





## REAGENT M.S.D.S

### Section 1 - Product and Company Identification ACETONE

**Product Identification:** ACETONE

**Date of MSDS:** 12/03/1990 **Technical Review Date:** 03/04/1993

**FSC:** 6810 **NIIN:** LIIN: 00N040268

**Submitter:** N EN

**Status Code:** C

**MFN:** 01

**Article:** N

**Kit Part:** N

#### Manufacturer's Information

**Manufacturer's Name:** SYSTEMS SCIENTIFIC  
LABORATORIES INC

**Manufacturer's Address1:** 1295 BOULAVARD WAY

**Manufacturer's Address2:** WALNUT CREEK, CA  
94595

**Manufacturer's Country:** US

**General Information Telephone:** 415-937-6748

**Emergency Telephone:** 415-937-6748

**Emergency Telephone:** 415-937-6748

**MSDS Preparer's Name:** JAMES P. GILLEENY

**Proprietary:** N

**Reviewed:** N

**Published:** Y

**CAGE:** 3R697

**Special Project Code:** N

#### Contractor Information

**Contractor's Name:** SYSTEMS SCIENTIFIC  
LABORATORIES INC

**Contractor's Address1:** 1295 BOULAVARD WAY

**Contractor's Address2:** WALNUT CREEK, CA 94595

**Contractor's Telephone:** 415-937-6748

**Contractor's CAGE:** 3R697

### Section 2 - Composition/Information on Ingredients ACETONE

**Ingredient Name:** ACETONE (SARA III)

**Ingredient CAS Number:** 67-64-1 **Ingredient CAS  
Code:** M

**RTECS Number:** AL3150000 **RTECS Code:** M

**=WT: =WT Code:**

**=Volume: =Volume Code:**

**>WT: >WT Code:**

**>Volume: >Volume Code:**



**<WT: <WT Code:**

**<Volume: <Volume Code:**

**% Low WT: % Low WT Code:**

**% High WT: % High WT Code:**

**% Low Volume: % Low Volume Code:**

**% High Volume: % High Volume Code:**

**% Text: N/K**

**% Enviromental Weight:**

**Other REC Limits: N/K**

**OSHA PEL: 1000PPM OSHA PEL Code: M**

**OSHA STEL: OSHA STEL Code:**

**ACGIH TLV: 750PPM/1000STEL;9293 ACGIH TLV Code: M**

**ACGIH STEL: N/P ACGIH STEL Code:**

**EPA Reporting Quantity: 5000 LBS**

**DOT Reporting Quantity: 5000 LBS**

**Ozone Depleting Chemical: N**

### **Section 3 - Hazards Identification, Including Emergency Overview ACETONE**

**Health Hazards Acute & Chronic:** CAUSES EYE IRRITATION. AVOID REPEATED SKIN CONTACT. AMMONIA IS A RESPIRATORY AND EYE IRRITANT. AMMONIUM FLUORIDE IS HIGHLY TOXIC & CAUSES IRRITATION TO EYES, SKIN AND RESPIRATORY TRACT.

**Signs & Symptoms of Overexposure:**  
SEE HEALTH HAZARDS.

**Medical Conditions Aggravated by Exposure:**  
NONE SPECIFIED BY MANUFACTURER.

**LD50 LC50 Mixture:** NONE SPECIFIED BY MANUFACTURER.

**Route of Entry Indicators:**

**Inhalation:** YES

**Skin:** NO

**Ingestion:** YES

**Carcinogenicity Indicators**

**NTP:** NO

**IARC:** NO

**OSHA:** NO

**Carcinogenicity Explanation:** NOT RELEVANT.



#### Section 4 - First Aid Measures ACETONE

**First Aid:**

EYE: FLUSH WITH WATER FOR AT LEAST 15 MINUTES. CALL MD. INHAL: MOVE TO FRESH AIR. SUPPORT BREATHING (GIVE O<sub>2</sub>/ARTF RESP) (FP N). INGEST: CALL MD IMMEDIATELY (FP N). SKIN: FLUSH WITH COPIOUS AMOUNTS OF WATER FOR AT LEAST 15 MINUTES. CALL MD (FPN).

#### Section 5 - Fire Fighting Measures ACETONE

**Fire Fighting Procedures:**

WEAR NIOSH/MSHA APPROVED SCBA & FULL PROTECTIVE EQUIPMENT (FP N).

**Unusual Fire or Explosion Hazard:**

NONE SPECIFIED BY MANUFACTURER.

**Extinguishing Media:**

CO<sub>2</sub>, DRY CHEMICAL, ALCOHOL FOAM.

**Flash Point:** Flash Point Text: 0F, -18C

**Autoignition Temperature:**

Autoignition Temperature Text: N/A

Lower Limit(s): 12.8%

Upper Limit(s): 2.6%

#### Section 6 - Accidental Release Measures ACETONE

**Spill Release Procedures:**

COLLECT IN SUITABLE CONTAINER.

#### Section 7 - Handling and Storage ACETONE

**Handling and Storage Precautions:****Other Precautions:**

#### Section 8 - Exposure Controls & Personal Protection ACETONE

**Respiratory Protection:**

NIOSH/MSHA APPROVED DUST MASK.

**Ventilation:**

LOCAL AND MECHANICAL (GENERAL) EXHAUST ACCEPTABLE.

**Protective Gloves:**

RUBBER GLOVES.

**Eye Protection:** CHEMICAL WORKERS GOGGLES (FP N).

**Other Protective Equipment:** NONE SPECIFIED BY MANUFACTURER.

**Work Hygienic Practices:** NONE SPECIFIED BY MANUFACTURER.

**Supplemental Health & Safety Information:** NONE SPECIFIED BY MANUFACTURER.

#### Section 9 - Physical & Chemical Properties ACETONE

**HCC:**



**NRC/State License Number:**  
**Net Property Weight for Ammo:**  
**Boiling Point: Boiling Point Text:** 133F,56C  
**Melting/Freezing Point: Melting/Freezing Text:** N/K  
**Decomposition Point: Decomposition Text:** N/K  
**Vapor Pressure:** 186 **Vapor Density:** 2  
**Percent Volatile Organic Content:**  
**Specific Gravity:** 0.79  
**Volatile Organic Content Pounds per Gallon:**  
**pH:** N/K  
**Volatile Organic Content Grams per Liter:**  
**Viscosity:** N/P  
**Evaporation Weight and Reference:** 14.5 (BUTYL ACETATE=1)  
**Solubility in Water:** COMPLETE  
**Appearance and Odor:** COLORLESS LIQUID  
**Percent Volatiles by Volume:** 100  
**Corrosion Rate:** N/K

**Section 10 - Stability & Reactivity Data**  
**ACETONE**

**Stability Indicator:** YES  
**Materials to Avoid:**  
CONTACT WITH ACID FORMS HYDROGEN FLUORIDE. CONTACT WITH CAUSTIC LIBERATES AMMONIA.  
**Stability Condition to Avoid:**  
NONE SPECIFIED BY MANUFACTURER.  
**Hazardous Decomposition Products:**  
ON HEATING, LIBERATES AMMONIA AND HYDROGEN FLUORIDE.  
**Hazardous Polymerization Indicator:** NO  
**Conditions to Avoid Polymerization:**  
NOT RELEVANT.

**Section 11 - Toxicological Information**  
**ACETONE**

**Toxicological Information:**  
N/P

**Section 12 - Ecological Information**  
**ACETONE**

**Ecological Information:**  
N/P

**Section 13 - Disposal Considerations**  
**ACETONE**

**Waste Disposal Methods:**  
DISPOSE OF BY MEANS AS TO COMPLY WITH ALL LOCAL, STATE AND FEDERAL REGULATIONS. CONTACT AN APPROVED AND LICENSED DISPOSAL AGENCY.

**Section 14 - MSDS Transport Information**  
**ACETONE**

**Transport Information:**  
N/P



**Section 15 - Regulatory Information**  
**ACETONE**

**SARA Title III Information:**

N/P

**Federal Regulatory Information:**

N/P

**State Regulatory Information:**

N/P

**Section 16 - Other Information**  
**ACETONE**

**Other Information:**

N/P

**HAZCOM Label Information**

**Product Identification:** ACETONE

**CAGE:** 3R697

**Assigned Individual:** N

**Company Name:** SYSTEMS SCIENTIFIC LABORATORIES INC

**Company PO Box:**

**Company Street Address1:** 1295 BOULAVARD WAY

**Company Street Address2:** WALNUT CREEK, CA 94595 US

**Health Emergency Telephone:** 415-937-6748

**Label Required Indicator:** Y

**Date Label Reviewed:** 03/04/1993

**Status Code:** C

**Manufacturer's Label Number:**

**Date of Label:** 03/04/1993

**Year Procured:** N/K

**Organization Code:** G

**Chronic Hazard Indicator:** N

**Eye Protection Indicator:** YES

**Skin Protection Indicator:** YES

**Respiratory Protection Indicator:** YES

**Signal Word:** DANGER

**Health Hazard:** None

**Contact Hazard:** Slight

**Fire Hazard:** Severe

**Reactivity Hazard:** None

**Section 1 - Product and Company Identification**  
**AMMONIUM MOLYBDATE, 12215**

**Product Identification:** AMMONIUM MOLYBDATE, 12215

**Date of MSDS:** 01/27/1989 **Technical Review Date:** 02/03/1995

**FSC:** 6810 **NIIN:** LIIN: 00N057008

**Submitter:** N EN

**Status Code:** C

**MFN:** 01

**Article:** N

**Kit Part:** N



**Manufacturer's Information**

**Manufacturer's Name:** JOHNSON MATTHEY CATALOG CO  
**Manufacturer's Address1:** 30 BOND ST  
**Manufacturer's Address2:** WARD HILL, MA 01835-0747  
**Manufacturer's Country:** US  
**General Information Telephone:** 508-521-6300  
**Emergency Telephone:** 800-424-9300 (CHEMTREC)  
**Emergency Telephone:** 800-424-9300 (CHEMTREC)  
**MSDS Preparer's Name:** N/P  
**Proprietary:** N  
**Reviewed:** N  
**Published:** Y  
**CAGE:** 0JVJ1  
**Special Project Code:** N

**Contractor Information**

**Contractor's Name:** JOHNSON MATTHEY CATALOG CO INC ALFA AESAR  
**Contractor's Address1:** 30 BOND ST  
**Contractor's Address2:** WARD HILL, MA 01835-0747  
**Contractor's Telephone:** 978-521-6300  
**Contractor's CAGE:** 0JVJ1

**Section 2 - Compositon/Information on Ingredients  
AMMONIUM MOLYBDATE, 12215**

**Ingredient Name:** AMMONIUM MOLYBDATE

**Ingredient CAS Number:** 27546-07-2 **Ingredient CAS Code:** M

**RTECS Number:** **RTECS Code:** X

**=WT: =WT Code:**

**=Volume: =Volume Code:**

**>WT: >WT Code:**

**>Volume: >Volume Code:**

**<WT: <WT Code:**

**<Volume: <Volume Code:**

**% Low WT: % Low WT Code:**

**% High WT: % High WT Code:**

**% Low Volume: % Low Volume Code:**

**% High Volume: % High Volume Code:**

**% Text:** 100

**% Enviromental Weight:**

**Other REC Limits:** N/K



**OSHA PEL:** 5 MG/M3 (MFR) **OSHA PEL Code:** M

**OSHA STEL:** **OSHA STEL Code:**

**ACGIH TLV:** 5 MG/M3 (MFR) **ACGIH TLV Code:** M

**ACGIH STEL:** N/P **ACGIH STEL Code:**

**EPA Reporting Quantity:**

**DOT Reporting Quantity:**

**Ozone Depleting Chemical:**

### **Section 3 - Hazards Identification, Including Emergency Overview AMMONIUM MOLYBDATE, 12215**

**Health Hazards Acute & Chronic:** ACUTE: INGESTION: MAY BE HARMFUL; EFFECTS NOT KNOWN. SKIN/EYES/INHALATION: MAY CAUSE IRRITATION. CHRONIC: INGESTION: LARGE DOSES OF A SIMILAR COMPOUND HAS PRODUCED KIDNEY DAMAGE IN EXPERIMENTAL ANIMAL S. SKIN/EYES/INHALATION: NONE KNOWN.

**Signs & Symptoms of Overexposure:**  
SEE HEALTH HAZARDS.

**Medical Conditions Aggravated by Exposure:**  
NONE KNOWN.

**LD50 LC50 Mixture:** NONE SPECIFIED BY MANUFACTURER.

**Route of Entry Indicators:**

**Inhalation:** NO

**Skin:** NO

**Ingestion:** YES

**Carcinogenicity Indicators**

**NTP:** NO

**IARC:** NO

**OSHA:** NO

**Carcinogenicity Explanation:** NOT RELEVANT

### **Section 4 - First Aid Measures AMMONIUM MOLYBDATE, 12215**

**First Aid:**

INHAL: REMOVE TO FRESH AIR. SUPPORT BREATHING (GIVE OXYGEN/ARTIFICIAL RESPIRATION) (FP N). INGEST: OBTAIN MEDICAL ATTENTION. SKIN: REMOVE CONTAMINATED CLOTHING, FLOOD SKIN WITH LARGE AMOUNTS OF WATER. IF IRRITATION PERSISTS, SEEK MEDICAL ATTENTION. EYES: IMMEDIATELY FLUSH EYES, INCLUDING UNDER EYELIDS, WITH LARGE AMOUNTS OF WATER FOR AT LEAST 15 MINUTES. CALL MD.

### **Section 5 - Fire Fighting Measures AMMONIUM MOLYBDATE, 12215**

**Fire Fighting Procedures:**

USE NIOSH/MSHA APPROVED SCBA & FULL PROTECTIVE EQUIPMENT (FP N). IF WITHOUT RISK, REMOVE MATERIAL FROM FIRE AREA. COOL CONTAINER W/WATER FROM MAXIMUM DISTANCE.

**Unusual Fire or Explosion Hazard:**



NONE SPECIFIED BY MANUFACTURER.

**Extinguishing Media:**

USE WATER, CARBON DIOXIDE, DRY CHEMICAL EXTINGUISHING AGENTS, DRY SAND OR DRY GROUND DOLOMITE.

**Flash Point:** Flash Point Text: N/A

**Autoignition Temperature:**

Autoignition Temperature Text: N/A

Lower Limit(s): N/A

Upper Limit(s): N/A

**Section 6 - Accidental Release Measures  
AMMONIUM MOLYBDATE, 12215**

**Spill Release Procedures:**

WEARING FULL PROTECTIVE EQUIPMENT, COVER SPILL WITH DRY SAND OR VERMICULITE. MIX WELL AND CAREFULLY TRANSFER TO A CONTAINER.

**Section 7 - Handling and Storage  
AMMONIUM MOLYBDATE, 12215**

**Handling and Storage Precautions:**

**Other Precautions:**

**Section 8 - Exposure Controls & Personal Protection  
AMMONIUM MOLYBDATE, 12215**

**Respiratory Protection:**

NIOSH/MSHA APPROVED HIGH EFFICIENCY PARTICLE RESPIRATOR.

**Ventilation:**

LABORATORY FUME HOOD.

**Protective Gloves:**

RUBBER GLOVES.

**Eye Protection:** ANSI APPROVED SAFETY GOGGLES.

**Other Protective Equipment:** LAB COAT & APRON, FLAME & CHEMICAL RESISTANT COVERALLS, EYEWASH CAPABLE OF SUSTAINED FLUSHING, SAFETY DRENCH (SUPDAT)

**Work Hygienic Practices:** WASH THOROUGHLY AFTER USE.

**Supplemental Health & Safety Information:** OTHER PROT EQUIP: SHOWER & HYGIENIC FACILITIES FOR WASHING.

**Section 9 - Physical & Chemical Properties  
AMMONIUM MOLYBDATE, 12215**

**HCC:** N1

**NRC/State License Number:**

**Net Property Weight for Ammo:**

**Boiling Point:** Boiling Point Text: N/K

**Melting/Freezing Point:** Melting/Freezing Text: N/K

**Decomposition Point:** Decomposition Text: N/K

**Vapor Pressure:** 0 Vapor Density: N/A

**Percent Volatile Organic Content:**

**Specific Gravity:** N/K

**Volatile Organic Content Pounds per Gallon:**

**pH:** N/K



**Volatile Organic Content Grams per Liter:**  
**Viscosity:** N/P  
**Evaporation Weight and Reference:** 0 (BUTYL ACETATE=1)  
**Solubility in Water:** SOLUBLE  
**Appearance and Odor:** WHITE POWDER; ODOR NOT KNOWN.  
**Percent Volatiles by Volume:** 0  
**Corrosion Rate:** N/K

**Section 10 - Stability & Reactivity Data**  
**AMMONIUM MOLYBDATE, 12215**

**Stability Indicator:** YES  
**Materials to Avoid:**  
ALKALI METALS, ACIDS.  
**Stability Condition to Avoid:**  
THERMAL DECOMPOSITION.  
**Hazardous Decomposition Products:**  
MOLYBDENUM OXIDES.  
**Hazardous Polymerization Indicator:** NO  
**Conditions to Avoid Polymerization:**  
NOT RELEVANT

**Section 11 - Toxicological Information**  
**AMMONIUM MOLYBDATE, 12215**

**Toxicological Information:**  
N/P

**Section 12 - Ecological Information**  
**AMMONIUM MOLYBDATE, 12215**

**Ecological Information:**  
N/P

**Section 13 - Disposal Considerations**  
**AMMONIUM MOLYBDATE, 12215**

**Waste Disposal Methods:**  
CONSULT STATE, LOCAL OR FEDERAL EPA REGULATIONS FOR PROPER DISPOSAL.

**Section 14 - MSDS Transport Information**  
**AMMONIUM MOLYBDATE, 12215**

**Transport Information:**  
N/P

**Section 15 - Regulatory Information**  
**AMMONIUM MOLYBDATE, 12215**

**SARA Title III Information:**  
N/P  
**Federal Regulatory Information:**  
N/P  
**State Regulatory Information:**  
N/P

**Section 16 - Other Information**

**AMMONIUM MOLYBDATE, 12215****Other Information:**

N/P

**HAZCOM Label Information****Product Identification:** AMMONIUM MOLYBDATE, 12215**CAGE:** 0JVJ1**Assigned Individual:** N**Company Name:** JOHNSON MATTHEY CATALOG CO INC ALFA AESAR**Company PO Box:****Company Street Address1:** 30 BOND ST**Company Street Address2:** WARD HILL, MA 01835-0747 US**Health Emergency Telephone:** 800-424-9300 (CHEMTREC)**Label Required Indicator:** Y**Date Label Reviewed:** 02/03/1995**Status Code:** C**Manufacturer's Label Number:****Date of Label:** 02/03/1995**Year Procured:** N/K**Organization Code:** G**Chronic Hazard Indicator:** Y**Eye Protection Indicator:** YES**Skin Protection Indicator:** YES**Respiratory Protection Indicator:** YES**Signal Word:** CAUTION**Health Hazard:** Slight**Contact Hazard:** Slight**Fire Hazard:** None**Reactivity Hazard:** None**Section 1 - Product and Company Identification  
CALCIUM OXALATE MONOHYDRATE, 901150.000****Product Identification:** CALCIUM OXALATE MONOHYDRATE, 901150.000**Date of MSDS:** 02/11/1992 **Technical Review Date:** 09/05/1995**FSC:** 6810 **NIIN:** LIIN: 00N063221**Submitter:** N EN**Status Code:** C**MFN:** 01**Article:** N**Kit Part:** N**Manufacturer's Information****Manufacturer's Name:** TA INSTRUMENTS**Manufacturer's Address1:** 109 LUKENS DRIVE**Manufacturer's Address2:** NEW CASTLE, DE 19720**Manufacturer's Country:** US**General Information Telephone:** 302-695-5533**Emergency Telephone:** 302-695-5533**Emergency Telephone:** 302-695-5533**MSDS Preparer's Name:** SR SAUERBRUNN**Proprietary:** N**Reviewed:** N**Published:** Y**CAGE:** 0MJS5**Special Project Code:** N



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**Contractor Information**

**Contractor's Name:** TA INSTRUMENTS  
**Contractor's Address1:** 109 LUKENS DRIVE  
**Contractor's Address2:** NEW CASTLE, DE 19720  
**Contractor's Telephone:** 302-695-5533  
**Contractor's CAGE:** 0MJS5

**Section 2 - Compositon/Information on Ingredients**  
**CALCIUM OXALATE MONOHYDRATE, 901150.000**

**Ingredient Name:** CALCIUM OXALATE MONOHYDRATE

**Ingredient CAS Number: Ingredient CAS Code:** X

**RTECS Number: RTECS Code:** X

**=WT: =WT Code:**

**=Volume: =Volume Code:**

**>WT: >WT Code:**

**>Volume: >Volume Code:**

**<WT: <WT Code:**

**<Volume: <Volume Code:**

**% Low WT: % Low WT Code:**

**% High WT: % High WT Code:**

**% Low Volume: % Low Volume Code:**

**% High Volume: % High Volume Code:**

**% Text:** N/K

**% Enviromental Weight:**

**Other REC Limits:** N/K

**OSHA PEL:** N/K (FP N) **OSHA PEL Code:** M

**OSHA STEL:** **OSHA STEL Code:**

**ACGIH TLV:** N/K (FP N) **ACGIH TLV Code:** M

**ACGIH STEL:** N/P **ACGIH STEL Code:**

**EPA Reporting Quantity:**

**DOT Reporting Quantity:**

**Ozone Depleting Chemical:**



**Section 3 - Hazards Identification, Including Emergency Overview**  
**CALCIUM OXALATE MONOHYDRATE, 901150.000**

**Health Hazards Acute & Chronic:** TOXIC BY ORAL OR INHALATION ROUTES. CORROSIVE TO MOUTH.

**Signs & Symptoms of Overexposure:**  
SEE HEALTH HAZARDS.

**Medical Conditions Aggravated by Exposure:**  
NONE SPECIFIED BY MANUFACTURER.

**LD50 LC50 Mixture:** NONE SPECIFIED BY MANUFACTURER.

**Route of Entry Indicators:**

**Inhalation:** YES

**Skin:** NO

**Ingestion:** YES

**Carcinogenicity Indicators**

**NTP:** NO

**IARC:** NO

**OSHA:** NO

**Carcinogenicity Explanation:** NOT RELEVANT.

**Section 4 - First Aid Measures**  
**CALCIUM OXALATE MONOHYDRATE, 901150.000**

**First Aid:**

SKIN: FLUSH AREA W/WATER. CALL MD. EYE: FLUSH W/POTABLE WATER FOR AT LEAST 15 MINUTES.  
SEE MD(FP N). INHAL: REMOVE TO FRESH AIR. SUPPORT BREATHING(GIVE O\*2/ARTF RESP)(FP N).  
INGEST: CALL MD IMMEDIATELY(FP N).

**Section 5 - Fire Fighting Measures**  
**CALCIUM OXALATE MONOHYDRATE, 901150.000**

**Fire Fighting Procedures:**

WEAR NIOSH/MSHA APPROVED SCBA & FULL PROTECTIVE EQUIPMENT(FP N).

**Unusual Fire or Explosion Hazard:**

NONE SPECIFIED BY MANUFACTURER.

**Extinguishing Media:**

WATER, CO\*2, CHEMICAL OR SAND.

**Flash Point:** Flash Point Text: N/K

**Autoignition Temperature:**

**Autoignition Temperature Text:** N/A

**Lower Limit(s):** N/K

**Upper Limit(s):** N/K

**Section 6 - Accidental Release Measures**  
**CALCIUM OXALATE MONOHYDRATE, 901150.000**

**Spill Release Procedures:**

NO SPECIAL PROCEDURES.

**Section 7 - Handling and Storage**  
**CALCIUM OXALATE MONOHYDRATE, 901150.000**

**Handling and Storage Precautions:**

**Other Precautions:****Section 8 - Exposure Controls & Personal Protection  
CALCIUM OXALATE MONOHYDRATE, 901150.000****Respiratory Protection:**

NIOSH/MSHA APPROVED FILTER MASK RECOMMENDED FOR USE W/LGE AIRBORNE QUANTITIES.

**Ventilation:**

LOCAL EXHAUST.

**Protective Gloves:**

IMPERVIOUS GLOVES(FP N).

**Eye Protection:** ANSI APPRVD CHEM WORKERS GOGGS(FP N).

**Other Protective Equipment:** EMERGENCY EYEWASH & DELUGE SHOWER MEETING ANSI DESIGN CRITERIA(FP N).

**Work Hygienic Practices:** NONE SPECIFIED BY MANUFACTURER.

**Supplemental Health & Safety Information:** NONE SPECIFIED BY MANUFACTURER.

**Section 9 - Physical & Chemical Properties  
CALCIUM OXALATE MONOHYDRATE, 901150.000****HCC:**

**NRC/State License Number:**

**Net Property Weight for Ammo:**

**Boiling Point: Boiling Point Text:** N/K

**Melting/Freezing Point: Melting/Freezing Text:** N/K

**Decomposition Point: Decomposition Text:** N/K

**Vapor Pressure: N/K Vapor Density: N/K**

**Percent Volatile Organic Content:**

**Specific Gravity:** 2.12

**Volatile Organic Content Pounds per Gallon:**

**pH:** N/K

**Volatile Organic Content Grams per Liter:**

**Viscosity:** N/P

**Evaporation Weight and Reference:** 0

**Solubility in Water:** INSOLUBLE

**Appearance and Odor:** WHITE CRYSTALLINE POWDER.

**Percent Volatiles by Volume:** 0

**Corrosion Rate:** N/K

**Section 1 - Product and Company Identification  
CALCIUM OXIDE**

**Product Identification:** CALCIUM OXIDE

**Date of MSDS:** 03/25/1992 **Technical Review Date:** 04/04/1994

**FSC:** 6810 **NIIN:** 00-964-0105

**Submitter:** D DG

**Status Code:** C

**MFN:** 01

**Article:** N

**Kit Part:** N

**Manufacturer's Information**

**Manufacturer's Name:** J.T.BAKER CHEMICAL CO  
**Manufacturer's Address1:** 222 RED SCHOOL LANE  
**Manufacturer's Address2:** PHILLIPSBURG, NJ 08865  
**Manufacturer's Country:** US  
**General Information Telephone:** 800-JTBAKER  
**Emergency Telephone:** 201-859-2151/800-424-9300(CHEMTR)  
**Emergency Telephone:** 201-859-2151/800-424-9300(CHEMTR)  
**MSDS Preparer's Name:** N/P  
**Proprietary:** N  
**Reviewed:** Y  
**Published:** Y  
**CAGE:** DO870  
**Special Project Code:** N

**Item Description**

**Item Name:** CALCIUM OXIDE,ANALYZED REAGENT  
**Item Manager:**  
**Specification Number:** NK  
**Type/Grade/Class:** NK  
**Unit of Issue:** BT **Quantitative Expression:** 10000000025KG  
**Unit of Issue Quantity:** 6  
**Type of Container:**

**Contractor Information**

**Contractor's Name:** CHEMICAL COMMODITIES AGENCY, INC.  
**Contractor's Address1:** 27447 PACIFIC STREET  
**Contractor's Address2:** HIGHLAND, CA 92346-2640  
**Contractor's Telephone:** 909-864-2310  
**Contractor's CAGE:** 60777

**Contractor Information**

**Contractor's Name:** J.T.BAKER CHEMICAL CO.  
**Post Office Box:** N/K  
**Contractor's Address1:** 222 RED SCHOOL LANE  
**Contractor's Address2:** PHILLIPSBURG, NJ 08865-2219  
**Contractor's Telephone:** 201-859-2151  
**Contractor's CAGE:** DO870

**Contractor Information**

**Contractor's Name:** MALLINCKRODT BAKER, INC. (FORMERLY J.T. BAKER INC)  
**Contractor's Address1:** 222 RED SCHOOL LANE  
**Contractor's Address2:** PHILLIPSBURG, NJ 08865-2219  
**Contractor's Telephone:** 800-582-2537  
**Contractor's CAGE:** 70829

**Section 2 - Compositon/Information on Ingredients  
CALCIUM OXIDE**

**Ingredient Name:** CALCIUM OXIDE

**Ingredient CAS Number:** 1305-78-8 **Ingredient CAS Code:** M

**RTECS Number:** EW3100000 **RTECS Code:** M

**=WT: =WT Code:**



**=Volume: =Volume Code:**

**>WT: >WT Code:**

**>Volume: >Volume Code:**

**<WT: <WT Code:**

**<Volume: <Volume Code:**

**% Low WT: % Low WT Code:**

**% High WT: % High WT Code:**

**% Low Volume: % Low Volume Code:**

**% High Volume: % High Volume Code:**

**% Text: 99-100**

**% Environmental Weight:**

**Other REC Limits: N/K**

**OSHA PEL: 5 MG/M3 OSHA PEL Code: M**

**OSHA STEL: OSHA STEL Code:**

**ACGIH TLV: 2 MG/M3; 9192 ACGIH TLV Code: M**

**ACGIH STEL: N/P ACGIH STEL Code:**

**EPA Reporting Quantity:**

**DOT Reporting Quantity:**

**Ozone Depleting Chemical: N**

### **Section 3 - Hazards Identification, Including Emergency Overview CALCIUM OXIDE**

**Health Hazards Acute & Chronic:** ACUTE-IRRITATION TO UPPER RESPIRATORY PASSAGES. CHEMICAL BURNS OR SEVERE IRRITATION TO EYES, NOSE, MOIST SKIN. HARMFUL IF SWALLOWED, MAY CAUSE BURNS TO MOUTH AND STOMACH. TARGET ORGANS:RESPIRATORY SYSTEM, LUNGS, KIDNEYS, AND BLOOD.

