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4/24/08



GARDENA, CA  
NEW BRUNSWICK, NJ

# Material Safety Data Sheet

<b>NFPA</b>  	<b>HMIS</b>  <table border="1"> <tr> <td>Health Hazard</td> <td style="text-align: center;">2</td> </tr> <tr> <td>Fire Hazard</td> <td style="text-align: center;">1</td> </tr> <tr> <td>Reactivity</td> <td style="text-align: center;">1</td> </tr> </table>	Health Hazard	2	Fire Hazard	1	Reactivity	1	<b>Personal Protective Equipment</b>    See Section 15.
Health Hazard	2							
Fire Hazard	1							
Reactivity	1							

<b>Section 1. Chemical Product and Company Identification</b>		<b>Page Number: 1</b>
Common Name/ Trade Name	<b>Ammonium dichromate</b>	Catalog Number(s) YY022, A1178, A1179
Manufacturer	SPECTRUM LABORATORY PRODUCTS INC. 14422 S. SAN PEDRO STREET GARDENA, CA 90248	CAS# 7789-09-5
Commercial Name(s)	Not available.	RTECS HX7650000
Synonym	Ammonium Bichromate; Dichromic acid, diammonium salt	TSCA TSCA 8(b) inventory: Ammonium dichromate
Chemical Name	Ammonium Dichromate	CI# Not available.
Chemical Family	Not available.	<b>IN CASE OF EMERGENCY</b> <b>CHEMTREC (24hr) 800-424-9300</b>  CALL (310) 516-8000
Chemical Formula	(NH <sub>4</sub> ) <sub>2</sub> Cr <sub>2</sub> O <sub>7</sub>	
Supplier	SPECTRUM LABORATORY PRODUCTS INC. 14422 S. SAN PEDRO STREET GARDENA, CA 90248	

<b>Section 2. Composition and Information on Ingredients</b>					
		<i>Exposure Limits</i>			
Name	CAS #	TWA (mg/m <sup>3</sup> )	STEL (mg/m <sup>3</sup> )	CEIL (mg/m <sup>3</sup> )	% by Weight
1) Ammonium dichromate	7789-09-5	0.05			100
Toxicological Data on Ingredients	<b>Ammonium dichromate</b> LD50: Not available. LC50: Not available.				

<b>Section 3. Hazards Identification</b>	
Potential Acute Health Effects	Hazardous in case of skin contact (irritant), of eye contact (irritant), of ingestion, of inhalation. Slightly hazardous in case of skin contact (permeator). Prolonged exposure may result in skin burns and ulcerations. Over-exposure by inhalation may cause respiratory irritation. Severe over-exposure can result in death.
Potential Chronic Health Effects	Hazardous in case of skin contact (permeator). <b>CARCINOGENIC EFFECTS:</b> Classified A1 (Confirmed for human.) by ACGIH, 1 (Proven for human.) by IARC. <b>MUTAGENIC EFFECTS:</b> Mutagenic for bacteria and/or yeast. <b>TERATOGENIC EFFECTS:</b> Not available. <b>DEVELOPMENTAL TOXICITY:</b> Not available. The substance may be toxic to blood, kidneys, liver. Repeated or prolonged exposure to the substance can produce target organs damage. Repeated exposure to a highly toxic material may produce general deterioration of health by an accumulation in one or many human organs.

**Continued on Next Page**

**Section 4. First Aid Measures**

Eye Contact	Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. Get medical attention.
Skin Contact	In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Cover the irritated skin with an emollient. Cold water may be used. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention immediately.
Serious Skin Contact	Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek immediate medical attention.
Inhalation	If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.
Serious Inhalation	Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. <b>WARNING:</b> It may be hazardous to the person providing aid to give mouth-to-mouth resuscitation when the inhaled material is toxic, infectious or corrosive. Seek immediate medical attention.
Ingestion	If swallowed, do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.
Serious Ingestion	Not available.

