



MATERIAL SAFETY DATA SHEET

SECTION 1 – CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

<u>Company Name</u> Nu-Calgon Wholesaler, Inc.	<u>Phone Number</u> (314) 469-7000 / (800) 554-5499	<u>CHEMTREC</u> (800) 424-9300		
<u>Street Address</u> 2008 Altom Court	<u>City</u> St. Louis	<u>State</u> MO	<u>Postal Code</u> 63146-4151	<u>Last Update</u> 5/23/07
<u>Product Name</u> Acid Starch Indicator Powder	<u>Product Number</u> W017-0	<u>Product Use</u> Inorganic acid/starch mixture for water testing	<u>EPA Registration #</u> N/A	

SECTION 2 – COMPOSITION/INFORMATION ON INGREDIENTS

<u>Hazardous Ingredients</u>	<u>% By Wt.</u>	<u>CAS Number</u>	<u>TLV</u>	<u>PEL</u>
Sulfamic acid	<90	5329-14-6	NE	NE
Starch (Maltodextrin)	<25	9050-36-6		

SECTION 3 – HAZARD IDENTIFICATION

Emergency Overview: ROUTE(S) OF ENTRY: Inhalation Ingestion Skin. TARGET ORGAN(S): Eyes, skin, respiratory tract

Potential Health Effects

Eyes: Corrosive. Contact causes burns.

Skin: Corrosive. Contact causes burns.

Ingestion: Corrosive. Causes burns of mouth, esophagus, stomach.

Inhalation: Corrosive. Causes burns of mucous membranes, upper respiratory tract.

Chronic Exposure: No Data.

Carcinogenicity: NTP No IARC No OSHA No

Medical Conditions Aggravated by Exposure: Eye, skin, and respiratory conditions

SECTION 4 – FIRST AID MEASURES

Eyes: Immediately flush eyes with water for 15 minutes. Call physician.

Skin: Wash skin thoroughly with baking soda, soap and water.

Ingestion: Give large amounts of water or large amounts of water with milk of magnesia. Call physician. DO NOT INDUCE VOMITING.

Inhalation: Remove to fresh air. Call physician.

SECTION 5 – FIREFIGHTING MEASURES

Flash Point: NA°C/NA°F

Autoignition Temp: No Data. °C/No Data. °F

Hazardous Products of Combustion: No Data.

Flammable Limits in Air: LEL: NA UEL: NA

Extinguishing Media: Dry chemical, carbon dioxide, water spray or foam

Fire and Explosion Hazards: May react violently with chlorine, fuming nitric acid. May emit toxic fumes of sulfur oxides, sulfuric acid, ammonia.

Special Firefighting Procedures: Wear self-contained (positive pressure if available) breathing apparatus and special protective clothing

SECTION 6 – ACCIDENTAL RELEASE MEASURES

Spill or Leak: Neutralize with soda ash solution. Absorb with vermiculite or other inert material. Containerize for later disposal.

SECTION 7 – HANDLING AND STORAGE

Handling Procedures and Equipment: Avoid contact with eyes, skin, and clothing. Avoid breathing chemical. Wash thoroughly after handling.

Storage Requirements: Cool, dry area. Avoid direct sunlight.

SECTION 8 – EXPOSURE CONTROLS/PERSONAL PROTECTION

Respiratory Protection: dust mask

Eye Protection: safety glasses, face shield

Protective Clothing: Rubber gloves, lab coat, rubber apron

Exposure Guidelines: No Data.

Specific Engineering Controls (such as ventilation, enclosed process): No Data.

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

<u>Physical Form:</u> Solid	<u>Freezing Point:</u> NA°C/NA°F	<u>% Volatile by Weight:</u> No Data.%
<u>Color:</u> Off-white	<u>Vapor Density [air =1]:</u> NA	<u>Evaporation Rate:</u> NA
<u>Odor:</u> None	<u>Vapor Pressure:</u> NA	<u>Specific Gravity:</u> NA
<u>Boiling Point:</u> NA°C/NA°F	<u>Solubility in Water:</u> Soluble	<u>pH (concentrate):</u> NA

SECTION 10 – STABILITY AND REACTIVITY

Chemical Stability: No Data.