**Signs & Symptoms of Overexposure:**

SKIN: BURNS OR IRRITATION ESPECIALLY TO PERSPIRING PERSON. EXCESS COUGHING DUE TO IRRITATION TO UPPER RESPIRATORY SYSTEM. VOMITING, STOMACHACHE, DIARRHEA.

**Medical Conditions Aggravated by Exposure:**

BRONCHITIS OR PNEUMONIA. EYES AND "OPEN CUTS" ARE PARTICULARLY VULNERABLE.

**LD50 LC50 Mixture:** NONE SPECIFIED BY MANUFACTURER.

**Route of Entry Indicators:**

**Inhalation:** YES



**Skin:** NO

**Ingestion:** YES

**Carcinogenicity Indicators**

**NTP:** NO

**IARC:** NO

**OSHA:** NO

**Carcinogenicity Explanation:** NOT RELEVANT

**Section 4 - First Aid Measures**

**CALCIUM OXIDE**

**First Aid:**

SKIN: WASH OFF ALL LIME DUST WITH EXCESS WATER. APPLY CREAM OR OINTMENT. EYE: FLUSH IMMEDIATELY W/ LG AMTS OF WATER FOR AT LEAST 15 MIN & SEE MEDICAL DOCTOR IMMEDIATELY. INHAL: REMOVE TO, IF NOT BREATHING GIVE CPR/OXYGEN. INGEST: DRINK LARGE AMOUNTS OF WATER, ORANGE JUICE, FOLLOWED BY EGG WHITE IN WATER. CALL PHYSICIAN IMMEDIATELY.

**Section 5 - Fire Fighting Measures**

**CALCIUM OXIDE**

**Fire Fighting Procedures:**

NONE IDENTIFIED.

**Unusual Fire or Explosion Hazard:**

CONTACT WITH MOISTURE OR WATER MAY GENERATE SUFFICIENT HEAT TO IGNITE COMBUSTIBLES.

**Extinguishing Media:**

NON-COMBUSTIBLE. USE MEDIA SUITABLE FOR SURROUNDING FIRES.

**Flash Point: Flash Point Text:** NOT APPLICABLE

**Autoignition Temperature:**

**Autoignition Temperature Text:** N/A

**Lower Limit(s):** N/A

**Upper Limit(s):** N/A

**Section 6 - Accidental Release Measures**

**CALCIUM OXIDE**

**Spill Release Procedures:**

WEAR SELF CONTAINED BREATHING APPARATUS AND PROTECTIVE CLOTHING. VENTILATE AREA. SHOVEL MATERIAL INTO DRY CONTAINERS. FLUSH RESIDUE WITH WATER.

**Section 7 - Handling and Storage**

**CALCIUM OXIDE**

**Handling and Storage Precautions:**

**Other Precautions:**

**Section 8 - Exposure Controls & Personal Protection**

**CALCIUM OXIDE**

**Respiratory Protection:**

IN DUSTY LOCATIONS, USE NIOSH/MSHA APPROVED RESPIRATORS.

**Ventilation:**

APPLY ADEQUATE VENTILATION TO KEEP DUST BELOW TLV. VENT DUST TO "COLLECTOR".

**Protective Gloves:**



RUBBER GLOVES.

**Eye Protection:** SAFETY GOGGLES.

**Other Protective Equipment:** LONG SLEEVED SHIRT W/BUTTON COLLAR & LONG PANTS EXTENDING OVER HIGH TOP WORK BOOTS. EMERG EYE WASH AND DELUGE SHOWER.

**Work Hygienic Practices:** WASH WELL WITH WATER UPON COMPLETION OF SHIFT.

**Supplemental Health & Safety Information:** NONE SPECIFIED BY MANUFACTURER.

### Section 9 - Physical & Chemical Properties

#### CALCIUM OXIDE

**HCC:** B3

**NRC/State License Number:** N/R

**Net Property Weight for Ammo:** N/R

**Boiling Point: Boiling Point Text:** 5162F, 2850C

**Melting/Freezing Point: Melting/Freezing Text:** N/A

**Decomposition Point: Decomposition Text:** N/K

**Vapor Pressure: N/A Vapor Density: N/A**

**Percent Volatile Organic Content:**

**Specific Gravity:** 3.34

**Volatile Organic Content Pounds per Gallon:**

**pH:** N/K

**Volatile Organic Content Grams per Liter:**

**Viscosity:** N/A

**Evaporation Weight and Reference:** NOT APPLICABLE

**Solubility in Water:** NEGLIGIBLE, <0.1%

**Appearance and Odor:** WHITE OR GREY SOLID, ODORLESS.

**Percent Volatiles by Volume:** N/K

**Corrosion Rate:** N/K

### Section 10 - Stability & Reactivity Data

#### CALCIUM OXIDE

**Stability Indicator:** NO

**Materials to Avoid:**

WATER AND ACIDS.

**Stability Condition to Avoid:**

MOISTURE AND WATER.

**Hazardous Decomposition Products:**

NONE

**Hazardous Polymerization Indicator:** NO

**Conditions to Avoid Polymerization:**

NOT RELEVANT

### Section 11 - Toxicological Information

#### CALCIUM OXIDE

**Toxicological Information:**

N/P

### Section 12 - Ecological Information

#### CALCIUM OXIDE

**Ecological Information:**

N/P

### Section 13 - Disposal Considerations

#### CALCIUM OXIDE



**Waste Disposal Methods:**

DISPOSE OF I/A/W FEDERAL, STATE AND LOCAL REGULATIONS.

**Section 14 - MSDS Transport Information  
CALCIUM OXIDE**

**Transport Information:**

N/P

**Section 15 - Regulatory Information  
CALCIUM OXIDE**

**SARA Title III Information:**

N/P

**Federal Regulatory Information:**

N/P

**State Regulatory Information:**

N/P

**Section 16 - Other Information  
CALCIUM OXIDE**

**Other Information:**

N/P

**HMIS Transportation Information**

**Product Identification:** CALCIUM OXIDE

**Transportation ID Number:** 95087

**Responsible Party CAGE:** DO870

**Date MSDS Prepared:** 03/25/1992

**Date MSDS Reviewed:** 04/04/1994

**MFN:** 04/04/1994

**Submitter:** D DG

**Status Code:** C

**Container Information**

**Unit of Issue:** BT

**Container Quantity:** 6

**Type of Container:**

**Net Unit Weight:** 2.5 KG

**Article without MSDS:** N

**Technical Entry NOS Shipping Number:**

**Radioactivity:** N/R

**Form:**

**Net Explosive Weight:**

**Coast Guard Ammunition Code:**

**Magnetism:** N/P

**AF MMAC Code:**

**DOD Exemption Number:**



**Limited Quantity Indicator:**

**Multiple Kit Number:** 0

**Kit Indicator:** N

**Kit Part Indicator:** N

**Review Indicator:** Y

**Additional Data:**

REGULATED BY IMO ONLY IN BULK QUANTITIES.

#### **Department of Transportation Information**

**DOT Proper Shipping Name:** CALCIUM OXIDE

**DOT PSN Code:** CRE

**Symbols:** A

**DOT PSN Modifier:**

**Hazard Class:** 8

**UN ID Number:** UN1910

**DOT Packaging Group:** III

**Label:** CORROSIVE

**Special Provision(s):**

**Packaging Exception:**

**Non Bulk Packaging:** 213

**Bulk Packaging:** 240

**Maximum Quantity in Passenger Area:** 25 KG

**Maximum Quantity in Cargo Area:** 100 KG

**Stow in Vessel Requirements:** A

**Requirements Water/Sp/Other:**

#### **IMO Detail Information**

**IMO Proper Shipping Name:** NOT REGULATED FOR THIS MODE OF TRANSPORTATION

**IMO PSN Code:** ZZZ

**IMO PSN Modifier:**

**IMDG Page Number:** N/R

**UN Number:** N/R

**UN Hazard Class:** N/R

**IMO Packaging Group:** N/R

**Subsidiary Risk Label:** N/R

**EMS Number:** N/R

**Medical First Aid Guide Number:** N/R

#### **IATA Detail Information**

**IATA Proper Shipping Name:** CALCIUM OXIDE

**IATA PSN Code:** EZP

**IATA PSN Modifier:**

**IATA UN Id Number:** 1910

**IATA UN Class:** 8

**Subsidiary Risk Class:**

**UN Packaging Group:** III

**IATA Label:** CORROSIVE

**Packaging Note for Passengers:** 822

**Maximum Quantity for Passengers:** 25KG

**Packaging Note for Cargo:** 823

**Maximum Quantity for Cargo:** 100KG

**Exceptions:**

#### **AFI Detail Information**



**AFI Proper Shipping Name:** CALCIUM OXIDE

**AFI Symbols:**

**AFI PSN Code:** EZP

**AFI PSN Modifier:**

**AFI UN Id Number:** UN1910

**AFI Hazard Class:** 8

**AFI Packing Group:** III

**AFI Label:**

**Special Provisions:** P5

**Back Pack Reference:** A12.4

#### **HAZCOM Label Information**

**Product Identification:** CALCIUM OXIDE

**CAGE:** DO870

**Assigned Individual:** Y

**Company Name:** J.T.BAKER CHEMICAL CO.

**Company PO Box:** N/K

**Company Street Address1:** 222 RED SCHOOL LANE

**Company Street Address2:** PHILLIPSBURG, NJ 08865-2219 US

**Health Emergency Telephone:** 201-859-2151/800-424-9300(CHEMTR)

**Label Required Indicator:** Y

**Date Label Reviewed:** 04/04/1994

**Status Code:** C

**Manufacturer's Label Number:** N/K

**Date of Label:** 04/04/1994

**Year Procured:** 1994

**Organization Code:** F

**Chronic Hazard Indicator:** N/P

**Eye Protection Indicator:** YES

**Skin Protection Indicator:** YES

**Respiratory Protection Indicator:** YES

**Signal Word:** WARNING

**Health Hazard:** Slight

**Contact Hazard:** Moderate

**Fire Hazard:** None

**Reactivity Hazard:** Moderate

#### **Section 1 - Product and Company Identification CHROMIC ACID**

**Product Identification:** CHROMIC ACID

**Date of MSDS:** 02/01/1993 **Technical Review Date:** 05/22/1999

**FSC:** 6810 **NIIN:** 00-264-6517

**Submitter:** D DG

**Status Code:** C

**MFN:** 01

**Article:** N

**Kit Part:** N

#### **Manufacturer's Information**

**Manufacturer's Name:** VAN WATERS AND ROGERS INC

**Manufacturer's Address1:** 1600 NORTON BLDG.

**Manufacturer's Address2:** SEATTLE, WA 98104-1564

**Manufacturer's Country:** US

**General Information Telephone:** 408-435-8700

**Emergency Telephone:** 408-435-8700/800-424-9300(CHEMTREC)



**Emergency Telephone:** 408-435-8700/800-424-9300(CHEMTREC)  
**MSDS Preparer's Name:** C.A.EISENHART  
**Proprietary:** N  
**Reviewed:** Y  
**Published:** Y  
**CAGE:** 87664  
**Special Project Code:** N

#### Item Description

**Item Name:** CHROMIUM TRIOXIDE, TECHNICAL  
**Item Manager:** S9G  
**Specification Number:** NK  
**Type/Grade/Class:** NK  
**Unit of Issue:** CN **Quantitative Expression:** 0000000005LB  
**Unit of Issue Quantity:** B  
**Type of Container:**

#### Contractor Information

**Contractor's Name:** CHEMICAL COMMODITIES AGENCY, INC.  
**Contractor's Address1:** 27447 PACIFIC STREET  
**Contractor's Address2:** HIGHLAND, CA 92346-2640  
**Contractor's Telephone:** 909-864-2310  
**Contractor's CAGE:** 60777

#### Contractor Information

**Contractor's Name:** VAN WATERS AND ROGERS INC., UNIVAR CORP.  
**Contractor's Address1:** 1600 NORTON BLDG. 801 2ND AVENUE  
**Contractor's Address2:** SEATTLE, WA 98104-1564  
**Contractor's Telephone:** 206-447-5911/800-424-9300(CHEMTREC)  
**Contractor's CAGE:** 87664

### Section 2 - Composition/Information on Ingredients CHROMIC ACID

**Ingredient Name:** CHROMIUM (VI) OXIDE

**Ingredient CAS Number:** 1333-82-0 **Ingredient CAS Code:** M

**RTECS Number:** GB6650000 **RTECS Code:** M

**=WT: =WT Code:**

**=Volume: =Volume Code:**

**>WT: >WT Code:**

**>Volume: >Volume Code:**

**<WT: <WT Code:**

**<Volume: <Volume Code:**

**% Low WT: % Low WT Code:**

**% High WT: % High WT Code:**

**% Low Volume: % Low Volume Code:**



**% High Volume: % High Volume Code:**

**% Text: >99**

**% Environmental Weight:**

**Other REC Limits: N/K**

**OSHA PEL: C, 0.1 MG/M3 (CRO3) OSHA PEL Code: M**

**OSHA STEL: OSHA STEL Code:**

**ACGIH TLV: 0.05 MG/M3(CR); 8990 ACGIH TLV Code: M**

**ACGIH STEL: N/P ACGIH STEL Code:**

**EPA Reporting Quantity:**

**DOT Reporting Quantity:**

**Ozone Depleting Chemical: N**

### **Section 3 - Hazards Identification, Including Emergency Overview CHROMIC ACID**

**Health Hazards Acute & Chronic:** ACUTE-EYE:DUST IS EXTREMELY CORROSIVE;CAN CAUSE SEVERE DAMAGE.SKIN:IRRITATION.INHAL:IRRITATION OF THE NASAL SEPTUM & RESPIRATORY TRACT.INGESTION:CAN CAUSE EXTREME TISSUE DESTRUCTION,KIDNEY FAILURE & DEATH.CHRONIC-EYE:CONJUNCTIVITIS.SKIN:ESPEC. BROKEN,MAY CAUSE "CHROME SORE".

**Signs & Symptoms of Overexposure:**

EYES:CORROSIVE,SEVERE DAMAGE,PERMANENT INJURY,BLINDNESS;SKIN:BURNS,IRRITATION,CHROME SORES,SKIN SENSITIZATION, KIDNEY FAILURE, SEPTUM & RESPIRATORY TRACT,ASTHMA-LIKE SYMPTOMS;INGESTION: TISSUE DESTRUCTION ,SEVERE INJURY,DELAYED TOXIC EFFECTS,KIDNEY OR LIVER FAILURE.

**Medical Conditions Aggravated by Exposure:**

CONTACT WITH BROKEN SKIN CAN CAUSE "CHROME SORES".SKIN CAN BECOME SENSITIZED AND MASSIVE OVER-EXPOSURE TO SOLUTIONS CAN ABSORB HARMFUL AMOUNTS, LEADING TO KIDNEY FAILURE AND DEATH.

**LD50 LC50 Mixture:** NIOSH:.025MG(CR4)/M3;10HR TWA=.05MG

**Route of Entry Indicators:**

**Inhalation:** NO

**Skin:** YES

**Ingestion:** NO

**Carcinogenicity Indicators**

**NTP:** YES

**IARC:** YES

**OSHA:** NO

**Carcinogenicity Explanation:** CR (VI) COMPOUNDS ARE CONSIDERED SUSPECT CARCINOGENS.

### **Section 4 - First Aid Measures CHROMIC ACID**

**First Aid:**



EYE:IMMEDIATELY FLUSH WITH RUNNING WATER FOR 15 MIN.GET MEDICAL ATTENTION.SKIN:IMMEDIATELY FLUSH WITH RUNNING WATER FOR 15 MIN.DESTROY CONTAMINATED SHOES.CALL A DOCTOR.INHALATION:REMOVE TO FRESH AIR.G IVE CPR IF NEEDED.CALL A PHYSICIAN.INGESTION:DON'T INDUCE VOMITING.IF CONSCIOUS,GIVE LOTS OF WATER/MILK.GET IMMEDIATE MEDICAL ATTENTION.

### **Section 5 - Fire Fighting Measures CHROMIC ACID**

#### **Fire Fighting Procedures:**

FIRE FIGHTERS SHOULD USE NIOSH APPROVED SCBA & FULL PROTECTIVE EQUIPMENT WHEN FIGHTING CHEMICAL FIRE. USE WATER SPRAY TO COOL NEARBY CONTAINERS EXPOSED TO FIRE.

#### **Unusual Fire or Explosion Hazard:**

PRODUCT MAY CAUSE FIRE IF IT DRYs ON CLOTHING,WOOD,COMBUSTIBLES.CONTACT WITH FLAMMABLE MATERIALS MAY CAUSE IMMEDIATE FIRE OR EXPLOSION,ESPECIALLY IF HEATED.

#### **Extinguishing Media:**

DRY CHEMICAL OR CO2. DO NOT USE WATER.(UNDER CERTAIN CONDITIONS CONTACT WITH WATER CAN CAUSE STEAM EXPLOSIONS).

**Flash Point:** Flash Point Text: NONE

#### **Autoignition Temperature:**

**Autoignition Temperature Text:** N/A

**Lower Limit(s):** N/R

**Upper Limit(s):** N/R

### **Section 6 - Accidental Release Measures CHROMIC ACID**

#### **Spill Release Procedures:**

WEAR RESPIRATOR EQUIPPED WITH PARTICULATE FILTERS AND EYE PROTECTION. SWEEP UP AND DISPOSE OF IN DOT APPROVED WASTE CONTAINERS.

### **Section 7 - Handling and Storage CHROMIC ACID**

#### **Handling and Storage Precautions:**

#### **Other Precautions:**

### **Section 8 - Exposure Controls & Personal Protection CHROMIC ACID**

#### **Respiratory Protection:**

NIOSH APPROVED CARTRIDGE RESPIRATOR FOR ACID MISTS.

#### **Ventilation:**

LOCAL MECHANICAL EXHAUST VENTILATION CAPABLE OF MAINTAINING DUST EMISSIONS AT THE POINT OF USE BELOW THE PEL.

#### **Protective Gloves:**

PVC GLOVES WITH GAUNTLETS.

**Eye Protection:** CHEMICAL GOGGLES & FULL FACESHIELD.

**Other Protective Equipment:** ACID RESISTANT SLICKER SUIT WITH PVC APRON & BOOTS. EYEWASH STATION & SAFETY SHOWER.

**Work Hygienic Practices:** REMOVE CONTAMINATED CLOTHING IMMEDIATELY.DO NOT LAUNDER AT HOME.AVOID WEARING LEATHER SHOES & GLOVES.TAKE SHOWER DAILY.



**Supplemental Health & Safety Information:** NOTE TO PHYSICIAN:MASSIVE OVEREXPOSURE TO SOLUTIONS COULD LEAD TO KIDNEY FAILURE AND DEATH.EARLY RENAL DIALYSIS IS RECOMMENDED.ONE GRAM ASCORBIC ACID (ORAL/IV) FOLLOWED BY 100 MG T.I.D. FOR 14 DAYS.SK IN ULCERS MAY BE TREATED BY REMOVAL FROMEXPOSURE,DAILY CLEANSING & DEBRIDEMENT, & ANTIBIOTIC CREAM.

**Section 9 - Physical & Chemical Properties  
CHROMIC ACID**

**HCC:** D3  
**NRC/State License Number:** NONE  
**Net Property Weight for Ammo:** NONE  
**Boiling Point: Boiling Point Text:** N/R  
**Melting/Freezing Point: Melting/Freezing Text:** 387F (197C)  
**Decomposition Point: Decomposition Text:** UNKNOWN  
**Vapor Pressure: N/R Vapor Density:** N/R  
**Percent Volatile Organic Content:**  
**Specific Gravity:** 2.7  
**Volatile Organic Content Pounds per Gallon:**  
**pH:** N/K  
**Volatile Organic Content Grams per Liter:**  
**Viscosity:** N/P  
**Evaporation Weight and Reference:** N/R  
**Solubility in Water:** 62.5%  
**Appearance and Odor:** DARK RED FLAKES, NO ODOR  
**Percent Volatiles by Volume:** N/K  
**Corrosion Rate:** UNKNOWN

**Section 10 - Stability & Reactivity Data  
CHROMIC ACID**

**Stability Indicator:** YES  
**Materials to Avoid:**  
REDUCING AGENTS,COMBUSTIBLE MATERIALS SUCH AS OILS OR GREASES,WATER AND ORGANICS.  
**Stability Condition to Avoid:**  
NONE.  
**Hazardous Decomposition Products:**  
CHROMIC OXIDE  
**Hazardous Polymerization Indicator:** NO  
**Conditions to Avoid Polymerization:**  
NONE

**Section 11 - Toxicological Information  
CHROMIC ACID**

**Toxicological Information:**  
N/P

**Section 12 - Ecological Information  
CHROMIC ACID**

**Ecological Information:**  
N/P

**Section 13 - Disposal Considerations  
CHROMIC ACID**

**Waste Disposal Methods:**

DISPOSAL SHOULD BE MADE IN ACCORDANCE WITH ALL APPLICABLE FEDERAL, STATE AND LOCAL LAWS AND REGULATIONS.

**Section 14 - MSDS Transport Information  
CHROMIC ACID****Transport Information:**

N/P

**Section 15 - Regulatory Information  
CHROMIC ACID****SARA Title III Information:**

N/P

**Federal Regulatory Information:**

N/P

**State Regulatory Information:**

N/P

**Section 16 - Other Information  
CHROMIC ACID****Other Information:**

N/P

**HMIS Transportation Information**

**Product Identification:** CHROMIC ACID

**Transportation ID Number:** 63259

**Responsible Party CAGE:** 87664

**Date MSDS Prepared:** 02/01/1993

**Date MSDS Reviewed:** 08/05/1993

**MFN:** 08/05/1993

**Submitter:** D DG

**Status Code:** C

**Container Information**

**Unit of Issue:** CN

**Container Quantity:** B

**Type of Container:**

**Net Unit Weight:** 5 POUNDS

**Article without MSDS:** N

**Technical Entry NOS Shipping Number:**

**Radioactivity:**

**Form:**

**Net Explosive Weight:**

**Coast Guard Ammunition Code:**

**Magnetism:** N/P

**AF MMAC Code:**

**DOD Exemption Number:**



**Limited Quantity Indicator:**

**Multiple Kit Number:** 0

**Kit Indicator:** N

**Kit Part Indicator:** N

**Review Indicator:** Y

**Additional Data:**

**Department of Transportation Information**

**DOT Proper Shipping Name:** CHROMIC ACID, SOLID

**DOT PSN Code:** DJH

**Symbols:** D

**DOT PSN Modifier:**

**Hazard Class:** 5.1

**UN ID Number:** NA1463

**DOT Packaging Group:** II

**Label:** OXIDIZER, CORROSIVE

**Special Provision(s):**

**Packaging Exception:**

**Non Bulk Packaging:** 212

**Bulk Packaging:** 242

**Maximum Quantity in Passenger Area:** 5 KG

**Maximum Quantity in Cargo Area:** 25 KG

**Stow in Vessel Requirements:** A

**Requirements Water/Sp/Other:**

**IMO Detail Information**

**IMO Proper Shipping Name:** CHROMIC ACID, SOLID

**IMO PSN Code:** EIT

**IMO PSN Modifier:**

**IMDG Page Number:** SEE 5145

**UN Number:** 1463

**UN Hazard Class:** 5.1

**IMO Packaging Group:** II

**Subsidiary Risk Label:** CORROSIVE

**EMS Number:** 5.1-05

**Medical First Aid Guide Number:** 700

**IATA Detail Information**

**IATA Proper Shipping Name:** CHROMIUM TRIOXIDE, ANHYDROUS

**IATA PSN Code:** GVR

**IATA PSN Modifier:**

**IATA UN Id Number:** 1463

**IATA UN Class:** 5.1

**Subsidiary Risk Class:** 8

**UN Packaging Group:** II

**IATA Label:** OXIDIZER & CORROSIVE

**Packaging Note for Passengers:** 508

**Maximum Quantity for Passengers:** 5KG

**Packaging Note for Cargo:** 511

**Maximum Quantity for Cargo:** 25KG

**Exceptions:**

**AFI Detail Information**



**AFI Proper Shipping Name:** CHROMIC ACID, SOLID  
**AFI Symbols:** D  
**AFI PSN Code:** GUD  
**AFI PSN Modifier:** CHROMIC ACID, SOLID; ALSO SEE CHROMIUM TRIOXIDE, ANHYDROUS  
**AFI UN Id Number:** NA1463  
**AFI Hazard Class:** 5.1  
**AFI Packing Group:** II  
**AFI Label:** 8  
**Special Provisions:** P5  
**Back Pack Reference:** A9.8

#### **HAZCOM Label Information**

**Product Identification:** CHROMIC ACID  
**CAGE:** 87664  
**Assigned Individual:** N  
**Company Name:** VAN WATERS AND ROGERS INC., UNIVAR CORP.  
**Company PO Box:**  
**Company Street Address1:** 1600 NORTON BLDG. 801 2ND AVENUE  
**Company Street Address2:** SEATTLE, WA 98104-1564 US  
**Health Emergency Telephone:** 408-435-8700/800-424-9300(CHEMTREC)  
**Label Required Indicator:** Y  
**Date Label Reviewed:** 08/05/1993  
**Status Code:** C  
**Manufacturer's Label Number:** UNKNOWN  
**Date of Label:** 08/05/1993  
**Year Procured:** 1993  
**Organization Code:** F  
**Chronic Hazard Indicator:** Y  
**Eye Protection Indicator:** YES  
**Skin Protection Indicator:** YES  
**Respiratory Protection Indicator:** YES  
**Signal Word:** DANGER  
**Health Hazard:** Severe  
**Contact Hazard:** Severe  
**Fire Hazard:** None  
**Reactivity Hazard:** None

#### **Section 1 - Product and Company Identification FERRIC CHLORIDE, ANHYDROUS**

**Product Identification:** FERRIC CHLORIDE, ANHYDROUS  
**Date of MSDS:** 10/11/1993 **Technical Review Date:** 05/17/1996  
**FSC:** 6810 **NIIN:** 00-682-6677  
**Submitter:** D DG  
**Status Code:** C  
**MFN:** 01  
**Article:** N  
**Kit Part:** N

#### **Manufacturer's Information**

**Manufacturer's Name:** POLY RESEARCH CORPORATION  
**Manufacturer's Address1:** 125 CORPORATE DRIVE  
**Manufacturer's Address2:** HOLTSVILLE, NY 11742  
**Manufacturer's Country:** US  
**General Information Telephone:** 516-242-1020  
**Emergency Telephone:** 800-424-9300



**Emergency Telephone:** 800-424-9300  
**MSDS Preparer's Name:** UNKNOWN  
**Proprietary:** N  
**Reviewed:** Y  
**Published:** Y  
**CAGE:** 64713  
**Special Project Code:** N

**Item Description**

**Item Name:** FERRIC CHLORIDE, ANHYDROUS, TECHNICAL  
**Item Manager:** S9G  
**Specification Number:** MIL-F-14580  
**Type/Grade/Class:** NK  
**Unit of Issue:** DR **Quantitative Expression:** 00000000135LB  
**Unit of Issue Quantity:** L  
**Type of Container:** DRUM

**Contractor Information**

**Contractor's Name:** POLY RESEARCH CORPORATION  
**Contractor's Address1:** 125 CORPORATE DRIVE  
**Contractor's Address2:** HOLTSVILLE, NY 11742-2007  
**Contractor's Telephone:** 516-758-0460  
**Contractor's CAGE:** 64713

**Section 2 - Composition/Information on Ingredients**  
**FERRIC CHLORIDE, ANHYDROUS**

**Ingredient Name:** FERRIC CHLORIDE (SARA III)

**Ingredient CAS Number:** 7705-08-0 **Ingredient CAS Code:** M

**RTECS Number:** LJ9100000 **RTECS Code:** M

**=WT: =WT Code:**

**=Volume: =Volume Code:**

**>WT: >WT Code:**

**>Volume: >Volume Code:**

**<WT: <WT Code:**

**<Volume: <Volume Code:**

**% Low WT: % Low WT Code:**

**% High WT: % High WT Code:**

**% Low Volume: % Low Volume Code:**

**% High Volume: % High Volume Code:**

**% Text: 99**

**% Environmental Weight:**



**Other REC Limits:** NONE RECOMMENDED

**OSHA PEL:** 1 MG (FE)/M3 **OSHA PEL Code:** M

**OSHA STEL:** **OSHA STEL Code:**

**ACGIH TLV:** 1 MG (FE)/M3; 9394 **ACGIH TLV Code:** M

**ACGIH STEL:** N/P **ACGIH STEL Code:**

**EPA Reporting Quantity:** 1000 LBS

**DOT Reporting Quantity:** 1000 LBS

**Ozone Depleting Chemical:** N

### **Section 3 - Hazards Identification, Including Emergency Overview FERRIC CHLORIDE, ANHYDROUS**

**Health Hazards Acute & Chronic:** EYE CONTACT: MAY CAUSE IRRITATION AND MAY BE CORROSIVE AND RESULT IN PERMANENT VISUAL LOSS. SKIN CONTACT: A MODERATE SKIN IRRITANT. CONTACT CAN CAUSE IRRITATION OR CORROSIVE CHEMICAL BURNS TO HUMAN TISSUE. INHALATION: IRRITANT. INGESTION: MAY CAUSE SEVERE LIVER AND/OR KIDNEY DAMAGE.