**Section 5. Fire and Explosion Data**

Flammability of the Product	May be combustible at high temperature.
Auto-Ignition Temperature	190°C (374°F)
Flash Points	Not available.
Flammable Limits	Not available.
Products of Combustion	Some metallic oxides.
Fire Hazards in Presence of Various Substances	Slightly flammable to flammable in presence of heat. Non-flammable in presence of shocks.
Explosion Hazards in Presence of Various Substances	Risks of explosion of the product in presence of mechanical impact: Not available. Explosive in presence of open flames and sparks, of heat.
Fire Fighting Media and Instructions	Oxidizing material. Do not use water jet. Use flooding quantities of water. Avoid contact with organic materials.
Special Remarks on Fire Hazards	May ignite by friction with carbide. In contact with substances which are readily oxidized, these can react rapidly enough to cause ignition.
Special Remarks on Explosion Hazards	Hydrazine is decomposed explosively by chromates. With finely divided oxidizable substances, combustion can be violent. Closed containers readily rupture at decomposition temperature.

**Section 6. Accidental Release Measures**

Small Spill	Use appropriate tools to put the spilled solid in a convenient waste disposal container. If necessary: <b>Neutralize the residue with a dilute solution of sodium carbonate.</b>
Large Spill	Oxidizing material. Poisonous solid. Stop leak if without risk. Do not get water inside container. Avoid contact with a combustible material (wood, paper, oil, clothing...). Keep substance damp using water spray. Do not touch spilled material. Use water spray to reduce vapors. Prevent entry into sewers, basements or confined areas; dike if needed. Eliminate all ignition sources. Call for assistance on disposal. <b>Neutralize the residue with a dilute solution of sodium carbonate.</b> Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

**Continued on Next Page**

**Section 7. Handling and Storage**

Precautions	Keep locked up.. Keep away from heat. Keep away from sources of ignition. Keep away from combustible material.. Empty containers pose a fire risk, evaporate the residue under a fume hood. Ground all equipment containing material. Do not ingest. Do not breathe dust. Wear suitable protective clothing. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes. Keep away from incompatibles such as combustible materials, organic materials, acids, alkalis.
Storage	Keep container tightly closed. Keep container in a cool, well-ventilated area. Separate from acids, alkalies, reducing agents and combustibles. See NFPA 43A, Code for the Storage of Liquid and Solid Oxidizers. Do not store above 24°C (75.2°F).

**Section 8. Exposure Controls/Personal Protection**

Engineering Controls	Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.
Personal Protection	Splash goggles. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.
Personal Protection in Case of a Large Spill	Splash goggles. Full suit. Dust respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.
Exposure Limits	TWA: 0.05 (mg (Cr)/m <sup>3</sup> ) from ACGIH (TLV) [United States]  Consult local authorities for acceptable exposure limits.

**Section 9. Physical and Chemical Properties**

Physical state and appearance	Solid. (Crystals solid.)	Odor	Odorless.
Molecular Weight	252.1 g/mole	Taste	Not available.
pH (1% soln/water)	3.95 [Acidic.]	Color	Orange. Red.
Boiling Point	Not available.		
Melting Point	Not available.		
Critical Temperature	Not available.		
Specific Gravity	2.155 (Water = 1)		
Vapor Pressure	Not applicable.		
Vapor Density	8.7(Air = 1)		
Volatility	Not available.		
Odor Threshold	Not available.		
Water/Oil Dist. Coeff.	Not available.		
Ionicity (in Water)	Not available.		
Dispersion Properties	See solubility in water.		
Solubility	Soluble in cold water, hot water. Insoluble in acetone. Soluble in alcohol.		

