NAERG Guide No.: Not listed</p> <p>2.7 Standard Industrial Trade Classification: 52511</p> <p>3. HEALTH HAZARDS</p> <p>3.1 Personal Protective Equipment: Approved dust respirator; goggles or face shield; protective clothing</p> <p>3.2 Symptoms Following Exposure: Inhalation of dust may irritate nose and throat. Contact with eyes causes irritation.</p> <p>3.3 Treatment of Exposure: Get medical attention after all exposures to this compound. INGESTION: give large amounts of water; induce vomiting. EYES: flush with water for at least 15 min. SKIN: flush with water.</p> <p>3.4 TLV-TWA: 0.2 mg/m<sup>3</sup> (as uranium)</p> <p>3.5 TLV-STEL: 0.6 mg/m<sup>3</sup> (as uranium)</p> <p>3.6 TLV-Ceiling: Not listed.</p> <p>3.7 Toxicity by Ingestion: Grade 1; LD<sub>50</sub> = 5-15 g/kg</p> <p>3.8 Toxicity by Inhalation: Currently not available.</p> <p>3.9 Chronic Toxicity: Currently not available</p> <p>3.10 Vapor (Gas) Irritant Characteristics: Currently not available</p> <p>3.11 Liquid or Solid Characteristics: Currently not available</p> <p>3.12 Odor Threshold: Currently not available</p> <p>3.13IDLH Value: 10 mg U/m<sup>3</sup></p> <p>3.14 OSHA PEL-TWA: 0.05 mg/m<sup>3</sup> (as uranium)</p> <p>3.15 OSHA PEL-STEL: Not listed.</p> <p>3.16 OSHA PEL-Ceiling: Not listed.</p> <p>3.17 EPA A EGL: Not listed</p>					

# URANYL SULFATE

URS

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
	NOT PERTINENT		NOT PERTINENT		NOT PERTINENT		NOT PERTINENT

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 36 38 40 42 44 46 48 50 52 54 56 58 60 62 64 66 68 70 72 74 76 78 80 82 84	10.480 11.250 12.030 12.800 13.570 14.340 15.110 15.890 16.660 17.430 18.200 18.980 19.750 20.520 21.290 22.060 22.840 23.610 24.380 25.150 25.930 26.700 27.470 28.240 29.010 29.790		NOT PERTINENT		NOT PERTINENT		NOT PERTINENT