**Signs & Symptoms of Overexposure:**  
SEE HEALTH HAZARDS.

**Medical Conditions Aggravated by Exposure:**  
PERSONS WITH A HISTORY OF EYE, SKIN AND RESPIRATORY DISORDERS MAY BE AT INCREASED RISK FROM EXPOSURE.

**LD50 LC50 Mixture:** NONE SPECIFIED BY MANUFACTURER.

**Route of Entry Indicators:**

**Inhalation:** YES

**Skin:** YES

**Ingestion:** YES

**Carcinogenicity Indicators**

**NTP:** NO

**IARC:** NO

**OSHA:** NO

**Carcinogenicity Explanation:** NONE

### **Section 4 - First Aid Measures FERRIC CHLORIDE, ANHYDROUS**

**First Aid:**

EYE: IMMEDIATELY FLUSH WITH PLENTY OF WATER FOR 15-20 MINUTES. GET MEDICAL ATTENTION. SKIN: REMOVE CONTAMINATED CLOTHING. WASH WITH SOAP AND WATER. INHALATION: REMOVE TO FRESH AIR. GIVE OXYGEN IF BREATHING IS DIFFICULT. GIVE ARTIFICIAL RESPIRATION IF VICTIM IS NOT BREATHING. INGESTION: DO NOT INDUCE VOMITING. DRINK COPIOUS AMOUNTS OF WATER. GET IMMEDIATE MEDICAL ATTENTION.

### **Section 5 - Fire Fighting Measures FERRIC CHLORIDE, ANHYDROUS**

**Fire Fighting Procedures:**



WEAR FIRE FIGHTING PROTECTIVE EQUIPMENT AND A FULL FACED SELF CONTAINED BREATHING APPARATUS. COOL EXTERIOR OF STORAGE TANKS.

**Unusual Fire or Explosion Hazard:**

MAY RELEASE CHLORINE GAS OR HYDROGEN CHLORIDE GAS AT HIGH TEMPERATURES AS MATERIAL DECOMPOSES. CAUTION: THIS MATERIAL HEATS ON CONTACT WITH WATER.

**Extinguishing Media:**

USE CARBON DIOXIDE, OR DRY CHEMICAL.

**Flash Point:** Flash Point Text: NONE

**Autoignition Temperature:**

**Autoignition Temperature Text:** N/R

**Lower Limit(s):** N/R

**Upper Limit(s):** N/R

**Section 6 - Accidental Release Measures  
FERRIC CHLORIDE, ANHYDROUS**

**Spill Release Procedures:**

WEAR PROTECTIVE EQUIPMENT AND VENTILATE AREA AS REQUIRED. SWEEP OR SCOOP UP AND REMOVE. FLUSH AREA WITH WATER.

**Section 7 - Handling and Storage  
FERRIC CHLORIDE, ANHYDROUS**

**Handling and Storage Precautions:**

**Other Precautions:**

**Section 8 - Exposure Controls & Personal Protection  
FERRIC CHLORIDE, ANHYDROUS**

**Respiratory Protection:**

USE NIOSH/MSHA APPROVED, FULL FACE RESPIRATOR WITH DUST FILTER. CONSULT RESPIRATOR MANUFACTURER TO DETERMINE APPROPRIATE EQUIPMENT.

**Ventilation:**

MECHANICAL (GENERAL) VENTILATION IS USUALLY ADEQUATE.

**Protective Gloves:**

IMPERVIOUS RUBBER GLOVES

**Eye Protection:** SAFETY GLASSES WITH SIDE SHIELDS

**Other Protective Equipment:** SAFETY SHOWER AND EYE BATH.

**Work Hygienic Practices:** WASH THOROUGHLY AFTER HANDLING AND BEFORE EATING OR DRINKING. LAUNDER CONTAMINATED CLOTHING BEFORE REUSE.

**Supplemental Health & Safety Information:** NONE

**Section 9 - Physical & Chemical Properties  
FERRIC CHLORIDE, ANHYDROUS**

**HCC:** C1

**NRC/State License Number:** N/R

**Net Property Weight for Ammo:** N/R

**Boiling Point:** Boiling Point Text: 581F,305C

**Melting/Freezing Point:** Melting/Freezing Text: UNKNOWN

**Decomposition Point:** Decomposition Text: UNKNOWN

**Vapor Pressure:** NEGLIGIBLE Vapor Density: N/A

**Percent Volatile Organic Content:**



**Specific Gravity:** 2.8 -2.9  
**Volatile Organic Content Pounds per Gallon:**  
**pH:** N/K  
**Volatile Organic Content Grams per Liter:**  
**Viscosity:** N/P  
**Evaporation Weight and Reference:** N/A  
**Solubility in Water:** APPRECIABLE  
**Appearance and Odor:** GREENISH BLACK GRANULAR SOLID  
**Percent Volatiles by Volume:** N/A  
**Corrosion Rate:** UNKNOWN

**Section 10 - Stability & Reactivity Data**  
**FERRIC CHLORIDE, ANHYDROUS**

**Stability Indicator:** YES  
**Materials to Avoid:**  
NONE SPECIFIED BY MANUFACTURER.  
**Stability Condition to Avoid:**  
AVOID HIGH TEMPERATURES.  
**Hazardous Decomposition Products:**  
CAN RELEASE CHLORINE GAS AT ELEVATED TEMPERATURES ABOVE 553F. CAN RELEASE HYDROGEN CHLORIDE GAS ON CONTACT WITH WATER.  
**Hazardous Polymerization Indicator:** NO  
**Conditions to Avoid Polymerization:**  
NONE SPECIFIED BY MANUFACTURER.

**Section 11 - Toxicological Information**  
**FERRIC CHLORIDE, ANHYDROUS**

**Toxicological Information:**  
N/P

**Section 12 - Ecological Information**  
**FERRIC CHLORIDE, ANHYDROUS**

**Ecological Information:**  
N/P

**Section 13 - Disposal Considerations**  
**FERRIC CHLORIDE, ANHYDROUS**

**Waste Disposal Methods:**  
DISPOSE OF SPILLED, NEUTRALIZED, OR WASTE PRODUCT CONTAMINATED SOIL AND OTHER CONTAMINATED MATERIALS IN ACCORDANCE WITH ALL APPLICABLE FEDERAL, STATE AND LOCAL REGULATIONS.

**Section 14 - MSDS Transport Information**  
**FERRIC CHLORIDE, ANHYDROUS**

**Transport Information:**  
N/P

**Section 15 - Regulatory Information**  
**FERRIC CHLORIDE, ANHYDROUS**

**SARA Title III Information:**  
N/P



**Federal Regulatory Information:**

N/P

**State Regulatory Information:**

N/P

**Section 16 - Other Information**  
**FERRIC CHLORIDE, ANHYDROUS**

**Other Information:**

N/P

**HMIS Transportation Information**

**Product Identification:** FERRIC CHLORIDE, ANHYDROUS

**Transportation ID Number:** 82163

**Responsible Party CAGE:** 64713

**Date MSDS Prepared:** 10/11/1993

**Date MSDS Reviewed:** 05/17/1996

**MFN:** 05/17/1996

**Submitter:** D DG

**Status Code:** C

**Container Information**

**Unit of Issue:** DR

**Container Quantity:** L

**Type of Container:** DRUM

**Net Unit Weight:** 135 LB

**Article without MSDS:** N

**Technical Entry NOS Shipping Number:**

**Radioactivity:**

**Form:**

**Net Explosive Weight:**

**Coast Guard Ammunition Code:**

**Magnetism:** N/P

**AF MMAC Code:**

**DOD Exemption Number:**

**Limited Quantity Indicator:**

**Multiple Kit Number:** 0

**Kit Indicator:** N

**Kit Part Indicator:** N

**Review Indicator:** Y

**Additional Data:**

**Department of Transportation Information**



**DOT Proper Shipping Name:** FERRIC CHLORIDE, ANHYDROUS

**DOT PSN Code:** GEO

**Symbols:**

**DOT PSN Modifier:**

**Hazard Class:** 8

**UN ID Number:** UN1773

**DOT Packaging Group:** III

**Label:** CORROSIVE

**Special Provision(s):**

**Packaging Exception:**

**Non Bulk Packaging:** 213

**Bulk Packaging:** 240

**Maximum Quantity in Passenger Area:** 25 KG

**Maximum Quantity in Cargo Area:** 100 KG

**Stow in Vessel Requirements:** A

**Requirements Water/Sp/Other:**

#### **IMO Detail Information**

**IMO Proper Shipping Name:** FERRIC CHLORIDE, ANHYDROUS

**IMO PSN Code:** HEC

**IMO PSN Modifier:**

**IMDG Page Number:** 8173

**UN Number:** 1773

**UN Hazard Class:** 8

**IMO Packaging Group:** III

**Subsidiary Risk Label:** -

**EMS Number:** 8-06

**Medical First Aid Guide Number:** 700

#### **IATA Detail Information**

**IATA Proper Shipping Name:** FERRIC CHLORIDE, ANHYDROUS

**IATA PSN Code:** LUN

**IATA PSN Modifier:**

**IATA UN Id Number:** 1773

**IATA UN Class:** 8

**Subsidiary Risk Class:**

**UN Packaging Group:** III

**IATA Label:** CORROSIVE

**Packaging Note for Passengers:** 822

**Maximum Quantity for Passengers:** 25KG

**Packaging Note for Cargo:** 823

**Maximum Quantity for Cargo:** 100KG

**Exceptions:**

#### **AFI Detail Information**

**AFI Proper Shipping Name:** FERRIC CHLORIDE, ANHYDROUS

**AFI Symbols:**

**AFI PSN Code:** LUN

**AFI PSN Modifier:**

**AFI UN Id Number:** UN1773

**AFI Hazard Class:** 8

**AFI Packing Group:** III

**AFI Label:**

**Special Provisions:** P5

**Back Pack Reference:** A12.4

#### **HAZCOM Label Information**

**Product Identification:** FERRIC CHLORIDE, ANHYDROUS

**CAGE:** 64713

**Assigned Individual:** N

**Company Name:** POLY RESEARCH CORPORATION



**Company PO Box:**  
**Company Street Address1:** 125 CORPORATE DRIVE  
**Company Street Address2:** HOLTSVILLE, NY 11742-2007 US  
**Health Emergency Telephone:** 800-424-9300  
**Label Required Indicator:** Y  
**Date Label Reviewed:** 07/12/1994  
**Status Code:** C  
**Manufacturer's Label Number:** NONE  
**Date of Label:** 07/12/1994  
**Year Procured:** N/K  
**Organization Code:** F  
**Chronic Hazard Indicator:** N/P  
**Eye Protection Indicator:** YES  
**Skin Protection Indicator:** YES  
**Respiratory Protection Indicator:** YES  
**Signal Word:** CAUTION  
**Health Hazard:** Slight  
**Contact Hazard:** Slight  
**Fire Hazard:** None  
**Reactivity Hazard:** None

**Section 1 - Product and Company Identification**  
**GOLD CHLORIDE SOLUTION, HT100-1, HT100-4**

**Product Identification:** GOLD CHLORIDE SOLUTION, HT100-1, HT100-4  
**Date of MSDS:** 11/01/1995 **Technical Review Date:** 10/19/2000  
**FSC: NIIN:** EMPTY  
**Submitter:** N EN  
**Status Code:** A  
**MFN:** 01  
**Article:** N  
**Kit Part:** N

**Manufacturer's Information**

**Manufacturer's Name:** SIGMA CHEMICAL COMPANY  
**Post Office Box:** 14508  
**Manufacturer's Address1:**  
**Manufacturer's Address2:** SAINT LOUIS, MO 63178  
**Manufacturer's Country:** US  
**General Information Telephone:** 800-325-3010  
**Emergency Telephone:** (314) 771-5765  
**Emergency Telephone:** (314) 771-5765  
**Proprietary:** N  
**Reviewed:** Y  
**Published:** Y  
**CAGE:** 21076

**Contractor Information**

**Contractor's Name:** SIGMA CHEMICAL COMPANY  
**Contractor's Address1:** 3050 SPRUCE ST  
**Contractor's Address2:** ST LOUIS, MO 63178  
**Contractor's Telephone:** 314-771-5765  
**Contractor's CAGE:** 21076



**Section 2 - Composition/Information on Ingredients  
GOLD CHLORIDE SOLUTION, HT100-1, HT100-4**

**Ingredient Name:** GOLD CHLORIDE SOLUTION

**Ingredient CAS Number: Ingredient CAS Code:** X

**RTECS Number: RTECS Code:** X

**=WT: =WT Code:**

**=Volume: =Volume Code:**

**>WT: >WT Code:**

**>Volume: >Volume Code:**

**<WT: <WT Code:**

**<Volume: <Volume Code:**

**% Low WT: % Low WT Code:**

**% High WT: % High WT Code:**

**% Low Volume: % Low Volume Code:**

**% High Volume: % High Volume Code:**

**% Text:** N/P

**% Environmental Weight:**

**Other REC Limits:** N/P

**OSHA PEL:** N/P **OSHA PEL Code:** M

**OSHA STEL:** N/P **OSHA STEL Code:** M

**ACGIH TLV:** N/P **ACGIH TLV Code:** M

**ACGIH STEL:** N/P **ACGIH STEL Code:** M

**EPA Reporting Quantity:**

**DOT Reporting Quantity:**

**Ozone Depleting Chemical:**

**Section 3 - Hazards Identification, Including Emergency Overview  
GOLD CHLORIDE SOLUTION, HT100-1, HT100-4**

None Listed

**Section 4 - First Aid Measures  
GOLD CHLORIDE SOLUTION, HT100-1, HT100-4**



None Listed

**Section 5 - Fire Fighting Measures**  
**GOLD CHLORIDE SOLUTION, HT100-1, HT100-4**

**Fire Fighting Procedures:**

WEAR (NIOSH APPROVED - FP N) SELF-CONTAINED BREATHING APPARATUS AND FULL PROTECTIVE CLOTHING TO PREVENT CONTACT WITH SKIN AND EYES.

**Unusual Fire or Explosion Hazard:**

N/P

**Extinguishing Media:**

NONCOMBUSTIBLE. USE EXTINGUISHING MEDIA APPROPRIATE TO SURROUNDING FIRE CONDITIONS.

**Flash Point:** Flash Point Text: N/P

**Autoignition Temperature:**

Autoignition Temperature Text: N/P

Lower Limit(s):

Upper Limit(s):

**Section 6 - Accidental Release Measures**  
**GOLD CHLORIDE SOLUTION, HT100-1, HT100-4**

None Listed

**Section 7 - Handling and Storage**  
**GOLD CHLORIDE SOLUTION, HT100-1, HT100-4**

None Listed

**Section 8 - Exposure Controls & Personal Protection**  
**GOLD CHLORIDE SOLUTION, HT100-1, HT100-4**

**Respiratory Protection:**

WEAR APPROPRIATE NIOSH-APPROVED RESPIRATOR.

**Ventilation:**

MECHANICAL EXHAUST IS REQUIRED.

**Protective Gloves:**

CHEMICAL-RESISTANT GLOVES.

**Eye Protection:** ANSI APPROVED CHEMICAL SAFETY GOGGLES (FP N).

**Other Protective Equipment:** SAFETY SHOWER AND EYEBATH (MEETING ANSI DESIGN CRITERIA - FP N). WEAR PROTECTIVE CLOTHING.

**Work Hygienic Practices:** WASH THOROUGHLY AFTER HANDLING.

**Supplemental Health & Safety Information:** PHYSICAL AND CHEMICAL PROPERTIES (CONT): SOLUBILITY: ETHER - SOLUABLE, ETHANOL - SOLUABLE.

**Section 9 - Physical & Chemical Properties**  
**GOLD CHLORIDE SOLUTION, HT100-1, HT100-4**

**HCC:**

**NRC/State License Number:**

**Net Property Weight for Ammo:**

**Boiling Point:** Boiling Point Text: N/P

**Melting/Freezing Point:** Melting/Freezing Text: N/P

**Decomposition Point:** Decomposition Text: N/P

**Vapor Pressure:** N/P **Vapor Density:** N/P

**Percent Volatile Organic Content:**

**Specific Gravity:** N/P

**Volatile Organic Content Pounds per Gallon:**

pH: N/P

**Volatile Organic Content Grams per Liter:**

Viscosity: N/P

**Evaporation Weight and Reference: N/P**

Solubility in Water: SOLUBLE

Appearance and Odor: LIQUID. ODOR: NONE SPECIFIED BY MANUFACTURER (FP N).

Percent Volatiles by Volume: N/P

Corrosion Rate: N/P

**Section 10 - Stability & Reactivity Data  
GOLD CHLORIDE SOLUTION, HT100-1, HT100-4****Stability Indicator:** YES**Materials to Avoid:**

REDUCING AGENTS.

**Stability Condition to Avoid:**

PROTECT FROM LIGHT.

**Hazardous Decomposition Products:**

DECOMPOSES ON HEATING TO CHLORINE GAS, HYDROGEN CHLORIDE AND METALLIC GOLD.

**Hazardous Polymerization Indicator:** NO**Conditions to Avoid Polymerization:**

N/P

**Section 11 - Toxicological Information  
GOLD CHLORIDE SOLUTION, HT100-1, HT100-4****Toxicological Information:**

TO THE BEST OF THE MANUFACTURER'S KNOWLEDGE, THE CHEMICAL, PHYSICAL AND TOXICOLOGICAL PROPERTIES HAVE NOT BEEN THOROUGHLY INVESTIGATED.

**Section 12 - Ecological Information  
GOLD CHLORIDE SOLUTION, HT100-1, HT100-4****Ecological Information:**

DATA NOT YET AVAILABLE.

**Section 13 - Disposal Considerations  
GOLD CHLORIDE SOLUTION, HT100-1, HT100-4**

None Listed

**Section 14 - MSDS Transport Information  
GOLD CHLORIDE SOLUTION, HT100-1, HT100-4****Transport Information:**

CONTACT SIGMA CHEMICAL COMPANY FOR TRANSPORTATION INFORMATION.

**Section 15 - Regulatory Information  
GOLD CHLORIDE SOLUTION, HT100-1, HT100-4****SARA Title III Information:**

N/P

**Federal Regulatory Information:**

EUROPEAN INFORMATION. CAUTION: SUBSTANCE NOT YET FULLY TESTED. IRRITANT. R 36/37/38 IRRITATING TO EYES, RESPIRATORY SYSTEM AND SKIN. S 26 IN CASE OF CONTACT WITH EYES, RINSE



IMMEDIATELY WITH PLENTY OF WATER AND SEEK MEDICAL ADVICE. S36 WEAR SUITABLE PROTECTIVE CLOTHING.

**State Regulatory Information:**

N/P

**Section 16 - Other Information**  
**GOLD CHLORIDE SOLUTION, HT100-1, HT100-4**

**Other Information:**

FAX: USA/CANADA 1-800-325-5052; OUTSIDE USA/CANADA 314-771-5757. TELEX: 910-761-0593 OR 434475 ANSWERBACK "SIG OK COLLECT". TELEPHONE # OUTSIDE USA/CANADA CALL COLLECT 314-771-5757.

**HAZCOM Label Information**

**Product Identification:** GOLD CHLORIDE SOLUTION, HT100-1, HT100-4

**CAGE:** 21076

**Assigned Individual:** N

**Company Name:** SIGMA CHEMICAL COMPANY

**Company PO Box:**

**Company Street Address1:** 3050 SPRUCE ST

**Company Street Address2:** ST LOUIS, MO 63178 US

**Health Emergency Telephone:** (314) 771-5765

**Label Required Indicator:** Y

**Date Label Reviewed:** 10/19/2000

**Status Code:** A

**Manufacturer's Label Number:**

**Date of Label:**

**Year Procured:** N/K

**Organization Code:** F

**Chronic Hazard Indicator:** Y

**Eye Protection Indicator:** YES

**Skin Protection Indicator:** YES

**Respiratory Protection Indicator:** YES

**Signal Word:** WARNING

**Health Hazard:** Moderate

**Contact Hazard:** Slight

**Fire Hazard:** None

**Reactivity Hazard:** None

**Section 1 - Product and Company Identification**  
**H2391 HYDROXYLAMINE HYDROCHLORIDE ACS REAGENT**

**Product Identification:** H2391 HYDROXYLAMINE HYDROCHLORIDE ACS REAGENT

**Date of MSDS:** 07/01/1997 **Technical Review Date:** 01/27/1999

**FSC:** NIIN: EMPTY

**Submitter:** F BT

**Status Code:** A

**MFN:** 01

**Article:** N

**Kit Part:** N

**Manufacturer's Information**

**Manufacturer's Name:** SIGMA CHEMICAL COMPANY

**Post Office Box:** 14508

**Manufacturer's Address1:** 3050 SPRUCE ST

**Manufacturer's Address2:** ST. LOUIS, MO 63178

**Manufacturer's Country:** US



**General Information Telephone:**  
**Emergency Telephone:** 314-771-5765  
**Emergency Telephone:** 314-771-5765  
**Proprietary:** N  
**Reviewed:** Y  
**Published:** Y  
**CAGE:** 21076

#### **Contractor Information**

**Contractor's Name:** ALDRICH CHEMICAL CO INC  
**Post Office Box:** 355  
**Contractor's Address1:** 1001 WEST ST PAUL AVE  
**Contractor's Address2:** MILWAUKEE, WI 53233  
**Contractor's Telephone:** 414-273-3850  
**Contractor's CAGE:** 60928

#### **Contractor Information**

**Contractor's Name:** FLUKA CHEMICAL CORP  
**Contractor's Address1:** 1001 WEST ST PAUL  
**Contractor's Address2:** MILWAUKEE, WI 53233  
**Contractor's Telephone:** 414-273-3850  
**Contractor's CAGE:** 63181

#### **Contractor Information**

**Contractor's Name:** SIGMA CHEMICAL COMPANY  
**Contractor's Address1:** 3050 SPRUCE ST  
**Contractor's Address2:** ST LOUIS, MO 63178  
**Contractor's Telephone:** 314-771-5765  
**Contractor's CAGE:** 21076

### **Section 2 - Compositon/Information on Ingredients H2391 HYDROXYLAMINE HYDROCHLORIDE ACS REAGENT**

**Ingredient Name:** HYDROXYLAMINE HYDROCHLORIDE

**Ingredient CAS Number:** 5470-11-1 **Ingredient CAS Code:** T

**RTECS Number:** NC3675000 **RTECS Code:** T

**=WT: =WT Code:**

**=Volume: =Volume Code:**

**>WT: >WT Code:**

**>Volume: >Volume Code:**

**<WT: <WT Code:**

**<Volume: <Volume Code:**

**% Low WT: % Low WT Code:**

**% High WT: % High WT Code:**

**% Low Volume: % Low Volume Code:**



**% High Volume: % High Volume Code:**

**% Text: N/P**

**% Environmental Weight:**

**Other REC Limits: N/P**

**OSHA PEL: N/P OSHA PEL Code:**

**OSHA STEL: N/P OSHA STEL Code:**

**ACGIH TLV: N/P ACGIH TLV Code:**

**ACGIH STEL: N/P ACGIH STEL Code:**

**EPA Reporting Quantity:**

**DOT Reporting Quantity:**

**Ozone Depleting Chemical: N**

**Section 3 - Hazards Identification, Including Emergency Overview  
H2391 HYDROXYLAMINE HYDROCHLORIDE ACS REAGENT**

None Listed

**Section 4 - First Aid Measures  
H2391 HYDROXYLAMINE HYDROCHLORIDE ACS REAGENT**

None Listed

**Section 5 - Fire Fighting Measures  
H2391 HYDROXYLAMINE HYDROCHLORIDE ACS REAGENT**

**Fire Fighting Procedures:**

WEAR SELF CONTAINED BREATHING APPARATUS & PROTECTIVE CLOTHING TO PREVENT CONTACT W/SKIN & EYES.

**Unusual Fire or Explosion Hazard:**

MAY EXPLODE WHEN HEATED. EMITS TOXIC FUMES UNDER FIRE CONDITIONS. CONTAINER EXPLOSION MAY OCCUR UNDER FIRE CONDITIONS. THIS MATERIAL MAY EXPLODE IF HEATED > 239F.

**Extinguishing Media:**

CO<sub>2</sub>, DRY CHEMICAL POWDER/APPROPRIATE FOAM.

**Flash Point: Flash Point Text: N/P**

**Autoignition Temperature:**

**Autoignition Temperature Text: N/P**

**Lower Limit(s):**

**Upper Limit(s):**

**Section 6 - Accidental Release Measures  
H2391 HYDROXYLAMINE HYDROCHLORIDE ACS REAGENT**

None Listed

**Section 7 - Handling and Storage  
H2391 HYDROXYLAMINE HYDROCHLORIDE ACS REAGENT**



None Listed

**Section 8 - Exposure Controls & Personal Protection**  
**H2391 HYDROXYLAMINE HYDROCHLORIDE ACS REAGENT**

**Respiratory Protection:**

WEAR APPROPRIATE NIOSH/MSHA APPROVED RESPIRATOR.

**Ventilation:**

USE ONLY IN A CHEMICAL FUME HOOD.

**Protective Gloves:**

CHEMICAL RESISTANT

**Eye Protection:** SAFETY GOGGLES, FACESHIELD 8-INCH MINIMUM

**Other Protective Equipment:** PROTECTIVE CLOTHING, SAFETY SHOWER, EYE BATH,

**Work Hygienic Practices:** REMOVE/LAUNDER CONTAMINATED CLOTHING BEFORE REUSE. WASH THOROUGHLY AFTER HANDLING. DISCARD CONTAMINATED SHOES.

**Supplemental Health & Safety Information:** TOXIC. HARMFUL: DANGER OF SERIOUS DAMAGE TO HEALTH BY PROLONGED EXPOSURE IF SWALLOWED. AVOID RELEASE TO THE ENVIRONMENT.

**Section 9 - Physical & Chemical Properties**  
**H2391 HYDROXYLAMINE HYDROCHLORIDE ACS REAGENT**

**HCC:**

**NRC/State License Number:**

**Net Property Weight for Ammo:**

**Boiling Point: Boiling Point Text:** N/P

**Melting/Freezing Point: =159.C, 318.2F Melting/Freezing Text:**

**Decomposition Point: Decomposition Text:** N/P

**Vapor Pressure: N/P Vapor Density: N/P**

**Percent Volatile Organic Content:**

**Specific Gravity:** 1.670

**Volatile Organic Content Pounds per Gallon:**

**pH:** N/P

**Volatile Organic Content Grams per Liter:**

**Viscosity:** N/P

**Evaporation Weight and Reference:** N/P

**Solubility in Water:** N/P

**Appearance and Odor:** WHITE CRYSTALLINE POWDER

**Percent Volatiles by Volume:** N/P

**Corrosion Rate:** N/P

**Section 10 - Stability & Reactivity Data**  
**H2391 HYDROXYLAMINE HYDROCHLORIDE ACS REAGENT**

**Stability Indicator:** YES

**Materials to Avoid:**

STRONG OXIDIZING AGENTS

**Stability Condition to Avoid:**

HEAT, OPEN FLAME, FIRE & OTHER IGNITION SOURCES, AIR/MOISTURE

**Hazardous Decomposition Products:**

NITROGEN OXIDES, HYDROGEN CHLORIDE GAS

**Hazardous Polymerization Indicator:** NO

**Conditions to Avoid Polymerization:**

N/P

**Section 11 - Toxicological Information**  
**H2391 HYDROXYLAMINE HYDROCHLORIDE ACS REAGENT**



**Toxicological Information:**

LABORATORY EXPERIMENTS HAVE SHOWN MUTAGENIC EFFECTS. TO THE BEST OF OUR KNOWLEDGE THE TOXICOLOGICAL PROPERTIES HAVE NOT BEEN THOROUGHLY INVESTIGATED.

**Section 12 - Ecological Information**

**H2391 HYDROXYLAMINE HYDROCHLORIDE ACS REAGENT**

**Ecological Information:**

DATA NOT YET AVAILABLE.

**Section 13 - Disposal Considerations**

**H2391 HYDROXYLAMINE HYDROCHLORIDE ACS REAGENT**

None Listed

**Section 14 - MSDS Transport Information**

**H2391 HYDROXYLAMINE HYDROCHLORIDE ACS REAGENT**

**Transport Information:**

CONTACT SIGMA CHEMICAL COMPANY FOR TRANSPORTATION INFORMATION.