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**Section 10. Stability and Reactivity Data**

Stability	Unstable.
Instability Temperature	Not available.
Conditions of Instability	Excess heat and incompatible materials
Incompatibility with various substances	Reactive with combustible materials, organic materials, acids, alkalis. Slightly reactive to reactive with moisture.
Corrosivity	Not available.
Special Remarks on Reactivity	It is an oxidizing material and combustible solid. Decomposes vigorously with luminescence around 200 C. Decomposes at about 180 C. Decomposition becomes self-sustaining at about 225 C with swelling and evolution of heat and nitrogen. It is incompatible with combustible, organic, or other readily oxidizable materials: Paper, wood, sulfur, aluminum, plastics, acids, bases, potassium chlorate, sodium nitrite, alcohols, ethylene glycol, water.
Special Remarks on Corrosivity	Not available.
Polymerization	Will not occur.

**Section 11. Toxicological Information**

Routes of Entry	Absorbed through skin. Inhalation. Ingestion.
Toxicity to Animals	LD50: Not available. LC50: Not available.
Chronic Effects on Humans	<b>CARCINOGENIC EFFECTS:</b> Classified A1 (Confirmed for human.) by ACGIH, 1 (Proven for human.) by IARC. <b>MUTAGENIC EFFECTS:</b> Mutagenic for bacteria and/or yeast. May cause damage to the following organs: blood, kidneys, liver.
Other Toxic Effects on Humans	Hazardous in case of skin contact (irritant), of ingestion, of inhalation. Slightly hazardous in case of skin contact (permeator).
Special Remarks on Toxicity to Animals	Lowest Published Lethal Dose LDL [Child] - Route: Oral; Dose: 99 mg/kg
Special Remarks on Chronic Effects on Humans	Not available.
Special Remarks on other Toxic Effects on Humans	Acute Potential Health Effects: Skin: Causes skin irritation. May be absorbed through skin Eyes: Causes eye irritation. Inhalation: Causes respiratory tract and mucous membrane irritation. It may destructive to the tissues of the mucous membranes Ingestion: May cause intense gastrointestinal tract irritation. May affect blood, Kidneys (urinary system), and liver. Symptoms of acute poisoning may include ulceration and corrosion, epigastric pain, nausea, vomiting, diarrhea, vertigo, fever, muscle cramps, hemorrhagic diathesis, toxic nephritis, renal failure, intravascular hemolysis, circulatory collapse, liver damage, peripheral vascular collapse, acute multisystem shock and coma, and even death depending on the dose. Chronic Potential Health Effects: Chronic poisoning usually results from inhalation or skin contact. May affect the blood, kidneys and liver. Signs and symptoms may include lacrimation, dermatitis, penetrating ulcers, perforation of nasal septum, pulmonary edema, congestion, chronic rhinitis, polyps of the upper respiratory tract, inflammation of the lung, emphysema, tracheitis, bronchitis, pharyngitis, adhesions of the diaphragm, inflammation of larynx, conjunctivitis, loss of appetite, nausea, vomiting, inflammation of liver or even acute hepatitis with jaundice, respiratory irritations, leukocytosis, leukopenia, monocytosis, and eosinophilia.

**Section 12. Ecological Information**

Ecotoxicity	Not available.
BOD5 and COD	Not available.
Products of Biodegradation	Possibly hazardous short/long term degradation products are to be expected.
Toxicity of the Products of Biodegradation	The products of degradation are less toxic than the product itself.
Special Remarks on the Products of Biodegradation	Not available.

**Section 13. Disposal Considerations**

Waste Disposal	Waste must be disposed of in accordance with federal, state and local environmental control regulations.
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**Section 14. Transport Information**

DOT Classification	CLASS 5.1: Oxidizing material.
Identification	: Ammonium dichromate UNNA: 1439 PG: II
Special Provisions for Transport	Not available.
DOT (Pictograms)	