**Section 15 - Regulatory Information**

**H2391 HYDROXYLAMINE HYDROCHLORIDE ACS REAGENT**

**SARA Title III Information:**

N/P

**Federal Regulatory Information:**

N/P

**State Regulatory Information:**

EUROPEAN INFORMATION TOXIC. R22 HARMFUL IF SWALLOWED. R36/38 IRRITATING TO EYES & SKIN. R43 MAY CAUSE SENSITIZATION BY SKIN CONTACT. R48/22 HARMFUL: DANGER OF SERIOUS DAMAGE TO HEALTH BY PROLONGED EXPOSURE IF SWALLOWED. R50 VERY TOXIC TO AQUATIC ORGANISMS. S22 DON'T BREATHE DUST. S24 AVOID CONTACT W/SKIN. S37 WEAR SUITABLE GLOVES. S61 AVOID RELEASE TO THE ENVIRONMENT.

**Section 16 - Other Information**

**H2391 HYDROXYLAMINE HYDROCHLORIDE ACS REAGENT**

**Other Information:**

THE ABOVE INFORMATION IS BELIEVED TO BE CORRECT BUT DOES NOT PURPORT TO BE ALL INCLUSIVE & SHALL BE USED ONLY AS A GUIDE. SIGMA, ALDRICH, FLUKA SHALL NOT BE HELD LIABLE FOR ANY DAMAGE RESULTING FROM HANDLING/FROM CONTACT W/THE ABOVE PRODUCT. SEE REVERSE SIDE OF INVOICE/PACKING SLIP FOR ADDITIONAL TERMS & CONDITIONS OF SALE. COPYRIGHT 1997 SIGMA CHEMICAL CO., ALDRICH CHEMICAL CO., INC., FLUKA CHEMIE AG. LICENSE GRANTED TO MAKE UNLIMITED PAPER COPIES FOR INTERNAL USE ONLY.

**HAZCOM Label Information**

**Product Identification:** H2391 HYDROXYLAMINE HYDROCHLORIDE ACS REAGENT

**CAGE:** 21076

**Assigned Individual:** N

**Company Name:** SIGMA CHEMICAL COMPANY

**Company PO Box:**

**Company Street Address1:** 3050 SPRUCE ST

**Company Street Address2:** ST LOUIS, MO 63178 US

**Health Emergency Telephone:** 314-771-5765

**Label Required Indicator:** Y

**Date Label Reviewed:** 01/27/1999



**Status Code:** A  
**Manufacturer's Label Number:**  
**Date of Label:**  
**Year Procured:** N/K  
**Organization Code:** G  
**Chronic Hazard Indicator:** N/P  
**Eye Protection Indicator:** N/P  
**Skin Protection Indicator:** N/P  
**Respiratory Protection Indicator:** N/P  
**Signal Word:** N/P  
**Health Hazard:**  
**Contact Hazard:**  
**Fire Hazard:**  
**Reactivity Hazard:**

### **Section 1 - Product and Company Identification** **MAGNESIUM SULFATE, 5691**

**Product Identification:** MAGNESIUM SULFATE, 5691  
**Date of MSDS:** 12/08/1996 **Technical Review Date:** 03/09/2000  
**FSC: NIIN:** EMPTY  
**Submitter:** N EN  
**Status Code:** A  
**MFN:** 01  
**Article:** N  
**Kit Part:** N

#### **Manufacturer's Information**

**Manufacturer's Name:** MALLINCKRODT BAKER INC  
**Manufacturer's Address1:** 222 RED SCHOOL LANE  
**Manufacturer's Address2:** PHILLIPSBURG, NJ 08865  
**Manufacturer's Country:** US  
**General Information Telephone:** 800-582-2537  
**Emergency Telephone:** 908-859-2151  
**Other Number for MSDS Information:** M0234  
**Emergency Telephone:** 908-859-2151  
**Chemtec Telephone:** (800)424-9300  
**Proprietary:** N  
**Reviewed:** Y  
**Published:** Y  
**CAGE:** 70829

#### **Contractor Information**

**Contractor's Name:** MALLINCKRODT BAKER, INC. (FORMERLY J.T. BAKER INC)  
**Contractor's Address1:** 222 RED SCHOOL LANE  
**Contractor's Address2:** PHILLIPSBURG, NJ 08865-2219  
**Contractor's Telephone:** 800-582-2537  
**Contractor's CAGE:** 70829

### **Section 2 - Composition/Information on Ingredients** **MAGNESIUM SULFATE, 5691**

**Ingredient Name:** MAGNESIUM SULFATE; (MAGNESIUM SULFATE ANHYDROUS)  
**Ingredient CAS Number:** 7487-88-9 **Ingredient CAS Code:** T



**RTECS Number:** OM4500000 **RTECS Code:** T

**=WT: =WT Code:**

**=Volume: =Volume Code:**

**>WT: >WT Code:**

**>Volume: >Volume Code:**

**<WT: <WT Code:**

**<Volume: <Volume Code:**

**% Low WT: 99. % Low WT Code: M**

**% High WT: 100. % High WT Code: M**

**% Low Volume: % Low Volume Code:**

**% High Volume: % High Volume Code:**

**% Text:**

**% Enviromental Weight:**

**Other REC Limits: N/P**

**OSHA PEL: N/P OSHA PEL Code:**

**OSHA STEL: N/P OSHA STEL Code:**

**ACGIH TLV: N/P ACGIH TLV Code:**

**ACGIH STEL: N/P ACGIH STEL Code:**

**EPA Reporting Quantity:**

**DOT Reporting Quantity:**

**Ozone Depleting Chemical: N**

### **Section 3 - Hazards Identification, Including Emergency Overview MAGNESIUM SULFATE, 5691**

**Health Hazards Acute & Chronic:** INHALATION: DUST MAY BE SLIGHTLY IRRITATING. SORE THROAT OR COUGHING MAY OCCUR. INGESTION: SINCE MAGNESIUM SALTS ARE SLOWLY ABSORBED, ABDOMINAL PAIN, VOMITING AND DIARRHEA MAY BE THE ONLY SYMPTOMS. HO WEVER, IF ELIMINATION IS BLOCKED BY BOWEL BLOCKAGE OR OTHER REASONS, CNS DEPRESSION, LACK OF REFLEXES, HYPOCALCEMIA (DEFICIENCY OF CALCIUM IN THE BLOOD) MAY OCCUR. SKIN CONTACT: NO ADVERSE EFFECTS EXP ECTED BUT MAY CAUSE MINOR SKIN IRRITATION. EYE CONTACT: NO ADVERSE EFFECTS EXPECTED BUT DUST MAY CAUSE MECHANICAL IRRITATION. CHRONIC EXPOSURE: NO INFORMATION FOUND.

**Signs & Symptoms of Overexposure:**  
SEE HEALTH HAZARDS.

**Medical Conditions Aggravated by Exposure:**

NO INFORMATION FOUND.

**LD50 LC50 Mixture:** N/P

**Route of Entry Indicators:**

**Inhalation:** YES

**Skin:** YES

**Ingestion:** YES

**Carcinogenicity Indicators**

**NTP:** NO

**IARC:** NO

**OSHA:** NO

**Carcinogenicity Explanation:** N/P

**Section 4 - First Aid Measures  
MAGNESIUM SULFATE, 5691****First Aid:**

INHAL: REMOVE TO FRESH AIR. GET MED ATTN FOR ANY BREATHING DIFFICULTY. INGEST: GIVE SEVERAL GLASSES OF WATER TO DRINK TO DILUTE. IF LARGE AMOUNTS WERE SWALLOWED, GET MED ADVICE. SKIN CONTACT: REMOVE ANY CONTAM CLTHG. WASH SKIN W/SOAP & WATER FOR AT LEAST 15 MINUTES. GET MED ATTN IF IRRITATION DEVELOPS OR PERSISTS. EYE CONTACT: WASH THOROUGHLY W/RUNNING WATER FOR AT LEAST 15 MINUTES. GET MED ADVICE IF IRRITATION DEVELOPS. NOTE TO MD: IV ADMINISTRATION OF CALCIUM GLUCONATE WILL PARTIALLY REVERSE EFFECTS OF ACUTE MAGNESIUM TOXICITY. VENTRICULAR SUPPORT W/CALCIUM CHLORIDE INFUSION & MANNITOL FORCED DIURESIS HAS ALSO BEEN SUCCESSFUL.

**Section 5 - Fire Fighting Measures  
MAGNESIUM SULFATE, 5691****Fire Fighting Procedures:**

USE NIOSH APPROVED SCBA AND FULL PROTECTIVE EQUIPMENT (FP N).

**Unusual Fire or Explosion Hazard:**

NOT CONSIDERED TO BE A FIRE HAZARD. NOT CONSIDERED TO BE AN EXPLOSION HAZARD.

**Extinguishing Media:**

USE ANY MEANS SUITABLE FOR EXTINGUISHING SURROUNDING FIRE.

**Flash Point: Flash Point Text:** N/P

**Autoignition Temperature:**

**Autoignition Temperature Text:** N/P

**Lower Limit(s):**

**Upper Limit(s):**

**Section 6 - Accidental Release Measures  
MAGNESIUM SULFATE, 5691****Spill Release Procedures:**

VENTILATE AREA OF LEAK OR SPILL. WEAR APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT AS SPECIFIED IN EXPOSURE CONTROLS/PERSONAL PROTECTION. SPILLS: SWEEP UP AND CONTAINERIZE FOR RECLAMATION OR DISPOSAL. VACUUMING OR WET SWEEPING MAY BE USED TO AVOID DUST DISPERSAL.

**Section 7 - Handling and Storage  
MAGNESIUM SULFATE, 5691****Handling and Storage Precautions:**

**Other Precautions:****Section 8 - Exposure Controls & Personal Protection  
MAGNESIUM SULFATE, 5691****Respiratory Protection:**

PERSONAL RESPS (NIOSH APPROVED): FOR CONDITIONS OF USE WHERE EXPOSURE TO DUST OR MIST IS APPARENT, A HALF-FACE DUST/MIST RESP MAY BE WORN. FOR EMERGENCIES OR INSTANCES WHERE THE EXPOSURE LEVELS ARE NOT KNOWN, USE A FULL-FACE POSITIVE-PRESSURE, AIR-SUPPLIED RESPIRATOR. WARNING: AIR-PURIFYING RESPS DO NOT PROTECT WORKERS IN OXYGEN-DEFICIENT ATMOSPHERES.

**Ventilation:**

A SYSTEM OF LOCAL &/OR GENERAL EXHAUST IS RECOMMENDED TO KEEP EMPLOYEE EXPOSURES AS LOW AS POSSIBLE. LOCAL EXHAUST VENT IS GENERALLY PREFERRED BECAUSE IT CAN (SUPPORT)

**Protective Gloves:**

IMPERVIOUS GLOVES (FP N).

**Eye Protection:** ANSI APPROVED CHEMICAL WORKERS GOGGLES (FP N).

**Other Protective Equipment:** EYE WASH AND DELUGE SHOWER MEETING ANSI DESIGN CRITERIA (FP N). WEAR CLEAN BODY-COVERING CLOTHING.

**Work Hygienic Practices:** N/P

**Supplemental Health & Safety Information:** VENT: CONTROL EMISSIONS OF CONTAMINANT AT ITS SOURCE, PREVENTING DISPERSION OF IT INTO THE GENERAL WORK AREA. PLEASE REFER TO ACGIH DOCUMENT, INDUSTRIAL VENTILATION, A MANUAL OF RECOMMENDED PRACTICES, MOST RECENT EDITION, FOR DETAILS. AIRBORNE EXPOSURE LIMITS: NONE ESTABLISHED.

**Section 9 - Physical & Chemical Properties  
MAGNESIUM SULFATE, 5691****HCC:**

**NRC/State License Number:**

**Net Property Weight for Ammo:**

**Boiling Point:** Boiling Point Text: NOT APPLICABLE

**Melting/Freezing Point:** =1124.C, #####F **Melting/Freezing Text:** DECOMPOSES (TOX INFO)

**Decomposition Point:** =1124.C, 2055.2F **Decomposition Text:**

**Vapor Pressure:** NO INFO FOUND **Vapor Density:** N/K

**Percent Volatile Organic Content:**

**Specific Gravity:** 1.67

**Volatile Organic Content Pounds per Gallon:**

**pH:** TOX INFO

**Volatile Organic Content Grams per Liter:**

**Viscosity:** N/P

**Evaporation Weight and Reference:** NO INFO FOUND

**Solubility in Water:** VERY SOLUBLE

**Appearance and Odor:** TRANSPARENT CRYSTALS, OR WHITE POWDER; ODORLESS.

**Percent Volatiles by Volume:** N/P

**Corrosion Rate:** N/P

**Section 10 - Stability & Reactivity Data  
MAGNESIUM SULFATE, 5691**

**Stability Indicator:** YES

**Materials to Avoid:**

ETHOXY ETHYL ALCOHOLS, ARSENATES, PHOSPHATES, TARTRATES, LEAD, BARIUM, STRONTIUM, AND CALCIUM.

**Stability Condition to Avoid:**

STABLE UNDER ORDINARY CONDITIONS OF USE AND STORAGE. LOSES SOME MOISTURE ON EXPOSURE TO DRY AIR AT ROOM TEMPERATURE. CONDITIONS TO AVOID: HEAT, MOISTURE, INCOMPATIBLES.

**Hazardous Decomposition Products:**

OXIDES OF SULFUR AND THE CONTAINED METAL.

**Hazardous Polymerization Indicator:** NO**Conditions to Avoid Polymerization:**

N/P

**Section 11 - Toxicological Information  
MAGNESIUM SULFATE, 5691**

**Toxicological Information:**

NO LD50/LC50 INFORMATION FOUND RELATING TO NORMAL ROUTES OF OCCUPATIONAL EXPOSURE. INVESTIGATED AS A MUTAGEN, REPRODUCTIVE EFFECTOR. CANCER LISTS - MAGNESIUM SULFATE ANHYDROUS (7487-88-9): NTP CARCIN - KNOWN: NO; ANTICIPATED: NO; IARC CATEGORY: NONE. PHYSICAL DATA: MELTING POINT: 1124C(2055F) DECOMPOSES. LOSES ALL WATERS OF HYDRATION @ 250C(482F). PH: AQUEOUS SOLUTION IS NEUTRAL OR SLIGHTLY ACID.

**Section 12 - Ecological Information  
MAGNESIUM SULFATE, 5691**

**Ecological Information:**

ENVIRONMENTAL FATE: NO INFORMATION FOUND. ENVIRONMENTAL TOXICITY: NO INFORMATION FOUND.

**Section 13 - Disposal Considerations  
MAGNESIUM SULFATE, 5691**

**Waste Disposal Methods:**

WHATEVER CANNOT BE SAVED FOR RECOVERY OR RECYCLING SHOULD BE MANAGED IN APPROPRIATE & APPROVED WASTE DISPOSAL FACILITY. PROCESSING, USE OR CONTAMINATION OF THIS PROD MAY CHANGE THE WASTE MANAGEMENT OPTIONS. STATE & LOCAL DISPOSAL REGS MAY DIFFER FROM FED DISPOSAL REGS. DISPOSE OF CNTNR & UNUSED CONTENTS I/A/W FEDERAL, STATE & LOCAL REQS.

**Section 14 - MSDS Transport Information  
MAGNESIUM SULFATE, 5691**

**Transport Information:**

NOT REGULATED.

**Section 15 - Regulatory Information  
MAGNESIUM SULFATE, 5691**

**SARA Title III Information:**

MAGNESIUM SULFATE ANHYDROUS (487-88-9) - FEDERAL, STATE & LOCAL REGULATIONS - PART 1 - SARA 302: RQ-NO; TPQ-NO. SARA 313: LIST-NO; CHEMICAL CATG-NO. SARA 311/312: ACUTE-YES; CHRONIC-NO; FIRE-NO; PRESS URE-NO; REACTIVITY-NO. (PURE / SOLID).

**Federal Regulatory Information:**

MAGNESIUM SULFATE ANHYDROUS (7487-88-9): CHEMICAL INVENTORY STATUS - PART 1 - TSCA-YES; EC-YES; JAPAN-YES; AUSTRALIA-YES. CHEMICAL INVENTORY STATUS - PART 2 - KOREA-YES; DSL-YES; NDSL-NO; PHIL-YES. FEDERAL, STATE & INTERNATIONAL REGULATIONS - PART 2 - CERCLA-NO; RCRA 261.33-NO; TSCA 8(D)-NO. CHEMICAL WEAPONS CONVENTION: NO. TSCA 12(B): NO. CDTA: NO. AUSTRALIAN HAZCHEM CODE: NO INFO FOUND. POISON SCHEDULE: NO INFO FOUND. WHMIS: THIS



MSDS HAS BEEN PREPARED ACCORDING TO THE HAZARD CRITERIA OF THE CONTROLLED PRODUCTS REGULATIONS (CPR) & MSDS CONTAINS ALL INFO REQUIRED BY CPR.

**State Regulatory Information:**

N/P

**Section 16 - Other Information  
MAGNESIUM SULFATE, 5691**

**Other Information:**

NFPA RATINGS: HLTH 1; FLAMMABILITY 0; REACTIVITY 0. LABEL HAZARD WARNING: CAUTION! MAY BE HARMFUL IF SWALLOWED. LABEL PRECS: KEEP CNTNR CLOSED. WASH THOROUGHLY AFTER HANDLING. LABEL FIRE AID: IF SWALLOWED, GIVE SEVERAL GLASSES OF WATER TO DRINK TO DILUTE. IF LARGE AMOUNTS WERE SWALLOWED, GET MEDICAL ADVICE. PRODUCT USE: LAB REAGENT. REVISION INFO: NEW 16 SECTION MSDS FORMATL, ALL SECTIONS HAVE BEEN REVISED. JT BAKER SAF-T-DATA RATINGS: HEALTH RATING: 1-SLIGHT; FLAMMABILITY RATING: 0-NONE; REACTIVITY RATING: 0-NONE. CONTACT RATING: 1-SLIGHT. LAB PROT EQUIP: GOGGLES; LAB COAT. STORAGE COLOR CODE : ORANGE (GENERAL STORAGE).

**HAZCOM Label Information**

**Product Identification:** MAGNESIUM SULFATE, 5691

**CAGE:** 70829

**Assigned Individual:** N

**Company Name:** MALLINCKRODT BAKER, INC. (FORMERLY J.T. BAKER INC)

**Company PO Box:**

**Company Street Address1:** 222 RED SCHOOL LANE

**Company Street Address2:** PHILLIPSBURG, NJ 08865-2219 US

**Health Emergency Telephone:** 908-859-2151

**Label Required Indicator:** Y

**Date Label Reviewed:** 03/10/2000

**Status Code:** A

**Manufacturer's Label Number:**

**Date of Label:**

**Year Procured:** N/K

**Organization Code:** F

**Chronic Hazard Indicator:** N

**Eye Protection Indicator:** YES

**Skin Protection Indicator:** YES

**Respiratory Protection Indicator:** YES

**Signal Word:** CAUTION

**Health Hazard:** Slight

**Contact Hazard:** Slight

**Fire Hazard:** None

**Reactivity Hazard:** None

**Section 1 - Product and Company Identification  
METHYLENE CHLORIDE**

**Product Identification:** METHYLENE CHLORIDE

**Date of MSDS:** 01/01/1985 **Technical Review Date:** 12/26/1984

**FSC:** 6810 **NIIN:** 00-616-9188

**Submitter:** DDG

**Status Code:** C

**MFN:** 01

**Article:** N

**Kit Part:** N



### Manufacturer's Information

**Manufacturer's Name:** YANCY MINERALS INCORPORATED  
**Manufacturer's Address1:**  
**Manufacturer's Address2:** N/P, NK 00000  
**Manufacturer's Country:** NK  
**General Information Telephone:**  
**Emergency Telephone:** (203)624-8067  
**Emergency Telephone:** (203)624-8067  
**MSDS Preparer's Name:** N/P  
**Proprietary:** N  
**Reviewed:** Y  
**Published:** Y  
**CAGE:** 95652  
**Special Project Code:** N

### Item Description

**Item Name:** DICHLOROMETHANE, TECHNICAL  
**Item Manager:** S9G  
**Specification Number:** MIL-D-6998  
**Type/Grade/Class:** NONE  
**Unit of Issue:** DR **Quantitative Expression:** 00000000055GL  
**Unit of Issue Quantity:** 1  
**Type of Container:** DRUM

### Contractor Information

**Contractor's Name:** YANCY MINERALS INCORPORATED  
**Contractor's Address1:** UNKNOWN  
**Contractor's Address2:** UNKNOWN, NK 00000  
**Contractor's Telephone:** UNKNOWN  
**Contractor's CAGE:** 95652

### Section 2 - Composition/Information on Ingredients METHYLENE CHLORIDE

**Ingredient Name:** METHYLENE CHLORIDE (SARA III)

**Ingredient CAS Number:** 75-09-2 **Ingredient CAS Code:** M

**RTECS Number:** PA8050000 **RTECS Code:** M

**=WT: =WT Code:**

**=Volume: =Volume Code:**

**>WT: >WT Code:**

**>Volume: >Volume Code:**

**<WT: <WT Code:**

**<Volume: <Volume Code:**

**% Low WT: % Low WT Code:**

**% High WT: % High WT Code:**



**% Low Volume: % Low Volume Code:**

**% High Volume: % High Volume Code:**

**% Text: 100**

**% Environmental Weight:**

**Other REC Limits: N/P**

**OSHA PEL: 500 PPM/C,1000; Z2 OSHA PEL Code: M**

**OSHA STEL: OSHA STEL Code:**

**ACGIH TLV: 50 PPM, A2; 9192 ACGIH TLV Code: M**

**ACGIH STEL: N/P ACGIH STEL Code:**

**EPA Reporting Quantity: 1000 LBS**

**DOT Reporting Quantity: 1000 LBS**

**Ozone Depleting Chemical: N**

### **Section 3 - Hazards Identification, Including Emergency Overview METHYLENE CHLORIDE**

**Health Hazards Acute & Chronic: N/P**

**Signs & Symptoms of Overexposure:**

LIGHT HEADEDNESS, MENTAL CONFUSION, NAUSEA, HEADACHE. TINGLING OR CREEPING SKIN FEELING ON INHALATION.

**Medical Conditions Aggravated by Exposure:**

N/P

**LD50 LC50 Mixture: N/P**

**Route of Entry Indicators:**

**Inhalation: N/P**

**Skin: N/P**

**Ingestion: N/P**

**Carcinogenicity Indicators**

**NTP: N/P**

**IARC: N/P**

**OSHA: N/P**

**Carcinogenicity Explanation: N/P**

### **Section 4 - First Aid Measures METHYLENE CHLORIDE**

**First Aid:**

REMOVE TO FRESH AIR, IF UNCONSCIOUS, USE ARTIFICIAL RESPIRATION & CALL A PHYSICIAN, KEEP WARM & COMFORTABLE. FOR EYE CONTACT, WASH WITH WATER FOR 15 MIN. IN CASE OF SKIN CONTACT, WASH WITH SOAP & WATER

### **Section 5 - Fire Fighting Measures**

**METHYLENE CHLORIDE****Fire Fighting Procedures:**

WEAR SELF-CNTD BRTHG,APP H\*20 SPRAY TO COOL CONTR.

**Unusual Fire or Explosion Hazard:**

MAY DECOMPOSE & GIVE PHOSGENE GAS.

**Extinguishing Media:**

CO\*2, FOAM, DRY CHEM & H\*2O FOG.

**Flash Point:** Flash Point Text: NON-FLAMMABLE

**Autoignition Temperature:**

Autoignition Temperature Text: N/A

Lower Limit(s): 15.5

Upper Limit(s): 66.0

**Section 6 - Accidental Release Measures****METHYLENE CHLORIDE****Spill Release Procedures:**

ALLOW MATERIAL TO VAPORIZE.KEEP UNPROTECTED EMPLOYEES AWAY.REMOVE IGNITION SOURCES.CLOSE VALVE IF PERTINENT & WITHOUT RISK.

**Section 7 - Handling and Storage****METHYLENE CHLORIDE****Handling and Storage Precautions:****Other Precautions:****Section 8 - Exposure Controls & Personal Protection****METHYLENE CHLORIDE****Respiratory Protection:**

SELF-CONTAINEE BREATHING APPARATUS;POSITIVE PRESSUR HOSE MASKS

**Ventilation:**

PROVIDE MECHAN(GEN/LOCAL EXHAUST)VENT TO MAINTN <TLV

**Protective Gloves:**

IMPERVIOUS

**Eye Protection:** GOGGLES/FACE SHIELD

**Other Protective Equipment:** EYE WASH STATION. APRONS. SPECIAL IMPERVIOUS CLOTHING.

**Work Hygenic Practices:** N/P

**Supplemental Health & Safety Information:** MSDS NOT DATED & SIGNED

**Section 9 - Physical & Chemical Properties****METHYLENE CHLORIDE**

HCC: T4

**NRC/State License Number:**

**Net Property Weight for Ammo:**

**Boiling Point:** Boiling Point Text: 104F

**Melting/Freezing Point:** Melting/Freezing Text: N/A

**Decomposition Point:** Decomposition Text: N/A

**Vapor Pressure:** 350 Vapor Density: 2.93

**Percent Volatile Organic Content:**

**Specific Gravity:** 1.326



**Volatile Organic Content Pounds per Gallon:**

pH: N/P

**Volatile Organic Content Grams per Liter:**

Viscosity: N/P

Evaporation Weight and Reference: 1.8

Solubility in Water: MODERATE

Appearance and Odor: CLEAR,COLORLESS LIQUID WITH PLEASANT,AROMATIC ODOR

Percent Volatiles by Volume: 100

Corrosion Rate: N/P

**Section 10 - Stability & Reactivity Data  
METHYLENE CHLORIDE**

**Stability Indicator:** YES

**Materials to Avoid:**

ALUMINUM,POTASSIUM,SODIUM

**Stability Condition to Avoid:**

EXCESSIVE HEAT,AUTOIGNITION TEMPERATURE 1180-1220F

**Hazardous Decomposition Products:**

PHOSGENE GAS

**Hazardous Polymerization Indicator:** NO

**Conditions to Avoid Polymerization:**

HIGH TEMPERATURE

**Section 11 - Toxicological Information  
METHYLENE CHLORIDE**

**Toxicological Information:**

N/P

**Section 12 - Ecological Information  
METHYLENE CHLORIDE**

**Ecological Information:**

N/P

**Section 13 - Disposal Considerations  
METHYLENE CHLORIDE**

**Waste Disposal Methods:**

RESIDUE MAY BE Poured ON SAND,EARTH OR ASHES AT A SAFE DISTANCE FROM OCCUPIED AREAS & ALLOWED TO EVAPORATE INTO THE ATMOSPHERE,ACCORDLY IN CONSULTATION WITH LOCAL,STATE & FEDERAL AUTHORITIES.

**Section 14 - MSDS Transport Information  
METHYLENE CHLORIDE**

**Transport Information:**

N/P

**Section 15 - Regulatory Information  
METHYLENE CHLORIDE**

**SARA Title III Information:**

N/P

**Federal Regulatory Information:**

N/P

**State Regulatory Information:**

N/P

**Section 16 - Other Information****METHYLENE CHLORIDE****Other Information:**

N/P

**HMIS Transportation Information****Product Identification:** METHYLENE CHLORIDE**Transportation ID Number:** 79915**Responsible Party CAGE:** 95652**Date MSDS Prepared:** 01/01/1985**Date MSDS Reviewed:** 12/26/1984**MFN:** 12/26/1984**Submitter:** D DG**Status Code:** C**Container Information****Unit of Issue:** DR**Container Quantity:** 1**Type of Container:** DRUM**Net Unit Weight:****Article without MSDS:** N**Technical Entry NOS Shipping Number:****Radioactivity:****Form:****Net Explosive Weight:****Coast Guard Ammunition Code:****Magnetism:** N/P**AF MMAC Code:****DOD Exemption Number:****Limited Quantity Indicator:****Multiple Kit Number:** 0**Kit Indicator:** N**Kit Part Indicator:** N**Review Indicator:** Y**Additional Data:**

HANDLE WITH CARE AVOID INHALATION OF VAPORS & SKIN OR EYE CONTACT. PROVIDE ADEQUATE VENTILATION. TARGET ORGANS: SKIN, CVS, EYES & CNS.

**Department of Transportation Information****DOT Proper Shipping Name:** DICHLOROMETHANE



**DOT PSN Code:** EUP  
**Symbols:**  
**DOT PSN Modifier:**  
**Hazard Class:** 6.1  
**UN ID Number:** UN1593  
**DOT Packaging Group:** III  
**Label:** KEEP AWAY FROM FOOD  
**Special Provision(s):** N36,T13  
**Packaging Exception:** 153  
**Non Bulk Packaging:** 203  
**Bulk Packaging:** 241  
**Maximum Quantity in Passenger Area:** 60 L  
**Maximum Quantity in Cargo Area:** 220 L  
**Stow in Vessel Requirements:** A  
**Requirements Water/Sp/Other:**

**IMO Detail Information**

**IMO Proper Shipping Name:** DICHLOROMETHANE  
**IMO PSN Code:** FLF  
**IMO PSN Modifier:**  
**IMDG Page Number:** 6127  
**UN Number:** 1593  
**UN Hazard Class:** 6.1  
**IMO Packaging Group:** III  
**Subsidiary Risk Label:** -  
**EMS Number:** 6.1-02  
**Medical First Aid Guide Number:** 340

**IATA Detail Information**

**IATA Proper Shipping Name:** DICHLOROMETHANE  
**IATA PSN Code:** IYW  
**IATA PSN Modifier:**  
**IATA UN Id Number:** 1593  
**IATA UN Class:** 6.1  
**Subsidiary Risk Class:**  
**UN Packaging Group:** III  
**IATA Label:** TOXIC  
**Packaging Note for Passengers:** 605  
**Maximum Quantity for Passengers:** 60L  
**Packaging Note for Cargo:** 612  
**Maximum Quantity for Cargo:** 220L  
**Exceptions:**

**AFI Detail Information**

**AFI Proper Shipping Name:** DICHLOROMETHANE  
**AFI Symbols:**  
**AFI PSN Code:** IYW  
**AFI PSN Modifier:**  
**AFI UN Id Number:** UN1593  
**AFI Hazard Class:** 6.1  
**AFI Packing Group:** III  
**AFI Label:**  
**Special Provisions:** P5, N36  
**Back Pack Reference:** A10.5

**HAZCOM Label Information**

**Product Identification:** METHYLENE CHLORIDE  
**CAGE:** 95652  
**Assigned Individual:** N  
**Company Name:** YANCY MINERALS INCORPORATED  
**Company PO Box:**



**Company Street Address1:** UNKNOWN  
**Company Street Address2:** UNKNOWN, NK 00000 NK  
**Health Emergency Telephone:** 203-624-8067  
**Label Required Indicator:** Y  
**Date Label Reviewed:** 09/12/1990  
**Status Code:** C  
**Manufacturer's Label Number:** N/R  
**Date of Label:** 09/12/1990  
**Year Procured:** N/K  
**Organization Code:** F  
**Chronic Hazard Indicator:** Y  
**Eye Protection Indicator:** YES  
**Skin Protection Indicator:** YES  
**Respiratory Protection Indicator:** YES  
**Signal Word:** WARNING  
**Health Hazard:** Moderate  
**Contact Hazard:** Slight  
**Fire Hazard:** None  
**Reactivity Hazard:** None

### Section 1 - Product and Company Identification NICKEL CHLORIDE

**Product Identification:** NICKEL CHLORIDE  
**Date of MSDS:** 06/23/1999 **Technical Review Date:** 12/01/2000  
**FSC:** 6810 **NIIN:** 00-726-9306  
**Submitter:** D DG  
**Status Code:** C  
**MFN:** 01  
**Article:** N  
**Kit Part:** N

#### Manufacturer's Information

**Manufacturer's Name:** SPECTRUM CHEMICAL MFG. CORP.  
**Manufacturer's Address1:** 14422 SOUTH SAN PEDRO STREET  
**Manufacturer's Address2:** GARDENA, CA 90248-2027  
**Manufacturer's Country:** US  
**General Information Telephone:** 310-516-8000  
**Emergency Telephone:** 310-516-8000  
**Other Number for MSDS Information:** CODE: N3250/ CATAGLO NO: N1050,N1051  
**Emergency Telephone:** 310-516-8000  
**MSDS Preparer's Name:** G. A. BINAS  
**Chemtec Telephone:** (800)424-9300  
**Proprietary:** N  
**Reviewed:** Y  
**Published:** Y  
**CAGE:** 63415

#### Item Description

**Item Name:** NICKEL CHLORIDE,HEXAHYDRATE,TECHNICAL  
**Item Manager:**  
**Specification Number:** NK  
**Type/Grade/Class:** NK  
**Unit of Issue:** BG **Quantitative Expression:** 00000000100LB  
**Unit of Issue Quantity:** 1  
**Type of Container:**



**Contractor Information**

**Contractor's Name:** COMPTECH CORP  
**Contractor's Address1:** 15944 DERWOOD RD  
**Contractor's Address2:** ROCKVILLE, MD 20855  
**Contractor's Telephone:** 800-284-5279; 301-519-3401  
**Contract Number:** SP0-450-01-M-322  
**Contractor's CAGE:** 0BR38

**Contractor Information**

**Contractor's Name:** INDUSTRIAL CHEMICAL COMMODITIES INC  
**Contractor's Address1:** 15944 DERWOOD RD  
**Contractor's Address2:** ROCKVILLE, MD 20855  
**Contractor's Telephone:** 800-284-5279  
**Contract Number:** SP0450-00-M-SH27  
**Contractor's CAGE:** 1ELU0

**Contractor Information**

**Contractor's Name:** SPECTRUM CHEMICAL MFG. CORP.  
**Contractor's Address1:** 14422 SOUTH SAN PEDRO STREET  
**Contractor's Address2:** GARDENA, CA 90248-2027  
**Contractor's Telephone:** 310-516-8000  
**Contractor's CAGE:** 63415

**Section 2 - Composition/Information on Ingredients  
NICKEL CHLORIDE**

**Ingredient Name:** NICKEL(II) CHLORIDE HEXAHYDRATE

**Ingredient CAS Number:** 7791-20-0 **Ingredient CAS Code:** M

**RTECS Number:** QR6480000 **RTECS Code:** T

**=WT:** 100. **=WT Code:** M

**=Volume:** **=Volume Code:**

**>WT:** **>WT Code:**

**>Volume:** **>Volume Code:**

**<WT:** **<WT Code:**

**<Volume:** **<Volume Code:**

**% Low WT:** **% Low WT Code:**

**% High WT:** **% High WT Code:**

**% Low Volume:** **% Low Volume Code:**

**% High Volume:** **% High Volume Code:**

**% Text:**

**% Environmental Weight:**



**Other REC Limits:** 0.1 MG/M3 TWA

**OSHA PEL:** N/P OSHA PEL Code:

**OSHA STEL:** N/P OSHA STEL Code:

**ACGIH TLV:** N/P ACGIH TLV Code:

**ACGIH STEL:** N/P ACGIH STEL Code:

**EPA Reporting Quantity:**

**DOT Reporting Quantity:**

**Ozone Depleting Chemical:** N

### Section 3 - Hazards Identification, Including Emergency Overview NICKEL CHLORIDE

**Health Hazards Acute & Chronic:** ACUTE: VERY HAZARDOUS IN CASE OF SKIN CONTACT (IRRITANT, SENSITIZER), EYE CONTACT (IRRITANT), INHALATION. SEVERE OVEREXPOSURE CAN RESULT IN DEATH. CHRONIC: TOXIC TO KIDNEYS, LUNGS, NERVOUS SYSTEM & MUCOUS MEMBRANES. TARGET ORGANS: KIDNEYS, LUNGS, NERVOUS SYSTEM AND MUCOUS MEMBRANES.

**Signs & Symptoms of Overexposure:**

IRRITATION OF EYES, SKIN AND RESPIRATORY SYSTEM. INFLAMMATION OF EYES IS CHARACTERIZED BY REDNESS, WATERING AND ITCHING. SKIN: ITCHING, SCALING, REDDENING, OR OCCASIONALLY BLISTERING.

**Medical Conditions Aggravated by Exposure:**

NONE PROVIDED BY MFR.

**LD50 LC50 Mixture:** ACUTE ORAL RAT: LD50 < 157 MG/KG

**Route of Entry Indicators:**

**Inhalation:** N/P

**Skin:** N/P

**Ingestion:** N/P

**Carcinogenicity Indicators**

**NTP:** YES

**IARC:** YES

**OSHA:** YES

**Carcinogenicity Explanation:** CLASSIFIED AS A1 (CONFIRMED HUMAN CARCINOGEN) BY ACGIH, 1 (PROVEN FOR HUMAN) BY IARC, AND PROVEN BY OSHA. CLASSIFIED 2 (REASONABLY ANTICIPATED) BY NTP.

### Section 4 - First Aid Measures NICKEL CHLORIDE

**First Aid:**

**EYE:** REMOVE ANY CONTACT LENSES. IMMEDIATELY FLUSH EYES WITH RUNNING WATER FOR AT LEAST 15 MINS KEEPING EYELIDS OPEN. DO NOT USE AN EYE OINTMENT. SEEK MEDICAL HELP. **SKIN:** WASH IMMEDIATELY WITH SOAP & WATER. CLEAN FOLDS, CREVICES, CREASES & GROIN. COVER THE IRRITATED SKIN WITH AN EMOLLENT. IF IRRITATION PERSISTS, SEEK MEDICAL HELP. **INHALATION:** REMOVE TO FRESH AIR. GET MEDICAL HELP. **INGESTION:** DO NOT INDUCE VOMITING. IF NOT BREATHING, GIVE MOUTH TO MOUTH RESUSCITATION, GET MEDICAL HELP.



**Section 5 - Fire Fighting Measures  
NICKEL CHLORIDE**

**Fire Fighting Procedures:**

NOT AVAILABLE

**Unusual Fire or Explosion Hazard:**

NOT AVAILABLE

**Extinguishing Media:**

NOT APPLICABLE

**Flash Point: Flash Point Text:** NOT APPLICABLE

**Autoignition Temperature:**

**Autoignition Temperature Text:** NOT AP

**Lower Limit(s):** NOT APPLICAB

**Upper Limit(s):** NOT APPLICAB

**Section 6 - Accidental Release Measures  
NICKEL CHLORIDE**

**Spill Release Procedures:**

SM: USE APPROPRIATE TOOLS TO PUT THE SPILLED SOLID IN A CONVENIENT WASTE DISPOSAL CONTAINER. LG: USE A SHOVEL TO PUT THE MAIERIAL INTO A CONVENIENT WAST DISPOSAL CONTAINER. BE CAREFUL THAT THE PRODUCT IS NOT PRESENT AT A CONCENTRATION LEVEL ABOVE TLV. CHECK TLV ON THE MSDS & WITH LOCAL AUTHORITIES.

**Section 7 - Handling and Storage  
NICKEL CHLORIDE**

**Handling and Storage Precautions:**

**Other Precautions:**

**Section 8 - Exposure Controls & Personal Protection  
NICKEL CHLORIDE**

**Repiratory Protection:**

DUST RESPIRATOR. BE SURE TO USE AN APPROVED/CERTIFIED RESPIRATOR OR EQUIVALENT. A SELF CONTAINED BREATHING APPARATUS SHOULD BE USED TO AVOID INHALATION OF THE PRODUCT.

**Ventilation:**

USE PORCESS ENCLOSURES, LOCAL EXHAUST VENTILATION, OR OTHER ENGINEERING CONTROLS TO KEEP AIRBORNE LEVELS BELOW RECOMMENDED EXPOSURE LIMITS.

**Protective Gloves:**

NONE PROVIDED BY MFR.

**Eye Protection:** SPLASH GOGGLES

**Other Protective Equipment:** LAB COAT, FULL SUIT, BOOTS, GLOVES

**Work Hygenic Practices:** NONE PROVIDED BY MFR.

**Supplemental Health & Safety Information:** NONE PROVIDED BY MFR.

**Section 9 - Physical & Chemical Properties  
NICKEL CHLORIDE**

**HCC:** T4

**NRC/State License Number:**

**Net Property Weight for Ammo:**

**Boiling Point: Boiling Point Text:** NOT AVAILABLE



**Melting/Freezing Point: Melting/Freezing Text:** SUBLIMES  
**Decomposition Point: Decomposition Text:** NONE PROVIDED BY MFR.  
**Vapor Pressure:** NOT APPLICABLE **Vapor Density:** NOT AVAILA  
**Percent Volatile Organic Content:**  
**Specific Gravity:** 3.6 (WATER=1)  
**Volatile Organic Content Pounds per Gallon:**  
**pH:** NOT AVAILABLE  
**Volatile Organic Content Grams per Liter:**  
**Viscosity:** NOT AVAILABLE  
**Evaporation Weight and Reference:** NONE PROVIDED BY MFR.  
**Solubility in Water:** SOLUBLE IN COLD WATER  
**Appearance and Odor:** SOLID (DELIQUESCENT CRYSTALS SOLID), GREEN COLOR, NO ODOR INFO AVAILABLE  
**Percent Volatiles by Volume:** NONE PROVIDE  
**Corrosion Rate:** NONE PROVIDED BY MFR

#### **Section 10 - Stability & Reactivity Data NICKEL CHLORIDE**

**Stability Indicator:** YES  
**Materials to Avoid:**  
NOT AVAILABLE  
**Stability Condition to Avoid:**  
NOT AVAILABLE  
**Hazardous Decomposition Products:**  
NONE PROVIDED BY MFR.  
**Hazardous Polymerization Indicator:** NO  
**Conditions to Avoid Polymerization:**  
NONE PROVIDED BY MFR.

#### **Section 11 - Toxicological Information NICKEL CHLORIDE**

**Toxicological Information:**  
ACUTE ORAL TOXICITY LD50 (RAT) = 157 MG/KG

#### **Section 12 - Ecological Information NICKEL CHLORIDE**

**Ecological Information:**  
ECOTOXICITY: NO INFORMATION AVAILABLE. PRODUCTS OF BIODEGRADATION: POSSIBLY HAZARDOUS SHORT TERM DEGRADATION PRODUCTS ARE NOT LIKELY. HOWEVER, LONG TERM DEGRADATION PRODUCTS MAY ARISE. TOXICITY OF THE BIODEGRADATION PRODUCTS: THE PRODUCTS OF DEGRADATION ARE AS TOXIC AS THE ORIGINAL PRODUCT.

#### **Section 13 - Disposal Considerations NICKEL CHLORIDE**

**Waste Disposal Methods:**  
RECYCLE TO PROCESS, IF POSSIBLE. CONSULT YOUR LOCAL OR REGIONAL AUTHORITIES.

#### **Section 14 - MSDS Transport Information NICKEL CHLORIDE**

**Transport Information:**  
PSN: TOXIC SOLID, INORGANIC, N.O.S. (NICKEL CHLORIDE), 6.1, UN3288, III.



**Section 15 - Regulatory Information  
NICKEL CHLORIDE**

**SARA Title III Information:**

SARA 313 TOXIC CHEMICAL NOTIFICATION AND RELEASE REPORTING: NICKEL CHLORIDE. CERCLA HAZARDOUS SUBSTANCE: NICKEL CHLORIDE.

**Federal Regulatory Information:**

LISTED ON TSCA INVENTORY: NICKEL CHLORIDE.

**State Regulatory Information:**

CALIFORNIA PROP 65: THIS PRODUCT CONTAINS A CHEMICAL KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER, BIRTH DEFECTS, OR OTHER REPRODUCTIVE HARM. (CA HEALTH & SAFETY CODE SEC 25249.6); NICKEL CHLORIDE . PENNSYLVANIA RTK AND MASSACHUSETTE RTK ; NICKEL CHLORIDE.

**Section 16 - Other Information  
NICKEL CHLORIDE**

**Other Information:**

N/P

**HMIS Transportation Information**

**Product Identification:** NICKEL CHLORIDE

**Transportation ID Number:** 154598

**Responsible Party CAGE:** 63415

**Date MSDS Prepared:** 06/23/1999

**Date MSDS Reviewed:** 09/01/2000

**MFN:** 09/01/2000

**Submitter:** D DG

**Status Code:** A

**Container Information**

**Unit of Issue:** BG

**Container Quantity:** 1

**Type of Container:**

**Net Unit Weight:** 100 LBS

**Article without MSDS:** N

**Technical Entry NOS Shipping Number:**

**Radioactivity:**

**Form:**

**Net Explosive Weight:** N/A

**Coast Guard Ammunition Code:**

**Magnetism:** N/A

**AF MMAC Code:**

**DOD Exemption Number:** N/A

**Limited Quantity Indicator:** N

**Multiple Kit Number:** 0

**Kit Indicator:** N



**Kit Part Indicator:** N

**Review Indicator:** N

**Additional Data:**

PSN PER MSDS.

#### **Department of Transportation Information**

**DOT Proper Shipping Name:** TOXIC SOLID, INORGANIC, N.O.S.

**DOT PSN Code:** QLW

**Symbols:** G

**DOT PSN Modifier:**

**Hazard Class:** 6.1

**UN ID Number:** UN3288

**DOT Packaging Group:** III

**Label:** KEEP AWAY FROM FOOD

**Special Provision(s):**

**Packaging Exception:** 153

**Non Bulk Packaging:** 213

**Bulk Packaging:** 240

**Maximum Quantity in Passenger Area:** 100 KG

**Maximum Quantity in Cargo Area:** 200 KG

**Stow in Vessel Requirements:** A

**Requirements Water/Sp/Other:**

#### **IMO Detail Information**

**IMO Proper Shipping Name:** TOXIC SOLID, INORGANIC, N.O.S. o

**IMO PSN Code:** OTQ

**IMO PSN Modifier:**

**IMDG Page Number:** 6270-6

**UN Number:** 3288

**UN Hazard Class:** 6.1

**IMO Packaging Group:** I/II/III

**Subsidiary Risk Label:** -

**EMS Number:** 6.1-04

**Medical First Aid Guide Number:** T

#### **IATA Detail Information**

**IATA Proper Shipping Name:** TOXIC SOLID, INORGANIC, N.O.S. \*

**IATA PSN Code:** YJF

**IATA PSN Modifier:**

**IATA UN Id Number:** 3288

**IATA UN Class:** 6.1

**Subsidiary Risk Class:**

**UN Packaging Group:** III

**IATA Label:** TOXIC

**Packaging Note for Passengers:** 619

**Maximum Quantity for Passengers:** 100KG

**Packaging Note for Cargo:** 619

**Maximum Quantity for Cargo:** 200KG

**Exceptions:**

#### **AFI Detail Information**

**AFI Proper Shipping Name:** TOXIC SOLID, INORGANIC, N.O.S.

**AFI Symbols:** \*

**AFI PSN Code:** YHR

**AFI PSN Modifier:**

**AFI UN Id Number:** UN3288



**AFI Hazard Class:** 6.1  
**AFI Packing Group:** III  
**AFI Label:**  
**Special Provisions:** P5  
**Back Pack Reference:** A10.6

**HAZCOM Label Information**

**Product Identification:** NICKEL CHLORIDE  
**CAGE:** 63415  
**Assigned Individual:** N  
**Company Name:** SPECTRUM CHEMICAL MFG. CORP.  
**Company PO Box:**  
**Company Street Address1:** 14422 SOUTH SAN PEDRO STREET  
**Company Street Address2:** GARDENA, CA 90248-2027 US  
**Health Emergency Telephone:** 310-516-8000  
**Label Required Indicator:** Y  
**Date Label Reviewed:** 09/01/2000  
**Status Code:** A  
**Manufacturer's Label Number:**  
**Date of Label:**  
**Year Procured:** 2000  
**Organization Code:** F  
**Chronic Hazard Indicator:** Y  
**Eye Protection Indicator:** YES  
**Skin Protection Indicator:** YES  
**Respiratory Protection Indicator:** YES  
**Signal Word:** DANGER  
**Health Hazard:** Severe  
**Contact Hazard:** Moderate  
**Fire Hazard:** None  
**Reactivity Hazard:** None

**Section 1 - Product and Company Identification**  
**POTASSIUM HYDROXIDE, 5%**

**Product Identification:** POTASSIUM HYDROXIDE, 5%  
**Date of MSDS:** 01/02/1998 **Technical Review Date:** 01/14/2000  
**FSC:** NIIN: EMPTY  
**Submitter:** D DG  
**Status Code:** A  
**MFN:** 01  
**Article:** N  
**Kit Part:** N

**Manufacturer's Information**

**Manufacturer's Name:** CAROLINA BIOLOGICAL SUPPLY  
**Manufacturer's Address1:** 2700 YORK RD  
**Manufacturer's Address2:** BURLINGTON, NC 27215-3387  
**Manufacturer's Country:** US  
**General Information Telephone:** 800-227-1150/800-424-9300  
**Emergency Telephone:** 800-227-1150  
**Emergency Telephone:** 800-227-1150  
**Chemtec Telephone:** (800)424-9300  
**Proprietary:** N  
**Reviewed:** Y  
**Published:** Y  
**CAGE:** 59896



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**Contractor Information**

**Contractor's Name:** CAROLINA BIOLOGICAL SUPPLY CO

**Contractor's Address1:** 2700 YORK RD

**Contractor's Address2:** BURLINGTON, NC 27215-3387

**Contractor's Telephone:** 800-227-1150/910-584-0381

**Contract Number:** MDA414-98-A-0118-0127

**Contractor's CAGE:** 59896

**Section 2 - Compositon/Information on Ingredients  
POTASSIUM HYDROXIDE, 5%**

**Ingredient Name:** POTASSIUM HYDROXIDE

**Ingredient CAS Number:** 1310-58-3 **Ingredient CAS Code:** T

**RTECS Number:** TT2100000 **RTECS Code:** T

**=WT:** 2. **=WT Code:** M

**=Volume:** **=Volume Code:**

**>WT:** **>WT Code:**

**>Volume:** **>Volume Code:**

**<WT:** **<WT Code:**

**<Volume:** **<Volume Code:**

**% Low WT:** **% Low WT Code:**

**% High WT:** **% High WT Code:**

**% Low Volume:** **% Low Volume Code:**

**% High Volume:** **% High Volume Code:**

**% Text:**

**% Enviromental Weight:**

**Other REC Limits:** N/P

**OSHA PEL:** N/P **OSHA PEL Code:**

**OSHA STEL:** N/P **OSHA STEL Code:**

**ACGIH TLV:** NOT ESTABLISHED **ACGIH TLV Code:** T

**ACGIH STEL:** C2 MG/M3 **ACGIH STEL Code:** T

**EPA Reporting Quantity:** 1000 LBS

**DOT Reporting Quantity:** 1000 LBS

**Ozone Depleting Chemical:** N



**Section 3 - Hazards Identification, Including Emergency Overview**  
**POTASSIUM HYDROXIDE, 5%**

**Health Hazards Acute & Chronic:** TARGET ORGANS: ABDOMINAL PAIN. EYES-MAY CAUSE IRRITATION. SKIN-MAY CAUSE IRRITATION. INGESTION-MAY CAUSE GASTROINTESTINAL DISCOMFORT. INHALATION-MAY CAUSE IRRITATION TO RESPIRATORY TRACT.

**Signs & Symptoms of Overexposure:**

N/P

**Medical Conditions Aggravated by Exposure:**

N/A

**LD50 LC50 Mixture:** ORAL LD50(RAT): 365 MG (KOH) KG

**Route of Entry Indicators:**

**Inhalation:** YES

**Skin:** YES

**Ingestion:** YES

**Carcinogenicity Indicators**

**NTP:** N/P

**IARC:** N/P

**OSHA:** N/P

**Carcinogenicity Explanation:** N/P

**Section 4 - First Aid Measures**  
**POTASSIUM HYDROXIDE, 5%**

**First Aid:**

EYES-FLUSH WITH WATER FOR 15 MINS, RAISING & LOWERING EYELIDS OCCASIONALLY. GET MEDICAL AID IF IRRITATION PERSISTS. SKIN-THOROUGHLY WASH EXPOSED AREA FOR 15 MIN. REMOVE CONTAMINATED CLOTHES. LAUNDRER C ONTAMINATED CLOTHING BEFORE REUSE. GET MEDICAL AID IF IRRITATION PERSISTS. INGESTION-IF SWALLOWED, IF CONSCIOUS, GIVE PLENTY OF WATER. IMMEDIATELY CALL A PHYSICIAN OR POISON CONTROL CENTER. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON. INHALATION-REMOVE TO FRESH AIR. GIVE OXYGEN IF BREATHING IS DIFFICULT; GIVE ARTIFICIAL RESPIRATION IF BREATHING HAS STOPPED. KEEP PERSON WARM, QUIET, & GET MEDICAL AID.

**Section 5 - Fire Fighting Measures**  
**POTASSIUM HYDROXIDE, 5%**

**Fire Fighting Procedures:**

FIREFIGHTERS SHOULD WEAR SELF-CONTAINED BREATHING APPARATUS AND FULL FIRE FIGHTER'S PROTECTIVE GEAR.

**Unusual Fire or Explosion Hazard:**

N/A

**Extinguishing Media:**

USE DRY CHEMICAL, CARBON DIOXIDE OR APPROPRIATE FOAM.

**Flash Point: Flash Point Text:** N/P

**Autoignition Temperature:**

**Autoignition Temperature Text:** N/P

**Lower Limit(s):**

**Upper Limit(s):**

**Section 6 - Accidental Release Measures**  
**POTASSIUM HYDROXIDE, 5%**

**Spill Release Procedures:**

VENTILATE SPILL AREA. ELIMINATE ALL SOURCES OF IGNITION. REMOVE ALL NON-ESSENTIAL PERSONNEL FROM AREA. CLEAN-UP PERSONNEL SHOULD WEAR PROPER PERSONAL PROTECTIVE GEAR. ABSORB MATERIAL WITH SUITABLE ADSORBENT AND CONTAINERIZE FOR DISPOSAL.

**Section 7 - Handling and Storage  
POTASSIUM HYDROXIDE, 5%****Handling and Storage Precautions:****Other Precautions:****Section 8 - Exposure Controls & Personal Protection  
POTASSIUM HYDROXIDE, 5%****Respiratory Protection:**

A NIOSH/MSHA CHEMICAL CARTRIDGE RESPIRATOR SHOULD BE WORN IF PEL OR TLV IS EXCEEDED.

**Ventilation:**

LOCAL EXHAUST: YES. MECHANICAL (GENERAL): YES.

**Protective Gloves:**

RUBBER, NEOPRENE, PVC OR EQUIVALENT.

**Eye Protection:** SPLASH PROOF CHEMICAL SAFETY GOGGLES SHOULD BE WORN.

**Other Protective Equipment:** LAB COAT, EYE WASH, AND SAFETY SHOWER.

**Work Hygienic Practices:** N/P

**Supplemental Health & Safety Information:** N/P

**Section 9 - Physical & Chemical Properties  
POTASSIUM HYDROXIDE, 5%**

**HCC:** B1

**NRC/State License Number:**

**Net Property Weight for Ammo:**

**Boiling Point:** =100.C, 212.F **Boiling Point Text:**

**Melting/Freezing Point:** =0.C, 32.F **Melting/Freezing Text:**

**Decomposition Point: Decomposition Text:** N/P

**Vapor Pressure:** N/P **Vapor Density:** N/P

**Percent Volatile Organic Content:**

**Specific Gravity:** N/P

**Volatile Organic Content Pounds per Gallon:**

**pH:** N/P

**Volatile Organic Content Grams per Liter:**

**Viscosity:** N/P

**Evaporation Weight and Reference:** N/P

**Solubility in Water:** MISCIBLE WITH WATER

**Appearance and Odor:** ODORLESS.

**Percent Volatiles by Volume:** N/P

**Corrosion Rate:** N/P

**Section 10 - Stability & Reactivity Data  
POTASSIUM HYDROXIDE, 5%**

**Stability Indicator:** YES

**Materials to Avoid:**

MATERIAL DOES NOT POLYMERIZE, ACIDS.



**Stability Condition to Avoid:**

N/A

**Hazardous Decomposition Products:**

POTASSIUM OXIDE AT VERY HIGH TEMPERATURES.

**Hazardous Polymerization Indicator:** NO

**Conditions to Avoid Polymerization:**

WILL NOT OCCUR.

**Section 11 - Toxicological Information**

**POTASSIUM HYDROXIDE, 5%**

**Toxicological Information:**

SKIN-RABBIT 50 MG/24H SEVERE. MUTATION DATA REFERENCE CITED.

**Section 12 - Ecological Information**

**POTASSIUM HYDROXIDE, 5%**

**Ecological Information:**

NONE

**Section 13 - Disposal Considerations**

**POTASSIUM HYDROXIDE, 5%**

**Waste Disposal Methods:**

DISPOSE OF IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL ENVIRONMENTAL REGULATIONS. ALWAYS CONTACT A PERMITTED WASTE DISPOSER (TSD) TO ASSURE COMPLIANCE.

**Section 14 - MSDS Transport Information**

**POTASSIUM HYDROXIDE, 5%**

**Transport Information:**

POTASSIUM HYDROXIDE SOLUTION., 8, UN1814, II, CORROSIVE.

**Section 15 - Regulatory Information**

**POTASSIUM HYDROXIDE, 5%**

**SARA Title III Information:**

HAZARD CATEGORY FOR SARA SECTION 311/312 REPORTING: ACUTE.

**Federal Regulatory Information:**

ON TSCA INVENTORY. CERCLA SECTION 103: YES RQ 1000 LBS.