**Section 15. Other Regulatory Information and Pictograms**

Federal and State Regulations	<p>California prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer, birth defects or other reproductive harm, which would require a warning under the statute: Ammonium dichromate</p> <p>California prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer which would require a warning under the statute: Ammonium dichromate</p> <p>Connecticut hazardous material survey.: Ammonium dichromate</p> <p>Illinois chemical safety act: Ammonium dichromate</p> <p>New York release reporting list: Ammonium dichromate</p> <p>Rhode Island RTK hazardous substances: Ammonium dichromate</p> <p>Pennsylvania RTK: Ammonium dichromate</p> <p>Massachusetts RTK: Ammonium dichromate</p> <p>Massachusetts spill list: Ammonium dichromate</p> <p>New Jersey: Ammonium dichromate</p> <p>New Jersey spill list: Ammonium dichromate</p> <p>Louisiana spill reporting: Ammonium dichromate</p> <p>California Director's List of Hazardous Substances: Ammonium dichromate</p> <p>TSCA 8(b) inventory: Ammonium dichromate</p> <p>CERCLA: Hazardous substances.: Ammonium dichromate: 10 lbs. (4.536 kg)</p>
California Proposition 65 Warnings	California prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer which would require a warning under the statute: Ammonium dichromate
Other Regulations	<p>OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).</p> <p>EINECS: This product is on the European Inventory of Existing Commercial Chemical Substances.</p> <p>Inventory lists for China, Japan, Korea, and Philippines.</p>

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**Other Classifications**

<b>WHMIS (Canada)</b>	CLASS C: Oxidizing material. CLASS D-1A: Material causing immediate and serious toxic effects (VERY TOXIC). CLASS D-2A: Material causing other toxic effects (VERY TOXIC).																		
<b>DSCL (EEC)</b>	<table border="0"> <tr> <td>R8- Contact with combustible material may cause fire.</td> <td>S2- Keep out of the reach of children.</td> </tr> <tr> <td>R21- Harmful in contact with skin.</td> <td>S46- If swallowed, seek medical advice immediately and show this container or label.</td> </tr> <tr> <td>R25- Toxic if swallowed.</td> <td>S53- Avoid exposure - obtain special instructions before use.</td> </tr> <tr> <td>R26- Very toxic by inhalation.</td> <td></td> </tr> <tr> <td>R37/38- Irritating to respiratory system and skin.</td> <td></td> </tr> <tr> <td>R41- Risk of serious damage to eyes.</td> <td></td> </tr> <tr> <td>R43- May cause sensitization by skin contact.</td> <td></td> </tr> <tr> <td>R45- May cause cancer.</td> <td></td> </tr> <tr> <td>R46- May cause heritable genetic damage.</td> <td></td> </tr> </table>	R8- Contact with combustible material may cause fire.	S2- Keep out of the reach of children.	R21- Harmful in contact with skin.	S46- If swallowed, seek medical advice immediately and show this container or label.	R25- Toxic if swallowed.	S53- Avoid exposure - obtain special instructions before use.	R26- Very toxic by inhalation.		R37/38- Irritating to respiratory system and skin.		R41- Risk of serious damage to eyes.		R43- May cause sensitization by skin contact.		R45- May cause cancer.		R46- May cause heritable genetic damage.	
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**HMIS (U.S.A.)**

Health Hazard	2
Fire Hazard	1
Reactivity	1
Personal Protection	(E)

**National Fire Protection Association (U.S.A.)**

Health  Flammability  
Reactivity  
Specific hazard

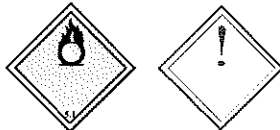
**WHMIS (Canada) (Pictograms)**



**DSCL (Europe) (Pictograms)**



**TDG (Canada) (Pictograms)**



**ADR (Europe) (Pictograms)**



**Protective Equipment**



Gloves.



Lab coat.



Dust respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate.



Splash goggles.

**Section 16. Other Information**

MSDS Code A5050

References Not available.

Other Special Considerations Not available.

Validated by Sonia Owen on 8/11/2006.

Verified by Sonia Owen.

Printed 9/8/2006.

CALL (310) 516-8000

**Notice to Reader**

*All chemicals may pose unknown hazards and should be used with caution. This Material Safety Data Sheet (MSDS) applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this MSDS. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this MSDS is based on technical data judged to be reliable, Spectrum Quality Products, Inc. assumes no responsibility for the completeness or accuracy of the information contained herein.*