**State Regulatory Information:**

N/P

**Section 16 - Other Information**

**POTASSIUM HYDROXIDE, 5%**

**Other Information:**

\*\*\*\*\*P/N 74-6614\*\*\*\*\*

**HMIS Transportation Information**

**Product Identification:** POTASSIUM HYDROXIDE, 5%

**Transportation ID Number:** 151052

**Responsible Party CAGE:** 59896

**Date MSDS Prepared:** 01/02/1998

**Date MSDS Reviewed:** 01/14/2000

**MFN:** 01/14/2000

**Submitter:** D DG

**Status Code:** A

**Container Information****Unit of Issue:** NK**Container Quantity:** NK**Type of Container:****Net Unit Weight:****Article without MSDS:** N**Technical Entry NOS Shipping Number:****Radioactivity:****Form:****Net Explosive Weight:****Coast Guard Ammunition Code:****Magnetism:****AF MMAC Code:****DOD Exemption Number:** N/A**Limited Quantity Indicator:** N**Multiple Kit Number:** 0**Kit Indicator:** N**Kit Part Indicator:** N**Review Indicator:** Y**Additional Data:****Department of Transportation Information****DOT Proper Shipping Name:** POTASSIUM HYDROXIDE, SOLUTION**DOT PSN Code:** LZO**Symbols:****DOT PSN Modifier:****Hazard Class:** 8**UN ID Number:** UN1814**DOT Packaging Group:** II**Label:** CORROSIVE**Special Provision(s):** B2, T8**Packaging Exception:** 154**Non Bulk Packaging:** 202**Bulk Packaging:** 242**Maximum Quantity in Passenger Area:** 1 L**Maximum Quantity in Cargo Area:** 30 L**Stow in Vessel Requirements:** A**Requirements Water/Sp/Other:****IMO Detail Information****IMO Proper Shipping Name:** POTASSIUM HYDROXIDE, SOLUTION**IMO PSN Code:** MDV



**IMO PSN Modifier:**  
**IMDG Page Number:** 8214  
**UN Number:** 1814  
**UN Hazard Class:** 8  
**IMO Packaging Group:** II/III  
**Subsidiary Risk Label:** -  
**EMS Number:** 8-06  
**Medical First Aid Guide Number:** 705

**IATA Detail Information**

**IATA Proper Shipping Name:** POTASSIUM HYDROXIDE SOLUTION  
**IATA PSN Code:** UPY  
**IATA PSN Modifier:**  
**IATA UN Id Number:** 1814  
**IATA UN Class:** 8  
**Subsidiary Risk Class:**  
**UN Packaging Group:** II  
**IATA Label:** CORROSIVE  
**Packaging Note for Passengers:** 809  
**Maximum Quantity for Passengers:** 1L  
**Packaging Note for Cargo:** 813  
**Maximum Quantity for Cargo:** 30L  
**Exceptions:** A3

**AFI Detail Information**

**AFI Proper Shipping Name:** POTASSIUM HYDROXIDE SOLUTION  
**AFI Symbols:**  
**AFI PSN Code:** UPY  
**AFI PSN Modifier:**  
**AFI UN Id Number:** UN1814  
**AFI Hazard Class:** 8  
**AFI Packing Group:** II  
**AFI Label:**  
**Special Provisions:** P5  
**Back Pack Reference:** A12.3

**HAZCOM Label Information**

**Product Identification:** POTASSIUM HYDROXIDE, 5%  
**CAGE:** 59896  
**Assigned Individual:** N  
**Company Name:** CAROLINA BIOLOGICAL SUPPLY CO  
**Company PO Box:**  
**Company Street Address1:** 2700 YORK RD  
**Company Street Address2:** BURLINGTON, NC 27215-3387 US  
**Health Emergency Telephone:** 800-227-1150  
**Label Required Indicator:** Y  
**Date Label Reviewed:** 01/14/2000  
**Status Code:** A  
**Manufacturer's Label Number:**  
**Date of Label:**  
**Year Procured:** N/K  
**Organization Code:** F  
**Chronic Hazard Indicator:** Y  
**Eye Protection Indicator:** YES  
**Skin Protection Indicator:** YES  
**Respiratory Protection Indicator:** YES  
**Signal Word:** WARNING  
**Health Hazard:** Moderate  
**Contact Hazard:** Slight  
**Fire Hazard:** None  
**Reactivity Hazard:** Slight



**Section 1 - Product and Company Identification**  
**P6142 POTASSIUM PERMANGANATE**

**Product Identification:** P6142 POTASSIUM PERMANGANATE  
**Date of MSDS:** 09/29/1989 **Technical Review Date:** 07/19/1990  
**FSC:** 6505 **NIIN:** 00-935-6568  
**Submitter:** D DG  
**Status Code:** C  
**MFN:** 01  
**Article:** N  
**Kit Part:** N

**Manufacturer's Information**

**Manufacturer's Name:** SIGMA CHEMICAL COMPANY  
**Post Office Box:** 14508  
**Manufacturer's Address1:**  
**Manufacturer's Address2:** ST. LOUIS, MO 63178  
**Manufacturer's Country:** NK  
**General Information Telephone:** 800-325-8070  
**Emergency Telephone:** 314-771-5765  
**Emergency Telephone:** 314-771-5765  
**MSDS Preparer's Name:** N/P  
**Proprietary:** N  
**Reviewed:** Y  
**Published:** Y  
**CAGE:** 21076  
**Special Project Code:** N

**Item Description**

**Item Name:**  
**Item Manager:** S9M  
**Specification Number:** O-C-275D  
**Type/Grade/Class:** NK  
**Unit of Issue:** BT  
**Unit of Issue Quantity:** B  
**Type of Container:** BOTTLE

**Contractor Information**

**Contractor's Name:** SIGMA CHEMICAL COMPANY  
**Contractor's Address1:** 3050 SPRUCE ST  
**Contractor's Address2:** ST LOUIS, MO 63178  
**Contractor's Telephone:** 314-771-5765  
**Contractor's CAGE:** 21076

**Section 2 - Compositon/Information on Ingredients**  
**P6142 POTASSIUM PERMANGANATE**

**Ingredient Name:** POTASSIUM PERMANGANATE (SARA III)

**Ingredient CAS Number:** 7722-64-7 **Ingredient CAS Code:** M

**RTECS Number:** SD6475000 **RTECS Code:** M

**=WT: =WT Code:**

**=Volume: =Volume Code:**



**>WT: >WT Code:**

**>Volume: >Volume Code:**

**<WT: <WT Code:**

**<Volume: <Volume Code:**

**% Low WT: % Low WT Code:**

**% High WT: % High WT Code:**

**% Low Volume: % Low Volume Code:**

**% High Volume: % High Volume Code:**

**% Text: 100**

**% Environmental Weight:**

**Other REC Limits: NOT ESTABLISHED**

**OSHA PEL: 5 MG MN/M3; CEILING OSHA PEL Code: M**

**OSHA STEL: OSHA STEL Code:**

**ACGIH TLV: 5 MG MN/M3; 9192 ACGIH TLV Code: M**

**ACGIH STEL: N/P ACGIH STEL Code:**

**EPA Reporting Quantity: 100 LBS**

**DOT Reporting Quantity: 100 LBS**

**Ozone Depleting Chemical: N**

**Section 3 - Hazards Identification, Including Emergency Overview  
P6142 POTASSIUM PERMANGANATE**

**Health Hazards Acute & Chronic:** HARMFUL IF SWALLOWED, INHALED, OR ABSORBED THROUGH SKIN. MATERIAL IS EXTREMELY DESTRUCTIVE TO TISSUE OF THE MUCOUS MEMBRANES AND UPPER RESPIRATORY TRACT, EYES AND SKIN. OVEREXPOSURE CAN RESULT IN ANEMIA, SWELLING OF THE THROAT WITH THE POSSIBILITY OF SUFFOCATION AND KIDNEY DAMAGE. INHALATION MAY BE FATAL.

**Signs & Symptoms of Overexposure:**

SYMPTOMS OF EXPOSURE MAY INCLUDE BURNING SENSATION, COUGHING, WHEEZING, LARYNGITIS, SHORTNESS OF BREATH, HEADACHE, NAUSEA AND VOMITING.

**Medical Conditions Aggravated by Exposure:**

PERSONS WITH A HISTORY OF SKIN AND RESPIRATORY DISORDERS MAY BE AT INCREASED RISK FROM EXPOSURE.

**LD50 LC50 Mixture:** LD50 (ORAL RAT) IS 1090 MG/KG

**Route of Entry Indicators:**

**Inhalation: YES**



**Skin:** YES

**Ingestion:** YES

**Carcinogenicity Indicators**

**NTP:** NO

**IARC:** NO

**OSHA:** NO

**Carcinogenicity Explanation:** THIS PRODUCT IS NOT LISTED BY IARC, NTP OR OSHA AS A CARCINOGEN.

**Section 4 - First Aid Measures**  
**P6142 POTASSIUM PERMANGANATE**

**First Aid:**

**EYES:**IMMEDIATELY FLUSH WITH LARGE AMOUNTS OF WATER FOR AT LEAST 15 MINUTES.

**SKIN:**IMMEDIATELY FLUSH WITH LARGE AMOUNTS OF WATER WHILE REMOVING CONTAMINATED CLOTHING AND SHOES. **INHALATION:**REMOVE TO FRESH AIR.IF NOT BREATHING GIVE ARTIFICIAL RESPIRATION.IF BREATHING IS DIFFICULT,GIVE OXYGEN.SEE DOCTOR.

**Section 5 - Fire Fighting Measures**  
**P6142 POTASSIUM PERMANGANATE**

**Fire Fighting Procedures:**

FIRE FIGHTERS SHOULD USE NIOSH APPROVED SCBA & FULL PROTECTIVE EQUIPMENT WHEN FIGHTING CHEMICAL FIRE. USE WATER SPRAY TO COOL NEARBY CONTAINERS EXPOSED TO FIRE.

**Unusual Fire or Explosion Hazard:**

FIRE OR EXCESSIVE HEAT MAY CAUSE PRODUCTION OF HAZARDOUS DECOMPOSITION PRODUCTS. CONTACT WITH OTHER MATERIALS MAY CAUSE FIRE.

**Extinguishing Media:**

WATER SPRAY.

**Flash Point:** Flash Point Text: N/R

**Autoignition Temperature:**

**Autoignition Temperature Text:** N/R

**Lower Limit(s):** N/R

**Upper Limit(s):** N/R

**Section 6 - Accidental Release Measures**  
**P6142 POTASSIUM PERMANGANATE**

**Spill Release Procedures:**

EVACUATE AREA.SHUT OFF IGNITION SOURCES.VENTILATE.WEAR SCBA,RUBBER BOOTS AND HEAVY RUBBER GLOVES.COVER WITH DRY-LIME,SAND OR SODA ASH.PLACE IN COVERED CONTAINERS USING NON-SPARKING TOOLS AND TRANSPORT OUTDOORS.WASH AREA WITH LARGE AMOUNTS OF WATER.

**Section 7 - Handling and Storage**  
**P6142 POTASSIUM PERMANGANATE**

**Handling and Storage Precautions:**

**Other Precautions:**

**Section 8 - Exposure Controls & Personal Protection**  
**P6142 POTASSIUM PERMANGANATE**

**Respiratory Protection:**



USE NIOSH/MSHA APPROVED RESPIRATOR AS PER CURRENT 29 CFR 1910.134, INSTRUCTIONS/WARNINGS AND NIOSH-RESPIRATOR SELECTION.

**Ventilation:**

USE ONLY IN A CHEMICAL FUME HOOD.

**Protective Gloves:**

RUBBER

**Eye Protection:** CHEMICAL SAFETY GOGGLES

**Other Protective Equipment:** SAFETY SHOWER AND EYE BATH. OTHER EQUIPMENT AS REQUIRED TO MINIMIZE EXPOSURE FROM PROLONGED OR REPEATED CONTACT.

**Work Hygienic Practices:** WASH THOROUGHLY AFTER HANDLING AND BEFORE EATING. LAUNDRY CONTAMINATED CLOTHING BEFORE REUSE. DISCARD CONTAMINATED SHOES.

**Supplemental Health & Safety Information:** SEE CASE HISTORY 90200A FOR MORE INFORMATION ON WASTE DISPOSAL PROCEDURES AND ON INCOMPATIBLE MATERIALS THAT MAY RESULT IN IGNITION, INCREASED SENSITIVITY TO HEAT OR FRICTION, VIOLENT REACTIONS, OR EXPLOSIONS. - THIS PRODUCT CAUSES EFFECTS ON MALE FERTILITY. -

**Section 9 - Physical & Chemical Properties**  
**P6142 POTASSIUM PERMANGANATE**

**HCC:** D1

**NRC/State License Number:**

**Net Property Weight for Ammo:**

**Boiling Point: Boiling Point Text:** N/R

**Melting/Freezing Point: Melting/Freezing Text:** UNKNOWN

**Decomposition Point: Decomposition Text:** UNKNOWN

**Vapor Pressure: N/R Vapor Density:** N/R

**Percent Volatile Organic Content:**

**Specific Gravity:** 2.703

**Volatile Organic Content Pounds per Gallon:**

**pH:** N/R

**Volatile Organic Content Grams per Liter:**

**Viscosity:** N/P

**Evaporation Weight and Reference:** N/R

**Solubility in Water:** COMPLETE

**Appearance and Odor:** BLACK OR DEEP PURPLE CRYSTALS

**Percent Volatiles by Volume:** N/R

**Corrosion Rate:** UNKNOWN

**Section 10 - Stability & Reactivity Data**  
**P6142 POTASSIUM PERMANGANATE**

**Stability Indicator:** YES

**Materials to Avoid:**

STRONG REDUCING AGENTS, FINELY POWDERED METALS, PEROXIDES, ALUMINUM, ZINC, LEAD, COPPER, AND THEIR ALLOYS.

**Stability Condition to Avoid:**

HIGH TEMPERATURES, OPEN FLAMES.

**Hazardous Decomposition Products:**

NATURE OF DECOMPOSITION PRODUCTS NOT KNOWN.

**Hazardous Polymerization Indicator:** NO

**Conditions to Avoid Polymerization:**

NOT APPLICABLE

**Section 11 - Toxicological Information**  
**P6142 POTASSIUM PERMANGANATE**

**Toxicological Information:**



N/P

**Section 12 - Ecological Information**  
**P6142 POTASSIUM PERMANGANATE**

**Ecological Information:**

N/P

**Section 13 - Disposal Considerations**  
**P6142 POTASSIUM PERMANGANATE**

**Waste Disposal Methods:**

CONTACT YOUR LOCAL ENVIRONMENTAL OFFICER. A SPECIAL PRECIPITATION PROCEDURE MUST BE FOLLOWED PRIOR TO DISPOSAL. FOLLOW MANUFACTURER'S INSTRUCTIONS. DISPOSE OF IN ACCORDANCE WITH ALL APPLICABLE FEDERAL, STATE AND LOCAL LAWS AND REGULATIONS.

**Section 14 - MSDS Transport Information**  
**P6142 POTASSIUM PERMANGANATE**

**Transport Information:**

N/P

**Section 15 - Regulatory Information**  
**P6142 POTASSIUM PERMANGANATE**

**SARA Title III Information:**

N/P

**Federal Regulatory Information:**

N/P

**State Regulatory Information:**

N/P

**Section 16 - Other Information**  
**P6142 POTASSIUM PERMANGANATE**

**Other Information:**

N/P

**HMIS Transportation Information**

**Product Identification:** P6142 POTASSIUM PERMANGANATE

**Transportation ID Number:** 93340

**Responsible Party CAGE:** 21076

**Date MSDS Prepared:** 09/29/1989

**Date MSDS Reviewed:** 07/19/1990

**MFN:** 07/19/1990

**Submitter:** D DG

**Status Code:** C

**Container Information**

**Unit of Issue:** BT

**Container Quantity:** B

**Type of Container:** BOTTLE

**Net Unit Weight:** 0.3 GM

**Article without MSDS:** N

**Technical Entry NOS Shipping Number:**

**Radioactivity:**



**Form:**

**Net Explosive Weight:**

**Coast Guard Ammunition Code:**

**Magnetism:** N/P

**AF MMAC Code:**

**DOD Exemption Number:**

**Limited Quantity Indicator:**

**Multiple Kit Number:** 0

**Kit Indicator:** N

**Kit Part Indicator:** N

**Review Indicator:** Y

**Additional Data:**

**Department of Transportation Information**

**DOT Proper Shipping Name:** POTASSIUM PERMANGANATE

**DOT PSN Code:** MAU

**Symbols:**

**DOT PSN Modifier:**

**Hazard Class:** 5.1

**UN ID Number:** UN1490

**DOT Packaging Group:** II

**Label:** OXIDIZER

**Special Provision(s):** B12

**Packaging Exception:** 152

**Non Bulk Packaging:** 212

**Bulk Packaging:** 240

**Maximum Quantity in Passenger Area:** 5 KG

**Maximum Quantity in Cargo Area:** 25 KG

**Stow in Vessel Requirements:** D

**Requirements Water/Sp/Other:** 56,58,69,106,107

**IMO Detail Information**

**IMO Proper Shipping Name:** POTASSIUM PERMANGANATE

**IMO PSN Code:** MFN

**IMO PSN Modifier:**

**IMDG Page Number:** 5173

**UN Number:** 1490

**UN Hazard Class:** 5.1

**IMO Packaging Group:** II

**Subsidiary Risk Label:** -

**EMS Number:** 5.1-06

**Medical First Aid Guide Number:** 715

**IATA Detail Information**

**IATA Proper Shipping Name:** POTASSIUM PERMANGANATE

**IATA PSN Code:** URW



**IATA PSN Modifier:**  
**IATA UN Id Number:** 1490  
**IATA UN Class:** 5.1  
**Subsidiary Risk Class:**  
**UN Packaging Group:** II  
**IATA Label:** OXIDIZER  
**Packaging Note for Passengers:** 508  
**Maximum Quantity for Passengers:** 5KG  
**Packaging Note for Cargo:** 511  
**Maximum Quantity for Cargo:** 25KG  
**Exceptions:**

#### AFI Detail Information

**AFI Proper Shipping Name:** POTASSIUM PERMANGANATE  
**AFI Symbols:**  
**AFI PSN Code:** URW  
**AFI PSN Modifier:**  
**AFI UN Id Number:** UN1490  
**AFI Hazard Class:** 5.1  
**AFI Packing Group:** II  
**AFI Label:**  
**Special Provisions:** P5  
**Back Pack Reference:** A9.8

#### HAZCOM Label Information

**Product Identification:** P6142 POTASSIUM PERMANGANATE  
**CAGE:** 21076  
**Assigned Individual:** N  
**Company Name:** SIGMA CHEMICAL COMPANY  
**Company PO Box:**  
**Company Street Address1:** 3050 SPRUCE ST  
**Company Street Address2:** ST LOUIS, MO 63178 US  
**Health Emergency Telephone:** 314-771-5765  
**Label Required Indicator:** Y  
**Date Label Reviewed:** 07/18/1990  
**Status Code:** C  
**Manufacturer's Label Number:** NONE  
**Date of Label:** 07/18/1990  
**Year Procured:** N/K  
**Organization Code:** F  
**Chronic Hazard Indicator:** Y  
**Eye Protection Indicator:** YES  
**Skin Protection Indicator:** YES  
**Respiratory Protection Indicator:** YES  
**Signal Word:** DANGER  
**Health Hazard:** Severe  
**Contact Hazard:** Severe  
**Fire Hazard:** None  
**Reactivity Hazard:** Severe

### Section 1 - Product and Company Identification RESORCINOL, 3366

**Product Identification:** RESORCINOL, 3366  
**Date of MSDS:** 03/09/1992 **Technical Review Date:** 09/29/1995  
**FSC:** 6810 **NIIN:** LIIN: 00N046932  
**Submitter:** N EN  
**Status Code:** C



**MFN:** 01  
**Article:** N  
**Kit Part:** N

**Manufacturer's Information**

**Manufacturer's Name:** J T BAKER INC  
**Manufacturer's Address1:** 222 RED SCHOOL LANE  
**Manufacturer's Address2:** PHILLIPSBURG, NJ 08865  
**Manufacturer's Country:** US  
**General Information Telephone:** 800-582-2537  
**Emergency Telephone:** 800-424-8802;800-424-9300(CHEMTREC)  
**Emergency Telephone:** 800-424-8802;800-424-9300(CHEMTREC)  
**MSDS Preparer's Name:** N/P  
**Proprietary:** N  
**Reviewed:** N  
**Published:** Y  
**CAGE:** DO803  
**Special Project Code:** N

**Contractor Information**

**Contractor's Name:** J T BAKER INC  
**Post Office Box:** N/K  
**Contractor's Address1:** 222 RED SCHOOL LANE  
**Contractor's Address2:** PHILLIPSBURG, NJ 08865  
**Contractor's Telephone:** 1-800-582-2537  
**Contractor's CAGE:** DO803

**Contractor Information**

**Contractor's Name:** MALLINCKRODT BAKER, INC. (FORMERLY J.T. BAKER INC)  
**Contractor's Address1:** 222 RED SCHOOL LANE  
**Contractor's Address2:** PHILLIPSBURG, NJ 08865-2219  
**Contractor's Telephone:** 800-582-2537  
**Contractor's CAGE:** 70829

**Section 2 - Compositon/Information on Ingredients  
RESORCINOL, 3366**

**Ingredient Name:** RESORCINOL

**Ingredient CAS Number:** 108-46-3 **Ingredient CAS Code:** M

**RTECS Number:** VG9625000 **RTECS Code:** M

**=WT: =WT Code:**

**=Volume: =Volume Code:**

**>WT: >WT Code:**

**>Volume: >Volume Code:**

**<WT: <WT Code:**

**<Volume: <Volume Code:**

**% Low WT: % Low WT Code:**



**% High WT: % High WT Code:**

**% Low Volume: % Low Volume Code:**

**% High Volume: % High Volume Code:**

**% Text: 90-100**

**% Environmental Weight:**

**Other REC Limits: N/K**

**OSHA PEL: 10 PPM;20 STEL OSHA PEL Code: M**

**OSHA STEL: OSHA STEL Code:**

**ACGIH TLV: 10 PPM;20 STEL ACGIH TLV Code: M**

**ACGIH STEL: N/P ACGIH STEL Code:**

**EPA Reporting Quantity: 5000 LBS**

**DOT Reporting Quantity: 5000 LBS**

**Ozone Depleting Chemical: N**

### **Section 3 - Hazards Identification, Including Emergency Overview RESORCINOL, 3366**

**Health Hazards Acute & Chronic:** ACUTE: INHAL: HEADACHE, COUGHING, DIZZINESS, DIFFICULT BREATHING. SKIN/EYE/SKIN ABSORP: NONE IDENTIFIED. INGEST: NONE IDENTIFIED. CHRONIC: NONE IDENTIFIED.

**Signs & Symptoms of Overexposure:**  
SEE HEALTH HAZARDS.

**Medical Conditions Aggravated by Exposure:**  
NONE INDICATED.

**LD50 LC50 Mixture:** LD50(ORAL,RAT)301 MG/KG

**Route of Entry Indicators:**

**Inhalation:** YES

**Skin:** NO

**Ingestion:** NO

**Carcinogenicity Indicators**

**NTP:** NO

**IARC:** NO

**OSHA:** NO

**Carcinogenicity Explanation:** NOT RELEVANT

### **Section 4 - First Aid Measures RESORCINOL, 3366**

**First Aid:**

INGEST: CALL A PHYS. IF SWALLOWED, IF CONSCIOUS, IMMEDIATELY INDUCE VOMIT. INHAL: REMOVE TO FRESH AIR. IF NOT BREATHING, GIVE ARTIFICIAL RESPIRATION. IF BREATHING IS DIFFICULT, GIVE OXYGEN. SKIN: IMMEDIATELY FLUSH



W/PLENTY OF WATER FOR @ LST 15 MIN. EYE: IMMED FLUSH WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES.

**Section 5 - Fire Fighting Measures  
RESORCINOL, 3366**

**Fire Fighting Procedures:**

NIOSH/MSHA APPRVD SCBA & FULL PROT EQUIP (FP N). MOVE CONTRS FROM FIRE AREA IF IT CAN BE DONE W/OUT RISK. USE WATER TO KEEP FIRE-EXPOSED CONTRS COOL.

**Unusual Fire or Explosion Hazard:**

NONE IDENTIFIED.

**Extinguishing Media:**

USE ALCOHOL FOAM, DRY CHEMICAL OR CARBON DIOXIDE. (WATER MAY BE INEFFECTIVE).

**Flash Point: Flash Point Text:** NOT APPLICABLE

**Autoignition Temperature:**

**Autoignition Temperature Text:** N/A

**Lower Limit(s):** N/A

**Upper Limit(s):** N/A

**Section 6 - Accidental Release Measures  
RESORCINOL, 3366**

**Spill Release Procedures:**

WEAR NIOSH/MSHA APPRVD SCBA AND FULL PROT EQUIP. SHUT OFF IGNIT SOURCES; NO FLARES, SMOKING, OR FLAMES IN AREA. W/ CLEAN SHOVEL, CAREFULLY PLACE MATERIAL INTO CLEAN, DRY CONTAINER & COVER; REMOVE FROM AREA. FLUSH SPILL AREA W/WATER.

**Section 7 - Handling and Storage  
RESORCINOL, 3366**

**Handling and Storage Precautions:**

**Other Precautions:**

**Section 8 - Exposure Controls & Personal Protection  
RESORCINOL, 3366**

**Respiratory Protection:**

RESPIRATORY PROTECTION REQUIRED IF AIRBORNE CONCENTRATION EXCEEDS TLV. AT CONCENTRATIONS ABOVE 10 PPM, A NIOSH/MSHA APPROVED SCBA IS ADVISED.

**Ventilation:**

USE GENERAL OR LOCAL EXHAUST VENTILATION TO MEET TLV REQUIREMENTS.

**Protective Gloves:**

RUBBER GLOVES.

**Eye Protection:** SAFETY GOGGLES.

**Other Protective Equipment:** UNIFORM. LAB COAT.

**Work Hygienic Practices:** WASH THOROUGHLY AFTER HANDLING.

**Supplemental Health & Safety Information:** NONE SPECIFIED BY MANUFACTURER.

**Section 9 - Physical & Chemical Properties  
RESORCINOL, 3366**

**HCC:** N1

**NRC/State License Number:**



**Net Property Weight for Ammo:**  
**Boiling Point: Boiling Point Text:** 537F,281C  
**Melting/Freezing Point: Melting/Freezing Text:** 232F,111C  
**Decomposition Point: Decomposition Text:** N/K  
**Vapor Pressure:** N/A **Vapor Density:** 3.8  
**Percent Volatile Organic Content:**  
**Specific Gravity:** 1.27(H<sub>2</sub>O=1)  
**Volatile Organic Content Pounds per Gallon:**  
**pH:** N/A  
**Volatile Organic Content Grams per Liter:**  
**Viscosity:** N/P  
**Evaporation Weight and Reference:** NOT APPLICABLE  
**Solubility in Water:** COMPLETE(100%)  
**Appearance and Odor:** WHITE CRYSTALS OR POWDER  
**Percent Volatiles by Volume:** N/A  
**Corrosion Rate:** N/K

**Section 10 - Stability & Reactivity Data**  
**RESORCINOL, 3366**

**Stability Indicator:** YES  
**Materials to Avoid:**  
STRONG OXIDIZING AGENTS.  
**Stability Condition to Avoid:**  
HEAT, FLAME, SOURCES OF IGNITION.  
**Hazardous Decomposition Products:**  
NONE IDENTIFIED.  
**Hazardous Polymerization Indicator:** NO  
**Conditions to Avoid Polymerization:**  
NOT RELEVANT

**Section 11 - Toxicological Information**  
**RESORCINOL, 3366**

**Toxicological Information:**  
N/P

**Section 12 - Ecological Information**  
**RESORCINOL, 3366**

**Ecological Information:**  
N/P

**Section 13 - Disposal Considerations**  
**RESORCINOL, 3366**

**Waste Disposal Methods:**  
DISPOSE I/A/W ALL APPLICABLE FEDERAL, STATE, AND LOCAL ENVIRONMENTAL REGULATIONS.

**Section 14 - MSDS Transport Information**  
**RESORCINOL, 3366**

**Transport Information:**  
N/P

**Section 15 - Regulatory Information**  
**RESORCINOL, 3366**



**SARA Title III Information:**

N/P

**Federal Regulatory Information:**

N/P

**State Regulatory Information:**

N/P

**Section 16 - Other Information  
RESORCINOL, 3366**

**Other Information:**

N/P

**HAZCOM Label Information**

**Product Identification:** RESORCINOL, 3366

**CAGE:** DO803

**Assigned Individual:** Y

**Company Name:** J T BAKER INC

**Company PO Box:** N/K

**Company Street Address1:** 222 RED SCHOOL LANE

**Company Street Address2:** PHILLIPSBURG, NJ 08865 US

**Health Emergency Telephone:** 800-424-8802;800-424-9300(CHEMTREC)

**Label Required Indicator:** Y

**Date Label Reviewed:** 12/30/1993

**Status Code:** C

**Manufacturer's Label Number:**

**Date of Label:** 12/30/1993

**Year Procured:** N/K

**Organization Code:** G

**Chronic Hazard Indicator:** N

**Eye Protection Indicator:** YES

**Skin Protection Indicator:** YES

**Respiratory Protection Indicator:** YES

**Signal Word:** CAUTION

**Health Hazard:** Slight

**Contact Hazard:** Slight

**Fire Hazard:** None

**Reactivity Hazard:** None

**Section 1 - Product and Company Identification  
SILVER CHROMATE, 99%, 22789-7**

**Product Identification:** SILVER CHROMATE, 99%, 22789-7

**Date of MSDS:** 05/29/1990 **Technical Review Date:** 03/28/1991

**FSC:** 6810 **NIIN:** LIIN: 00N014624

**Submitter:** N EN

**Status Code:** C

**MFN:** 01

**Article:** N

**Kit Part:** N

**Manufacturer's Information**

**Manufacturer's Name:** ALDRICH CHEMICAL CO

**Post Office Box:** 355

**Manufacturer's Address1:**

**Manufacturer's Address2:** MILWAUKEE, WI 53201



**Manufacturer's Country:** US  
**General Information Telephone:** 414-273-3850  
**Emergency Telephone:** N/P  
**Emergency Telephone:** N/P  
**MSDS Preparer's Name:** N/P  
**Proprietary:** N  
**Reviewed:** N  
**Published:** Y  
**CAGE:** 60928  
**Special Project Code:** N

#### **Contractor Information**

**Contractor's Name:** ALDRICH CHEMICAL CO INC  
**Post Office Box:** 355  
**Contractor's Address1:** 1001 WEST ST PAUL AVE  
**Contractor's Address2:** MILWAUKEE, WI 53233  
**Contractor's Telephone:** 414-273-3850  
**Contractor's CAGE:** 60928

#### **Section 2 - Composition/Information on Ingredients SILVER CHROMATE, 99%, 22789-7**

**Ingredient Name:** SILVER CHROMATE, 99%

**Ingredient CAS Number:** 7784-01-2 **Ingredient CAS Code:** M

**RTECS Number:** **RTECS Code:** X

**=WT: =WT Code:**

**=Volume: =Volume Code:**

**>WT: >WT Code:**

**>Volume: >Volume Code:**

**<WT: <WT Code:**

**<Volume: <Volume Code:**

**% Low WT: % Low WT Code:**

**% High WT: % High WT Code:**

**% Low Volume: % Low Volume Code:**

**% High Volume: % High Volume Code:**

**% Text:** 99

**% Environmental Weight:**

**Other REC Limits:** N/K

**OSHA PEL:** NOT APPLICABLE **OSHA PEL Code:** M

**OSHA STEL:** **OSHA STEL Code:**



**ACGIH TLV: NOT APPLICABLE ACGIH TLV Code: M**

**ACGIH STEL: N/P ACGIH STEL Code:**

**EPA Reporting Quantity:**

**DOT Reporting Quantity:**

**Ozone Depleting Chemical: N**

**Section 3 - Hazards Identification, Including Emergency Overview  
SILVER CHROMATE, 99%, 22789-7**

**Health Hazards Acute & Chronic:** ACUTE: HARMFUL IF INGEST, INHAL, OR ABSORBED THRU SKIN. CAUSES EYE & SKIN IRRITS. MATL IS IRRIT TO MUC MEMBS & UPPER RESP TRACT. MAY CAUSE ARGYRIA (SLATE-GRAY OR BLUISH DISCOLORATION OF SKIN & DEEP TI SSUES DUE TO DEPOSIT OF INSOLUBLE ALBUMINATE OF SILVER). CHRONIC: CARCINOGEN. MAY ALTER GENETIC MATL. (SEE SUPP DATA)

**Signs & Symptoms of Overexposure:**  
NONE SPECIFIED BY MANUFACTURER.

**Medical Conditions Aggravated by Exposure:**  
NONE SPECIFIED BY MANUFACTURER.

**LD50 LC50 Mixture:** NONE SPECIFIED BY MANUFACTURER.

**Route of Entry Indicators:**

**Inhalation:** YES

**Skin:** YES

**Ingestion:** YES

**Carcinogenicity Indicators**

**NTP:** NO

**IARC:** YES

**OSHA:** NO

**Carcinogenicity Explanation:** IARC GROUP 1

**Section 4 - First Aid Measures  
SILVER CHROMATE, 99%, 22789-7**

**First Aid:**

EYES: FLUSH W/COPIOUS AMTS OF H\*2O FOR AT LEAST 15 MIN. GET MD. SKIN: FLUSH W/COPIOUS AMTS OF H\*2O FOR AT LEAST 15 MIN WHILE REMOVING CONTAM CLTHNG & SHOES. DISCARD CONTAM CLTHNG & SHOES. GET MD. INHAL: REMOVE TO FRESH AIR. SUPPORT BREATHING (GIVE O\*2/ARTF RESP). GET MD. INGEST: CALL MD IMMEDIATELY (FP N).

**Section 5 - Fire Fighting Measures  
SILVER CHROMATE, 99%, 22789-7**

**Fire Fighting Procedures:**

WEAR NIOSH/MSHA APPROVED SCBA & PROTECTIVE CLOTHING TO PREVENT CONTACT W/SKIN & EYES. OXIDIZER.

**Unusual Fire or Explosion Hazard:**

EMITS TOXIC FUMES UNDER FIRE CONDITIONS. CONTACT W/OTHER MATLS MAY CAUSE FIRE.

**Extinguishing Media:**

NONCOMBUSTIBLE. USE EXTINGUISHING MEDIA APPROPRIATE TO SURROUNDING FIRE CONDITIONS.

**Flash Point: Flash Point Text:** NONE

**Autoignition Temperature:****Autoignition Temperature Text:** N/A**Lower Limit(s):** N/K**Upper Limit(s):** N/K**Section 6 - Accidental Release Measures****SILVER CHROMATE, 99%, 22789-7****Spill Release Procedures:**

EVACUATE AREA. WEAR NIOSH/MSHA APPROVED SCBA, RUB BOOTS & HVY RUB GLOVES. WEAR DISPOSABLE COVERALLS & DISCARD AFTER USE. SWEEP UP, PLACE IN BAG & HOLD FOR WASTE DISPOSAL. AVOID RAISING DUST. VENT AREA & WASH SPILL SITE AFT MATL PICKUP IS COMPLETE.

**Section 7 - Handling and Storage****SILVER CHROMATE, 99%, 22789-7****Handling and Storage Precautions:****Other Precautions:****Section 8 - Exposure Controls & Personal Protection****SILVER CHROMATE, 99%, 22789-7****Respiratory Protection:**

WEAR APPROPRIATE NIOSH/MSHA APPROVED RESPIRATOR.

**Ventilation:**

USE ONLY IN A CHEMICAL FUME HOOD.

**Protective Gloves:**

CHEMICAL-RESISTANT GLOVES.

**Eye Protection:** CHEMICAL WORKERS GOGGLES (FP N).

**Other Protective Equipment:** PROTECTIVE CLOTHING. SAFETY SHOWER & EYE BATH.

**Work Hygienic Practices:** WASH THOROUGHLY AFTER USE & BEFORE EATING, DRINKING, SMOKING, OR USING SANITARY FACILITIES (FP N).

**Supplemental Health & Safety Information:** HLTH HAZ:TARGET ORGAN(S):LUNGS & KIDNEYS.

**Section 9 - Physical & Chemical Properties****SILVER CHROMATE, 99%, 22789-7**

**HCC:** N1

**NRC/State License Number:**

**Net Property Weight for Ammo:**

**Boiling Point: Boiling Point Text:** N/K

**Melting/Freezing Point: Melting/Freezing Text:** N/K

**Decomposition Point: Decomposition Text:** N/K

**Vapor Pressure: N/K Vapor Density: N/K**

**Percent Volatile Organic Content:**

**Specific Gravity:** 5.625

**Volatile Organic Content Pounds per Gallon:**

**pH:** N/K

**Volatile Organic Content Grams per Liter:**

**Viscosity:** N/P

**Evaporation Weight and Reference:** N/K

**Solubility in Water:** N/K

**Appearance and Odor:** BLACK POWDER



**Percent Volatiles by Volume:** N/K

**Corrosion Rate:** N/K

**Section 10 - Stability & Reactivity Data  
SILVER CHROMATE, 99%, 22789-7**

**Stability Indicator:** N/P

**Materials to Avoid:**

STRONG REDUCING AGENTS. ALCOHOLS. STRONG ACIDS.

**Stability Condition to Avoid:**

MAY DECOMPOSE ON EXPOSURE TO LIGHT.

**Hazardous Decomposition Products:**

NONE SPECIFIED BY MANUFACTURER.

**Hazardous Polymerization Indicator:** N/P

**Conditions to Avoid Polymerization:**

NONE SPECIFIED BY MANUFACTURER.

**Section 11 - Toxicological Information  
SILVER CHROMATE, 99%, 22789-7**

**Toxicological Information:**

N/P

**Section 12 - Ecological Information  
SILVER CHROMATE, 99%, 22789-7**

**Ecological Information:**

N/P

**Section 13 - Disposal Considerations  
SILVER CHROMATE, 99%, 22789-7**

**Waste Disposal Methods:**

CATALYSTS & EXPENSIVE METALS SHOULD BE RECOVERED FOR REUSE OR RECYCLING. OBSERVE ALL FEDERAL, STATE, AND LOCAL LAWS.

**Section 14 - MSDS Transport Information  
SILVER CHROMATE, 99%, 22789-7**

**Transport Information:**

N/P

**Section 15 - Regulatory Information  
SILVER CHROMATE, 99%, 22789-7**

**SARA Title III Information:**

N/P

**Federal Regulatory Information:**

N/P

**State Regulatory Information:**

N/P

**Section 16 - Other Information  
SILVER CHROMATE, 99%, 22789-7**

**Other Information:**

N/P

**HMIS Transportation Information****Product Identification:** SILVER CHROMATE, 99%, 22789-7**Transportation ID Number:** 19853**Responsible Party CAGE:** 60928**Date MSDS Prepared:** 05/29/1990**Date MSDS Reviewed:** 08/09/1991**MFN:** 08/09/1991**Submitter:** N TN**Status Code:** C**Container Information****Unit of Issue:** NK**Container Quantity:** NK**Type of Container:****Net Unit Weight:****Article without MSDS:** N**Technical Entry NOS Shipping Number:****Radioactivity:****Form:****Net Explosive Weight:****Coast Guard Ammunition Code:****Magnetism:** N/P**AF MMAC Code:****DOD Exemption Number:****Limited Quantity Indicator:****Multiple Kit Number:** 0**Kit Indicator:** N**Kit Part Indicator:** N**Review Indicator:** Y**Additional Data:****Department of Transportation Information****DOT Proper Shipping Name:** TEAR GAS SUBSTANCES, SOLID, N.O.S.**DOT PSN Code:** NWS**Symbols:** G**DOT PSN Modifier:****Hazard Class:** 6.1**UN ID Number:** UN1693**DOT Packaging Group:** II**Label:** POISON**Special Provision(s):****Packaging Exception:**



**Non Bulk Packaging:** 212  
**Bulk Packaging:** NONE  
**Maximum Quantity in Passenger Area:** FORBIDDEN  
**Maximum Quantity in Cargo Area:** 25 KG  
**Stow in Vessel Requirements:** D  
**Requirements Water/Sp/Other:** 40

**IMO Detail Information**

**IMO Proper Shipping Name:** TEAR GAS SUBSTANCE, SOLID, N.O.S. o  
**IMO PSN Code:** OII  
**IMO PSN Modifier:**  
**IMDG Page Number:** 6262  
**UN Number:** 1693  
**UN Hazard Class:** 6.1  
**IMO Packaging Group:** I/II  
**Subsidiary Risk Label:** -  
**EMS Number:** 6.1-03  
**Medical First Aid Guide Number:** 740

**IATA Detail Information**

**IATA Proper Shipping Name:** TEAR GAS SUBSTANCE, SOLID, N.O.S. \*  
**IATA PSN Code:** XNK  
**IATA PSN Modifier:**  
**IATA UN Id Number:** 1693  
**IATA UN Class:** 6.1  
**Subsidiary Risk Class:**  
**UN Packaging Group:** II  
**IATA Label:** TOXIC  
**Packaging Note for Passengers:** FORB  
**Maximum Quantity for Passengers:** FORB  
**Packaging Note for Cargo:** 615  
**Maximum Quantity for Cargo:** 25 KG  
**Exceptions:** A36

**AFI Detail Information**

**AFI Proper Shipping Name:** TEAR GAS SUBSTANCES, SOLID, N.O.S.  
**AFI Symbols:** \*  
**AFI PSN Code:** XNK  
**AFI PSN Modifier:**  
**AFI UN Id Number:** UN1693  
**AFI Hazard Class:** 6.1  
**AFI Packing Group:** II  
**AFI Label:**  
**Special Provisions:** P5  
**Back Pack Reference:** A10.6

**HAZCOM Label Information**

**Product Identification:** SILVER CHROMATE, 99%, 22789-7  
**CAGE:** 60928  
**Assigned Individual:** N  
**Company Name:** ALDRICH CHEMICAL CO INC  
**Company PO Box:** 355  
**Company Street Address1:** 1001 WEST ST PAUL AVE  
**Company Street Address2:** MILWAUKEE, WI 53233 US  
**Health Emergency Telephone:**  
**Label Required Indicator:** Y  
**Date Label Reviewed:** 06/07/1991  
**Status Code:** C  
**Manufacturer's Label Number:**  
**Date of Label:** 06/07/1991  
**Year Procured:** N/K



**Organization Code:** G  
**Chronic Hazard Indicator:** Y  
**Eye Protection Indicator:** YES  
**Skin Protection Indicator:** YES  
**Respiratory Protection Indicator:** YES  
**Signal Word:** WARNING  
**Health Hazard:** Moderate  
**Contact Hazard:** Moderate  
**Fire Hazard:** None  
**Reactivity Hazard:** None

### Section 1 - Product and Company Identification SODIUM FLUORIDE

**Product Identification:** SODIUM FLUORIDE  
**Date of MSDS:** 09/11/1996 **Technical Review Date:** 05/01/1998  
**FSC:** 6810 **NIIN:** 00-871-0551  
**Submitter:** D DG  
**Status Code:** C  
**MFN:** 01  
**Article:** N  
**Kit Part:** N

#### Manufacturer's Information

**Manufacturer's Name:** ANACHEMIA CANADA INC  
**Manufacturer's Address1:** 500 2ND AVE  
**Manufacturer's Address2:** VILLE ST. PIERRE QUE CAN H8R 1M3, NK 00000  
**Manufacturer's Country:** CN  
**General Information Telephone:** 514-489-5711  
**Emergency Telephone:** 514-489-5711  
**Emergency Telephone:** 514-489-5711  
**MSDS Preparer's Name:** UNKNOWN  
**Proprietary:** N  
**Reviewed:** Y  
**Published:** Y  
**CAGE:** 36842  
**Special Project Code:** N

#### Item Description

**Item Name:** SODIUM FLUORIDE,ACS  
**Item Manager:**  
**Specification Number:** NONE  
**Type/Grade/Class:** NONE  
**Unit of Issue:**  
**Unit of Issue Quantity:**  
**Type of Container:** DRUM

#### Contractor Information

**Contractor's Name:** ANACHEMIA CANADA  
**Contractor's Address1:** 255 NORMAN H8R 1A3  
**Contractor's Address2:** VILLE ST. PIERRE (MONTREAL), PQ 00000  
**Contractor's Telephone:** 514-489-5711;518-297-4444  
**Contractor's CAGE:** 36842



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**Contractor Information**

**Contractor's Name:** CHEM SCIENTIFIC INC  
**Contractor's Address1:** 1250 WASHINGTON ST  
**Contractor's Address2:** NORWOOD, MA 02062  
**Contractor's Telephone:** 781-440-0900  
**Contractor's CAGE:** 0X801

**Section 2 - Compositon/Information on Ingredients**  
**SODIUM FLUORIDE**

**Ingredient Name:** SODIUM FLUORIDE (CERCLA)

**Ingredient CAS Number:** 7681-49-4 **Ingredient CAS Code:** M

**RTECS Number:** WB0350000 **RTECS Code:** M

**=WT: =WT Code:**

**=Volume: =Volume Code:**

**>WT: >WT Code:**

**>Volume: >Volume Code:**

**<WT: <WT Code:**

**<Volume: <Volume Code:**

**% Low WT: % Low WT Code:**

**% High WT: % High WT Code:**

**% Low Volume: % Low Volume Code:**

**% High Volume: % High Volume Code:**

**% Text:** 60- 100

**% Enviromental Weight:**

**Other REC Limits:** NONE RECOMMENDED

**OSHA PEL:** 2.5 PPM (F) **OSHA PEL Code:** M

**OSHA STEL:** **OSHA STEL Code:**

**ACGIH TLV:** 2.5 MG (F)/M3; 9596 **ACGIH TLV Code:** M

**ACGIH STEL:** N/P **ACGIH STEL Code:**

**EPA Reporting Quantity:** 1000 LBS

**DOT Reporting Quantity:** 1000 LBS

**Ozone Depleting Chemical:** N



### Section 3 - Hazards Identification, Including Emergency Overview SODIUM FLUORIDE

**Health Hazards Acute & Chronic:** TARGET ORGANS:HEART, LIVER, CNS, KIDNEYS, EYES, SKIN. ACUTE-TOXIC. CAUSES EYE BURNS. CAUSES SEVERE SKIN IRRITATION/BURNS. MAY BE FATAL IF INHALED/INGESTED/ABSORBED THROUGH SKIN. EXTREMELY DESTRUCTIVE TO MUCOUS MEMBRANES. VERY TOXIC BY INGESTION. CHRONIC- FLUOROSIS, FRAGILE BONES, ANEMIA, TOOTH & KIDNEY DAMAGE.

**Signs & Symptoms of Overexposure:**

BURNS, SEVERE IRRITATION, PAIN, TEARING, NAUSEA, VOMITING, DIARRHEA, WEIGHT LOSS, WEAKNESS, STIFFNESS OF JOINTS, LOSS OF APPETITE, LOSS OF VISION, FEVER, DEATH

**Medical Conditions Aggravated by Exposure:**

PERSONS WITH PRE-EXISTING SKIN DISORDERS, EYE PROBLEMS OR IMPAIRED CNS, KIDNEY OR RESPIRATORY FUNCTION MAY BE MORE SUSCEPTIBLE TO THE EFFECTS OF THIS PRODUCT.

**LD50 LC50 Mixture:** LD50 (ORAL, RAT) 57 MG/KG

**Route of Entry Indicators:**

**Inhalation:** YES

**Skin:** YES

**Ingestion:** YES

**Carcinogenicity Indicators**

**NTP:** NO

**IARC:** NO

**OSHA:** NO

**Carcinogenicity Explanation:** NONE

### Section 4 - First Aid Measures SODIUM FLUORIDE

**First Aid:**

SEEK IMMEDIATE MEDICAL ATTENTION. EYE/SKIN:IMMEDIATELY FLUSH WITH WATER FOR 15 MINUTES. HOLD EYELIDS OPEN. INHALED:MOVE TO FRESH AIR. PROVIDE CPR/OXYGEN IF NEEDED. ORAL:IF CONSCIOUS, WASH OUT MOUTH WITH WATER. DRINK SEVERAL GLASSES OF WATER & INDUCE VOMITING. NEVER GIVE FLUID OR INDUCE VOMITING IF PATIENT IS UNCONSCIOUS OR HAS CONVULSIONS.

### Section 5 - Fire Fighting Measures SODIUM FLUORIDE

**Fire Fighting Procedures:**

WEAR FULL PROTECTIVE CLOTHING AND NIOSH-APPROVED SELF-CONTAINED BREATHING APPARATUS. MAY FORM TOXIC/CORROSIVE GASES.

**Unusual Fire or Explosion Hazard:**

FORMS HAZARDOUS DECOMPOSITION PRODUCTS. CONTAINER MAY RUPTURE.

**Extinguishing Media:**

WATER SPRAY, CARBON DIOXIDE, FOAM OR DRY CHEMICAL FOR SURROUNDING FIRE. USE WATER SPRAY TO COOL FIRE EXPOSED CONTAINERS.

**Flash Point: Flash Point Text:** NONE

**Autoignition Temperature:**

**Autoignition Temperature Text:** N/R

**Lower Limit(s):** NOT RELEVANT

**Upper Limit(s):** NOT RELEVANT



**Section 6 - Accidental Release Measures**  
**SODIUM FLUORIDE**

**Spill Release Procedures:**

WEAR SUITABLE PROTECTIVE CLOTHING. AVOID MAKING DUST. RECOVER FOR REUSE IF NOT CONTAMINATED. SWEEP UP AND PLACE IN A SUITABLE CONTAINER FOR DISPOSAL. WASH SPILL SITE WELL WITH WATER AFTER PICK UP IS COMPLETE.

**Section 7 - Handling and Storage**  
**SODIUM FLUORIDE**

**Handling and Storage Precautions:**

**Other Precautions:**

**Section 8 - Exposure Controls & Personal Protection**  
**SODIUM FLUORIDE**

**Respiratory Protection:**

NONE SHOULD BE NEEDED IN NORMAL LABORATORY HANDLING. IF DUSTY CONDITIONS PREVAIL, WORK IN A FUME HOOD OR WEAR A NIOSH-APPROVED DUST RESPIRATOR OR DUST MASK. IN EMERGENCY, WEAR NIOSH-APPROVED SELF-CONTAINED BREATHING APPARATUS.

**Ventilation:**

USE GENERAL OR LOCAL EXHAUST VENTILATION TO MEET TLV REQUIREMENTS.

**Protective Gloves:**

RUBBER, NEOPRENE, PVC

**Eye Protection:** SAFETY GOGGLES/CHEMICAL SAFETY GLASSES

**Other Protective Equipment:** EYE WASH STATION, SAFETY SHOWER, PROTECTIVE CLOTHING AND/OR UNIFORM

**Work Hygienic Practices:** OBSERVE GOOD INDUSTRIAL HYGIENE PRACTICES AND RECOMMENDED PROCEDURES. WASH AFTER HANDLING AND BEFORE EATING OR DRINKING.

**Supplemental Health & Safety Information:** N/P

**Section 9 - Physical & Chemical Properties**  
**SODIUM FLUORIDE**

**HCC:** T4

**NRC/State License Number:** NOT RELEVANT

**Net Property Weight for Ammo:** N/R

**Boiling Point:** Boiling Point Text: 3092F,1700C

**Melting/Freezing Point:** Melting/Freezing Text: 1819F,993C

**Decomposition Point:** Decomposition Text: UNKNOWN

**Vapor Pressure:** N/R Vapor Density: N/R

**Percent Volatile Organic Content:**

**Specific Gravity:** 2.58 - 2.78

**Volatile Organic Content Pounds per Gallon:**

**pH:** N/K

**Volatile Organic Content Grams per Liter:**

**Viscosity:** NOT RELEVANT

**Evaporation Weight and Reference:** NOT RELEVANT

**Solubility in Water:** 4% @ 15C/59F

**Appearance and Odor:** WHITE CRYSTALS OR POWDER - ODORLESS

**Percent Volatiles by Volume:** N/R

**Corrosion Rate:** N/R



**Section 10 - Stability & Reactivity Data**  
**SODIUM FLUORIDE**

**Stability Indicator:** YES

**Materials to Avoid:**

ACIDS, ALKALIS, GLASS, OXIDIZING AGENTS, ALUMINUM

**Stability Condition to Avoid:**

EXCESSIVE HEAT

**Hazardous Decomposition Products:**

MAY FORM HYDROGEN FLUORIDE, FLUORINE AND SODIUM OXIDE.

**Hazardous Polymerization Indicator:** NO

**Conditions to Avoid Polymerization:**

NOT RELEVANT

**Section 11 - Toxicological Information**  
**SODIUM FLUORIDE**

**Toxicological Information:**

N/P

**Section 12 - Ecological Information**  
**SODIUM FLUORIDE**

**Ecological Information:**

N/P

**Section 13 - Disposal Considerations**  
**SODIUM FLUORIDE**

**Waste Disposal Methods:**

DISPOSE OF IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS. REPORTABLE QUANTITY (RQ): 1000 POUNDS. CAN BE DANGEROUS IF ALLOWED TO ENTER DRINKING WATER INTAKES. DO NOT CONTAMIANTE LAKES, STREAM S, PONDS OR RIVERS.

**Section 14 - MSDS Transport Information**  
**SODIUM FLUORIDE**

**Transport Information:**

N/P

**Section 15 - Regulatory Information**  
**SODIUM FLUORIDE**

**SARA Title III Information:**

N/P

**Federal Regulatory Information:**

N/P

**State Regulatory Information:**

N/P

**Section 16 - Other Information**  
**SODIUM FLUORIDE**

**Other Information:**

N/P



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**HMIS Transportation Information**

**Product Identification:** SODIUM FLUORIDE

**Transportation ID Number:** 89420

**Responsible Party CAGE:** 36842

**Date MSDS Prepared:** 09/11/1996

**Date MSDS Reviewed:** 05/01/1998

**MFN:** 05/01/1998

**Submitter:** D DG

**Status Code:** C

**Container Information**

**Unit of Issue:**

**Container Quantity:**

**Type of Container:** DRUM

**Net Unit Weight:** 25 LBS

**Article without MSDS:** N

**Technical Entry NOS Shipping Number:**

**Radioactivity:** NOT RELEVANT

**Form:**

**Net Explosive Weight:** N/R

**Coast Guard Ammunition Code:** N/R

**Magnetism:** N/P

**AF MMAC Code:**

**DOD Exemption Number:** NOT RELEVANT

**Limited Quantity Indicator:**

**Multiple Kit Number:** 0

**Kit Indicator:** N

**Kit Part Indicator:** N

**Review Indicator:** Y

**Additional Data:**

**Department of Transportation Information**

**DOT Proper Shipping Name:** SODIUM FLUORIDE

**DOT PSN Code:** NFI

**Symbols:**

**DOT PSN Modifier:**

**Hazard Class:** 6.1

**UN ID Number:** UN1690

**DOT Packaging Group:** III

**Label:** KEEP AWAY FROM FOOD

**Special Provision(s):** T8

**Packaging Exception:** 153



**Non Bulk Packaging:** 213  
**Bulk Packaging:** 240  
**Maximum Quantity in Passenger Area:** 100 KG  
**Maximum Quantity in Cargo Area:** 200 KG  
**Stow in Vessel Requirements:** A  
**Requirements Water/Sp/Other:** 26

#### IMO Detail Information

**IMO Proper Shipping Name:** SODIUM FLUORIDE, SOLID  
**IMO PSN Code:** NRR  
**IMO PSN Modifier:**  
**IMDG Page Number:** 6258  
**UN Number:** 1690  
**UN Hazard Class:** 6.1  
**IMO Packaging Group:** III  
**Subsidiary Risk Label:** -  
**EMS Number:** 6.1-04  
**Medical First Aid Guide Number:** 750

#### IATA Detail Information

**IATA Proper Shipping Name:** SODIUM FLUORIDE  
**IATA PSN Code:** WQB  
**IATA PSN Modifier:**  
**IATA UN Id Number:** 1690  
**IATA UN Class:** 6.1  
**Subsidiary Risk Class:**  
**UN Packaging Group:** III  
**IATA Label:** TOXIC  
**Packaging Note for Passengers:** 619  
**Maximum Quantity for Passengers:** 100KG  
**Packaging Note for Cargo:** 619  
**Maximum Quantity for Cargo:** 200KG  
**Exceptions:**

#### AFI Detail Information

**AFI Proper Shipping Name:** SODIUM FLUORIDE  
**AFI Symbols:**  
**AFI PSN Code:** WQB  
**AFI PSN Modifier:**  
**AFI UN Id Number:** UN1690  
**AFI Hazard Class:** 6.1  
**AFI Packing Group:** III  
**AFI Label:**  
**Special Provisions:** P5  
**Back Pack Reference:** A10.6

#### HAZCOM Label Information

**Product Identification:** SODIUM FLUORIDE  
**CAGE:** 36842  
**Assigned Individual:** N  
**Company Name:** ANACHEMIA CANADA  
**Company PO Box:**  
**Company Street Address1:** 255 NORMAN H8R 1A3  
**Company Street Address2:** VILLE ST. PIERRE (MONTREAL), PQ 00000 CN  
**Health Emergency Telephone:** 514-489-5711  
**Label Required Indicator:** Y  
**Date Label Reviewed:** 05/01/1998  
**Status Code:** C  
**Manufacturer's Label Number:** UNKNOWN  
**Date of Label:** 05/01/1998  
**Year Procured:** N/K



**Organization Code:** F  
**Chronic Hazard Indicator:** N/P  
**Eye Protection Indicator:** YES  
**Skin Protection Indicator:** YES  
**Respiratory Protection Indicator:** N/P  
**Signal Word:** WARNING  
**Health Hazard:** Moderate  
**Contact Hazard:** Moderate  
**Fire Hazard:** None  
**Reactivity Hazard:** None

**Section 1 - Product and Company Identification**  
**61B25042 SODIUM HYDROXIDE 15%**

**Product Identification:** 61B25042 SODIUM HYDROXIDE 15%  
**Date of MSDS:** 02/19/1987 **Technical Review Date:** 08/17/1993  
**FSC:** 6630 **NIIN:** 00-831-5932  
**Submitter:** F BT  
**Status Code:** C  
**MFN:** 07  
**Article:** N  
**Kit Part:** Y

**Manufacturer's Information**

**Manufacturer's Name:** VERSATILE MACHINING INC  
**Post Office Box:** N/K  
**Manufacturer's Address1:** 7450 TOWER ST  
**Manufacturer's Address2:** FORT WORTH, TX 76118-6424  
**Manufacturer's Country:** US  
**General Information Telephone:** N/K  
**Emergency Telephone:** N/K  
**Emergency Telephone:** N/K  
**MSDS Preparer's Name:** N/P  
**Proprietary:** N  
**Reviewed:** Y  
**Published:** Y  
**CAGE:** 6S522  
**Special Project Code:** N

**Item Description**

**Item Name:** KIT,IDENTIFICATION  
**Item Manager:** FLZ  
**Specification Number:** NK  
**Type/Grade/Class:** NK  
**Unit of Issue:** EA  
**Unit of Issue Quantity:** 1  
**Type of Container:**

**Preparer Information**

**Preparer's Name:** VERSATILE MACHINING INC  
**Preparer's Address1:** 7450 TOWER ST  
**Preparer's Address2:** FORT WORTH, TX 76118-6424  
**Preparer's CAGE:** 6S522  
**Assigned Individual:** N



### Contractor Information

**Contractor's Name:** ANDERSON LABORATORIES INC  
**Contractor's Address1:** 5901 FITZHUGH AVE  
**Contractor's Address2:** FORT WORTH, TX 76119  
**Contractor's Telephone:** 817-547-4474  
**Contractor's CAGE:** 0E6L4

### Contractor Information

**Contractor's Name:** VERSATILE MACHINING INC  
**Contractor's Address1:** 7450 TOWER ST  
**Contractor's Address2:** FORT WORTH, TX 76118-6424  
**Contractor's Telephone:** N/K  
**Contractor's CAGE:** 6S522

### Section 2 - Compositon/Information on Ingredients 61B25042 SODIUM HYDROXIDE 15%

**Ingredient Name:** SODIUM HYDROXIDE, CAUSTIC SODA, LYE

**Ingredient CAS Number:** 1310-73-2 **Ingredient CAS Code:** M

**RTECS Number:** WB4900000 **RTECS Code:** M

**=WT: =WT Code:**

**=Volume: =Volume Code:**

**>WT: >WT Code:**

**>Volume: >Volume Code:**

**<WT: <WT Code:**

**<Volume: <Volume Code:**

**% Low WT: % Low WT Code:**

**% High WT: % High WT Code:**

**% Low Volume: % Low Volume Code:**

**% High Volume: % High Volume Code:**

**% Text: 10**

**% Enviromental Weight:**

**Other REC Limits:** 2MG/M3 CEILING NIOSH

**OSHA PEL:** 2 MG/M3 **OSHA PEL Code:** M

**OSHA STEL:** **OSHA STEL Code:**

**ACGIH TLV:** C 2 MG/M3; 9293 **ACGIH TLV Code:** M

**ACGIH STEL:** N/P **ACGIH STEL Code:**



**EPA Reporting Quantity:** 1000 LBS

**DOT Reporting Quantity:** 1000 LBS

**Ozone Depleting Chemical:** N

**Ingredient Name:** WATER

**Ingredient CAS Number:** 7732-18-5 **Ingredient CAS Code:** M

**RTECS Number:** ZC0110000 **RTECS Code:** M

**=WT: =WT Code:**

**=Volume: =Volume Code:**

**>WT: >WT Code:**

**>Volume: >Volume Code:**

**<WT: <WT Code:**

**<Volume: <Volume Code:**

**% Low WT: % Low WT Code:**

**% High WT: % High WT Code:**

**% Low Volume: % Low Volume Code:**

**% High Volume: % High Volume Code:**

**% Text:** 90

**% Enviromental Weight:**

**Other REC Limits:** N/K

**OSHA PEL:** N/K **OSHA PEL Code:** M

**OSHA STEL:** **OSHA STEL Code:**

**ACGIH TLV:** N/K **ACGIH TLV Code:** M

**ACGIH STEL:** N/P **ACGIH STEL Code:**

**EPA Reporting Quantity:**

**DOT Reporting Quantity:**

**Ozone Depleting Chemical:** N

**Section 3 - Hazards Identification, Including Emergency Overview  
61B25042 SODIUM HYDROXIDE 15%**



**Health Hazards Acute & Chronic:** CAUSES SEVERE BURNS TO SKIN & EYES.

**Signs & Symptoms of Overexposure:**

SKIN/EYES: BURNS.

**Medical Conditions Aggravated by Exposure:**

N/K

**LD50 LC50 Mixture:** N/K

**Route of Entry Indicators:**

**Inhalation:** NO

**Skin:** YES

**Ingestion:** YES

**Carcinogenicity Indicators**

**NTP:** NO

**IARC:** NO

**OSHA:** NO

**Carcinogenicity Explanation:** NONE

**Section 4 - First Aid Measures**  
**61B25042 SODIUM HYDROXIDE 15%**

**First Aid:**

EYES: WASH IMMEDIATELY W/WATER UNDER LOW PRESSURE FROM AN EYE-WASH FOUNTAIN, FOR A MINIMUM OF 15 MINS. DON'T ATTEMPT TO NEUTRALIZE THE CAUSTIC W/CHEMICALS. SKIN: WASH W/PLENTY OF WATER FOR AT LEAST 15 MINS. INGESTION: GIVE PLENTY OF WATER OR (PREFERABLY) MILK. DON'T INDUCE VOMITING. OBTAIN MEDICAL ATTENTION IN ALL CASES.

**Section 5 - Fire Fighting Measures**  
**61B25042 SODIUM HYDROXIDE 50%**

**Fire Fighting Procedures:**

N/K

**Unusual Fire or Explosion Hazard:**

CONTACT W/ALUMINUM, TIN OR ZINC WILL PRODUCE HYDROGEN GAS WHICH IS A FIRE & EXPLOSIVE HAZARD.

**Extinguishing Media:**

N/K

**Flash Point:** Flash Point Text: N/R

**Autoignition Temperature:**

**Autoignition Temperature Text:** N/A

**Lower Limit(s):** N/R

**Upper Limit(s):** N/R

**Section 6 - Accidental Release Measures**  
**61B25042 SODIUM HYDROXIDE 50%**

**Spill Release Procedures:**

ABSORB ON SAND OR VERMICULITE & PLACE IN CLOSED CONTAINER FOR DISPOSAL.

**Section 7 - Handling and Storage**  
**61B25042 SODIUM HYDROXIDE 15%**

**Handling and Storage Precautions:**



**Other Precautions:**

**Section 8 - Exposure Controls & Personal Protection  
61B25042 SODIUM HYDROXIDE 15%**

**Respiratory Protection:**

N/K

**Ventilation:**

N/K

**Protective Gloves:**

REQUIRED

**Eye Protection:** GOGGLES

**Other Protective Equipment:** APRONS

**Work Hygienic Practices:** N/K

**Supplemental Health & Safety Information:** N/K

**Section 9 - Physical & Chemical Properties  
61B25042 SODIUM HYDROXIDE 15%**

**HCC:**

**NRC/State License Number:**

**Net Property Weight for Ammo:**

**Boiling Point: Boiling Point Text:** N/K

**Melting/Freezing Point: Melting/Freezing Text:** N/K

**Decomposition Point: Decomposition Text:** N/K

**Vapor Pressure: N/K Vapor Density:** N/K

**Percent Volatile Organic Content:**

**Specific Gravity:** N/K

**Volatile Organic Content Pounds per Gallon:**

**pH:** N/K

**Volatile Organic Content Grams per Liter:**

**Viscosity:** N/P

**Evaporation Weight and Reference:** N/K

**Solubility in Water:** N/K

**Appearance and Odor:** ODORLESS & COLORLESS LIQUIDS.

**Percent Volatiles by Volume:** N/K

**Corrosion Rate:** N/K

**Section 10 - Stability & Reactivity Data  
61B25042 SODIUM HYDROXIDE 50%**

**Stability Indicator:** YES

**Materials to Avoid:**

STRONG ACIDS, ALUMINUM, TIN, ZINC.

**Stability Condition to Avoid:**

N/K

**Hazardous Decomposition Products:**

N/K

**Hazardous Polymerization Indicator:** NO

**Conditions to Avoid Polymerization:**

N/K

**Section 11 - Toxicological Information  
61B25042 SODIUM HYDROXIDE 15%**

**Toxicological Information:**



N/P

**Section 12 - Ecological Information**  
**61B25042 SODIUM HYDROXIDE 15%**

**Ecological Information:**

N/P

**Section 13 - Disposal Considerations**  
**61B25042 SODIUM HYDROXIDE 15%**

**Waste Disposal Methods:**

DISPOSE OF IN ACCORDANCE W/LOCAL, STATE, & FEDERAL REGULATIONS.

**Section 14 - MSDS Transport Information**  
**61B25042 SODIUM HYDROXIDE 15%**

**Transport Information:**

N/P

**Section 15 - Regulatory Information**  
**61B25042 SODIUM HYDROXIDE 15%**

**SARA Title III Information:**

N/P

**Federal Regulatory Information:**

N/P

**State Regulatory Information:**

N/P

**Section 16 - Other Information**  
**61B25042 SODIUM HYDROXIDE 15%**

**Other Information:**

N/P

**HMIS Transportation Information**

**Product Identification:** 61B25042 SODIUM HYDROXIDE 15%

**Transportation ID Number:** 87660

**Responsible Party CAGE:** 6S522

**Date MSDS Prepared:** 02/19/1987

**Date MSDS Reviewed:** 05/12/1995

**MFN:** 05/12/1995

**Submitter:** F KT

**Status Code:** C

**Container Information**

**Unit of Issue:** EA

**Container Quantity:** 1

**Type of Container:**

**Net Unit Weight:** 8 OZ

**Article without MSDS:** N

**Technical Entry NOS Shipping Number:**

**Radioactivity:**

**Form:**



**Net Explosive Weight:**

**Coast Guard Ammunition Code:**

**Magnetism:** N/P

**AF MMAC Code:**

**DOD Exemption Number:**

**Limited Quantity Indicator:**

**Multiple Kit Number:** 0

**Kit Indicator:** N

**Kit Part Indicator:** Y

**Review Indicator:** Y

**Additional Data:**

**Department of Transportation Information**

**DOT Proper Shipping Name:** SODIUM HYDROXIDE SOLUTION

**DOT PSN Code:** NGY

**Symbols:**

**DOT PSN Modifier:**

**Hazard Class:** 8

**UN ID Number:** UN1824

**DOT Packaging Group:** II

**Label:** CORROSIVE

**Special Provision(s):** B2,N34,T8

**Packaging Exception:** 154

**Non Bulk Packaging:** 202

**Bulk Packaging:** 242

**Maximum Quantity in Passenger Area:** 1 L

**Maximum Quantity in Cargo Area:** 30 L

**Stow in Vessel Requirements:** A

**Requirements Water/Sp/Other:**

**IMO Detail Information**

**IMO Proper Shipping Name:** SODIUM HYDROXIDE, SOLUTION

**IMO PSN Code:** NTB

**IMO PSN Modifier:**

**IMDG Page Number:** 8226

**UN Number:** 1824

**UN Hazard Class:** 8

**IMO Packaging Group:** II/III

**Subsidiary Risk Label:** -

**EMS Number:** 8-06

**Medical First Aid Guide Number:** 705

**IATA Detail Information**

**IATA Proper Shipping Name:** SODIUM HYDROXIDE SOLUTION

**IATA PSN Code:** WST

**IATA PSN Modifier:**

**IATA UN Id Number:** 1824



**IATA UN Class:** 8  
**Subsidiary Risk Class:**  
**UN Packaging Group:** II  
**IATA Label:** CORROSIVE  
**Packaging Note for Passengers:** 809  
**Maximum Quantity for Passengers:** 1L  
**Packaging Note for Cargo:** 813  
**Maximum Quantity for Cargo:** 30L  
**Exceptions:** A3

#### **AFI Detail Information**

**AFI Proper Shipping Name:** SODIUM HYDROXIDE, SOLUTION  
**AFI Symbols:**  
**AFI PSN Code:** WST  
**AFI PSN Modifier:**  
**AFI UN Id Number:** UN1824  
**AFI Hazard Class:** 8  
**AFI Packing Group:** II  
**AFI Label:**  
**Special Provisions:** P5, N34  
**Back Pack Reference:** A12.3

#### **HAZCOM Label Information**

**Product Identification:** 61B25042 SODIUM HYDROXIDE 15%  
**CAGE:** 6S522  
**Assigned Individual:** N  
**Company Name:** VERSATILE MACHINING INC  
**Company PO Box:**  
**Company Street Address1:** 7450 TOWER ST  
**Company Street Address2:** FORT WORTH, TX 76118-6424 US  
**Health Emergency Telephone:** N/K  
**Label Required Indicator:** Y  
**Date Label Reviewed:** 08/17/1993  
**Status Code:** C  
**Manufacturer's Label Number:** N/R  
**Date of Label:** 08/17/1993  
**Year Procured:** N/K  
**Organization Code:** F  
**Chronic Hazard Indicator:** N  
**Eye Protection Indicator:** YES  
**Skin Protection Indicator:** YES  
**Respiratory Protection Indicator:** N/P  
**Signal Word:** DANGER  
**Health Hazard:** Severe  
**Contact Hazard:** Severe  
**Fire Hazard:** None  
**Reactivity Hazard:** Slight

### **Section 1 - Product and Company Identification** **SODIUM NITRITE**

**Product Identification:** SODIUM NITRITE  
**Date of MSDS:** 12/04/1989 **Technical Review Date:** 01/22/1991  
**FSC:** 6810 **NIIN:** 00-143-7000  
**Submitter:** N EN  
**Status Code:** C



**MFN:** 01  
**Article:** N  
**Kit Part:** N

**Manufacturer's Information**

**Manufacturer's Name:** MALLINCKRODT INC  
**Post Office Box:** M  
**Manufacturer's Address1:** PARIS BYPASS  
**Manufacturer's Address2:** PARIS, KY 40361  
**Manufacturer's Country:** US  
**General Information Telephone:** 606-987-7000  
**Emergency Telephone:** 314-982-5000  
**Emergency Telephone:** 314-982-5000  
**MSDS Preparer's Name:** N/P  
**Proprietary:** N  
**Reviewed:** N  
**Published:** Y  
**CAGE:** 62910  
**Special Project Code:** N

**Item Description**

**Item Name:** SODIUM NITRITE,ACS  
**Item Manager:**  
**Specification Number:** NK  
**Type/Grade/Class:** NK  
**Unit of Issue:** BT  
**Unit of Issue Quantity:** 1  
**Type of Container:**

**Contractor Information**

**Contractor's Name:** MALLINCKRODT SPECIALTY CHEMICALS CO  
**Contractor's Address1:** 222 RED SCHOOL LANE  
**Contractor's Address2:** PHILLIPSBURG, NJ 08865  
**Contractor's Telephone:** 908-859-2151  
**Contractor's CAGE:** 62910

**Section 2 - Composition/Information on Ingredients**  
**SODIUM NITRITE**

**Ingredient Name:** SODIUM NITRITE (SARA III)

**Ingredient CAS Number:** 7632-00-0 **Ingredient CAS Code:** M

**RTECS Number:** RA1225000 **RTECS Code:** M

**=WT: =WT Code:**

**=Volume: =Volume Code:**

**>WT: >WT Code:**

**>Volume: >Volume Code:**

**<WT: <WT Code:**

**<Volume: <Volume Code:**



**% Low WT: % Low WT Code:**

**% High WT: % High WT Code:**

**% Low Volume: % Low Volume Code:**

**% High Volume: % High Volume Code:**

**% Text: N/K**

**% Environmental Weight:**

**Other REC Limits: N/K**

**OSHA PEL: NOT ESTABLISHED OSHA PEL Code: M**

**OSHA STEL: OSHA STEL Code:**

**ACGIH TLV: NOT ESTABLISHED ACGIH TLV Code: M**

**ACGIH STEL: N/P ACGIH STEL Code:**

**EPA Reporting Quantity: 100 LBS**

**DOT Reporting Quantity: 100 LBS**

**Ozone Depleting Chemical: N**

### **Section 3 - Hazards Identification, Including Emergency Overview SODIUM NITRITE**

**Health Hazards Acute & Chronic:** INHAL: MAY CAUSE IRRIT TO RESP TRACT & SYSTEMIC POIS W/ SYMPTOMS PARALLELING INGEST. INGEST: MAY CAUSE HDCH, FLUSHING OF SKIN, VOMIT, COLIC & DIARR, MUSCULAR WEAK, DIZZ, COLLAPSE, FALL IN BLOOD PRESS, CYANOSIS, CONVULSIONS, COMA, RESP PARALYSIS, & DEATH DUE TO CIRCULATORY COLLAPSE. EST LETHAL DOSE (SEE EFTS OF OVEREXP)

**Signs & Symptoms of Overexposure:**

HLTH HAZ: 1-2 GRAMS. SKIN: MAY CAUSE IRRIT, REDNESS & PAIN. MAY BE ABSORBED THROUGH SKIN CAUSING SYSTEMIC POIS; SYMPTOMS MAY PARALLEL INGEST. EYES: MAY CAUSE IRRIT, REDNESS & PAIN. CHRONIC: RPTD EXPOS URE THROUGH ANY ROUTE MAY CAUSE SYMPTOMS SIMILAR TO ACUTE TOXICITY.

**Medical Conditions Aggravated by Exposure:**

NO INFORMATION FOUND.

**LD50 LC50 Mixture:** LD50:(ORAL)85 MG/KG(RAT)

**Route of Entry Indicators:**

**Inhalation:** YES

**Skin:** YES

**Ingestion:** NO

**Carcinogenicity Indicators**

**NTP:** NO

**IARC:** NO

**OSHA:** NO

**Carcinogenicity Explanation:** NOT APPLICABLE



**Section 4 - First Aid Measures**  
**SODIUM NITRITE**

**First Aid:**

INHAL: REMOVE TO FRESH AIR. IF NOT BRTHG GIVE ARTF RESP. IF BRTHG DFCLT GIVE OXYGEN. CALL MD. INGEST: INDUCE VOMIT IMMED BY GIVING 2 GLASSES WATER & STICK FINGER DOWN THROAT. NEVER GIVE ANYTHING BY MO UTH TO AN UNCON PERSON. CALL MD IMMED. SKIN: IMMED FLUSH WITH WATER FOR AT LEAST 15 MIN WHILE REMOVING CONTAM CLTHG/SHOES. CALL MD. EYES: WASH WITH WATER FOR AT LEAST 15 MIN, LIFT LIDS OCCAS. GET MD.

**Section 5 - Fire Fighting Measures**  
**SODIUM NITRITE**

**Fire Fighting Procedures:**

PROD IS NONCOMBUST BUT IS STRONG OXIDIZER. ITS HEAT OF RX W/REDUCING AGENTS/ COMBUSTIBLES MAY CAUSE IGNIT. WEAR NIOSH/MSHA APPRVD SCBA & FULL PROT(SEE SUPP DATA)

**Unusual Fire or Explosion Hazard:**

CONT W/OXIDIZABLE SUBSTANCES MAY CAUSE EXTREMELY VIOLENT COMBUST. MAY EXPLODE WHEN HEATED TO 537C/ON SEV IMPACT/ON CONT WITH CYANIDES, AMMONIUM (SEE SUPP DATA)

**Extinguishing Media:**

WATER/WATER SPRAY IN EARLY STAGES. MAY USE FOAM. AVOID USING MULTI-PURP DRY CHEM FIRE EXTING WHERE CONT W/PROD MAY OCCUR

**Flash Point:** Flash Point Text: N/K

**Autoignition Temperature:**

Autoignition Temperature Text: N/A

Lower Limit(s): N/K

Upper Limit(s): N/K

**Section 6 - Accidental Release Measures**  
**SODIUM NITRITE**

**Spill Release Procedures:**

VENT AREA OF LEAK OR SPILL. PROTECT CLEAN-UP PERSONNEL FROM DUST WITH NIOSH/MSHA APPROVED RESPIRATOR & PROTECTIVE CLOTHING. PICK UP & PLACE IN SUITABLE CNTNR FOR RECLAMATION OR DISPOSAL IN A METHOD TH AT DOES NOT GENERATE DUST.

**Section 7 - Handling and Storage**  
**SODIUM NITRITE**

**Handling and Storage Precautions:**

**Other Precautions:**

**Section 8 - Exposure Controls & Personal Protection**  
**SODIUM NITRITE**

**Respiratory Protection:**

NIOSH/MSHA APPROVED SUPPLIED AIR, FULL FACEPIECE RESPIRATOR, AIR-LINED HOOD, OR SCBA.

**Ventilation:**

LOCAL EXHAUST RECOMMENDED TO PREVENT DISPERSION OF CONTAMINANT INTO WORKROOM AIR.

**Protective Gloves:**

IMPERVIOUS GLOVES



**Eye Protection:** CHEM WORK GOGGLES/FACESHLD OPTNL (FP N)

**Other Protective Equipment:** IMPERVIOUS PROTECTIVE CLOTHING INCLUDING BOOTS, LAB COAT, APRON OR COVERALLS TO PREVENT SKIN CONTACT.

**Work Hygienic Practices:** DO NOT WEAR CONT LENSES WHILE WORKING W/MATL. MAINTAIN EYE WASH FOUNTAIN & QUICK-DRENCH FAC. WASH THORO AFTER HANDLING.

**Supplemental Health & Safety Information:** FIRE FIGHT PROC: EQUIP IN PRESS DEMAND/OTHER POS PRESS MODE. EXPLO HAZ: SALTS, CELLULOSE, LI, K + NH\*3, SODIUM THIOSULFATE. MATLS TO AVOID: SALTS, BUTADIENE, PHTHALIC ACID, PHTHALIC ANHYDRIDE, REDUCAN TS, SODIUM AMIDE, SODIUM DISULPHITE, SODIUM THIOCYANATE, UREA, WOOD ORG MATTER. DECOMP PRODS MAY LEAVE CAUSTIC RESIDUE.

### Section 9 - Physical & Chemical Properties SODIUM NITRITE

**HCC:** D2

**NRC/State License Number:**

**Net Property Weight for Ammo:**

**Boiling Point: Boiling Point Text:** DECOMP>320C

**Melting/Freezing Point: Melting/Freezing Text:** 520F,271C

**Decomposition Point: Decomposition Text:** >608F,>320C

**Vapor Pressure:** N/K **Vapor Density:** N/K

**Percent Volatile Organic Content:**

**Specific Gravity:** N/K

**Volatile Organic Content Pounds per Gallon:**

**pH:** N/K

**Volatile Organic Content Grams per Liter:**

**Viscosity:** N/P

**Evaporation Weight and Reference:** N/K

**Solubility in Water:** 85.2G/100G H\*2O

**Appearance and Odor:** WHITE OR YELLOWISH-WHITE CRYSTALLINE GRANULES, ODORLESS.

**Percent Volatiles by Volume:** N/K

**Corrosion Rate:** N/K

### Section 10 - Stability & Reactivity Data SODIUM NITRITE

**Stability Indicator:** YES

**Materials to Avoid:**

AMMONIUM SALTS, CELLULOSE, CYANIDES, LITHIUM, POTASSIUM PLUS AMMONIA, SODIUM THIOSULFATE, AMINOGUANIDE (SEE SUPP DATA)

**Stability Condition to Avoid:**

NONE SPECIFIED BY MANUFACTURER.

**Hazardous Decomposition Products:**

OXIDES OF NITROGEN

**Hazardous Polymerization Indicator:** NO

**Conditions to Avoid Polymerization:**

NOT APPLICABLE

### Section 11 - Toxicological Information SODIUM NITRITE

**Toxicological Information:**

N/P



**Section 12 - Ecological Information**  
**SODIUM NITRITE**

**Ecological Information:**

N/P

**Section 13 - Disposal Considerations**  
**SODIUM NITRITE**

**Waste Disposal Methods:**

DISPOSE WHAT CANNOT BE RECLAIMED IN A RCRA APPROVED HAZARDOUS WASTE FACILITY I/A/W LOCAL, STATE AND FEDERAL REGULATIONS.

**Section 14 - MSDS Transport Information**  
**SODIUM NITRITE**

**Transport Information:**

N/P

**Section 15 - Regulatory Information**  
**SODIUM NITRITE**

**SARA Title III Information:**

N/P

**Federal Regulatory Information:**

N/P

**State Regulatory Information:**

N/P

**Section 16 - Other Information**  
**SODIUM NITRITE**

**Other Information:**

N/P

**HMIS Transportation Information**

**Product Identification:** SODIUM NITRITE

**Transportation ID Number:** 50407

**Responsible Party CAGE:** 62910

**Date MSDS Prepared:** 12/04/1989

**Date MSDS Reviewed:** 04/05/1991

**MFN:** 04/05/1991

**Submitter:** N TN

**Status Code:** C

**Container Information**

**Unit of Issue:** BT

**Container Quantity:** 1

**Type of Container:**

**Net Unit Weight:**

**Article without MSDS:** N

**Technical Entry NOS Shipping Number:**

**Radioactivity:**

**Form:**



**Net Explosive Weight:**

**Coast Guard Ammunition Code:**

**Magnetism:** N/P

**AF MMAC Code:**

**DOD Exemption Number:**

**Limited Quantity Indicator:**

**Multiple Kit Number:** 0

**Kit Indicator:** N

**Kit Part Indicator:** N

**Review Indicator:** Y

**Additional Data:**

#### **Department of Transportation Information**

**DOT Proper Shipping Name:** SODIUM NITRITE

**DOT PSN Code:** NIB

**Symbols:**

**DOT PSN Modifier:**

**Hazard Class:** 5.1

**UN ID Number:** UN1500

**DOT Packaging Group:** III

**Label:** OXIDIZER

**Special Provision(s):** A1,A29

**Packaging Exception:** 152

**Non Bulk Packaging:** 213

**Bulk Packaging:** 240

**Maximum Quantity in Passenger Area:** 25 KG

**Maximum Quantity in Cargo Area:** 100 KG

**Stow in Vessel Requirements:** A

**Requirements Water/Sp/Other:** 56,58

#### **IMO Detail Information**

**IMO Proper Shipping Name:** SODIUM NITRITE

**IMO PSN Code:** NVF

**IMO PSN Modifier:**

**IMDG Page Number:** 5181

**UN Number:** 1500

**UN Hazard Class:** 5.1

**IMO Packaging Group:** III

**Subsidiary Risk Label:** -

**EMS Number:** 5.1-06

**Medical First Aid Guide Number:** 235

#### **IATA Detail Information**

**IATA Proper Shipping Name:** SODIUM NITRITE

**IATA PSN Code:** WUM

**IATA PSN Modifier:**

**IATA UN Id Number:** 1500



**IATA UN Class:** 5.1  
**Subsidiary Risk Class:** 6.1  
**UN Packaging Group:** III  
**IATA Label:** OXIDIZER & TOXIC  
**Packaging Note for Passengers:** 516  
**Maximum Quantity for Passengers:** 25KG  
**Packaging Note for Cargo:** 518  
**Maximum Quantity for Cargo:** 100KG  
**Exceptions:**

**AFI Detail Information**

**AFI Proper Shipping Name:** SODIUM NITRITE  
**AFI Symbols:**  
**AFI PSN Code:** WUM  
**AFI PSN Modifier:**  
**AFI UN Id Number:** UN1500  
**AFI Hazard Class:** 5.1  
**AFI Packing Group:** III  
**AFI Label:**  
**Special Provisions:** P5, A1, A29  
**Back Pack Reference:** A9.8

**HAZCOM Label Information**

**Product Identification:** SODIUM NITRITE  
**CAGE:** 62910  
**Assigned Individual:** N  
**Company Name:** MALLINCKRODT SPECIALTY CHEMICALS CO  
**Company PO Box:**  
**Company Street Address1:** 222 RED SCHOOL LANE  
**Company Street Address2:** PHILLIPSBURG, NJ 08865 US  
**Health Emergency Telephone:** 314-982-5000  
**Label Required Indicator:** Y  
**Date Label Reviewed:** 03/25/1991  
**Status Code:** C  
**Manufacturer's Label Number:**  
**Date of Label:** 03/25/1991  
**Year Procured:** N/K  
**Organization Code:** F  
**Chronic Hazard Indicator:** N  
**Eye Protection Indicator:** YES  
**Skin Protection Indicator:** YES  
**Respiratory Protection Indicator:** YES  
**Signal Word:** WARNING  
**Health Hazard:** Moderate  
**Contact Hazard:** Slight  
**Fire Hazard:** None  
**Reactivity Hazard:** None