Hazardous Polymerization: No Data.

Incompatibilities: No Data.

Reactive Conditions to avoid: Extreme heat, temperatures. Contact with strong alkali, metals.

Decomposition Products: No Data.

SECTION 11 – TOXICOLOGICAL INFORMATION

<u>Hazardous Ingredients</u>	<u>CAS #</u>	<u>EINECS #</u>	<u>LD 50 of Ingredient (Specify Species)</u>	<u>LC50 of Ingredient (Specify Species)</u>
Sulfamic acid			LD50(oral-rat): 3160 mg/kg	

SECTION 12 – ECOLOGICAL INFORMATION

<u>Hazardous Ingredients</u>	<u>Aquatic Toxicity Data</u>
No Data.	

SECTION 13 – DISPOSAL CONSIDERATIONS

Waste Disposal: Incineration or other method to comply with all local, state, and federal regulations.

SECTION 14 – TRANSPORTATION INFORMATION

Special Shipping Information: DOT Regulated.

<u>Purview</u>	<u>Proper Shipping Name</u>	<u>UN Number</u>	<u>Packing Group</u>	<u>Hazard Class</u>
DOT (Land)				ORM-D
IMO (Water)	No Data.			
ICAO (Air)	No Data.			

SECTION 15 – REGULATORY INFORMATION

WHMIS Classification: (Workplace Hazardous Material Information System)	No Data.
SARA Title III: (Superfund Amendments & Reauthorization Act)	No Data.
OSHA: (Occupational Safety & Health Administration)	No Data.
TSCA: (Toxic Substance Control Act)	No Data.
VOC: (volatile Organic Compounds)	No Data.
CPR: (Canadian Controlled Products Regulations)	This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations.
EINECS: (European Inventory of Existing Commercial Chemical Substances)	No Data.
DSL / NDSL: (Canadian Domestic Substance List)(Non-Domestic Substance List)	No Data.
CERCLA: (Comprehensive Response Compensation & Liability Act)	No Data.
IDL: (Canadian Ingredient Disclosure List)	No Data.
HFPA (HMIS) Rating: (Hazardous Materials Identification System)	Health: 2 Flammability: 0 Reactivity: 2 Specific: CORR

SECTION 16 – OTHER INFORMATION

No Data.

The information contained herein is based on the data available to us and is believed to be correct. However, Nu-Calgon Wholesaler Inc. makes no warranty, expressed, or implied, regarding the accuracy of this data or the results to be obtained from the use thereof. Nu-Calgon Wholesaler Inc. assumes no liability for injury from the use of the product described herein.



MATERIAL SAFETY DATA SHEET

SECTION 1 – CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

<u>Company Name</u> Nu-Calgon Wholesaler, Inc.	<u>Phone Number</u> (314) 469-7000 / (800) 554-5499	<u>CHEMTREC</u> (800) 424-9300		
<u>Street Address</u> 2008 Altom Court	<u>City</u> St. Louis	<u>State</u> MO	<u>Postal Code</u> 63146-4151	<u>Last Update</u> 5/23/07
<u>Product Name</u> Barium Chloride Solution 20%	<u>Product Number</u> W017-0	<u>Product Use</u> Inorganic salt solution for water testing.	<u>EPA Registration #</u> N/A	

SECTION 2 – COMPOSITION/INFORMATION ON INGREDIENTS

<u>Hazardous Ingredients</u>	<u>% By Wt.</u>	<u>CAS Number</u>	<u>TLV</u>	<u>PEL</u>
Barium chloride	20	10361-37-2	TLV: 0.5 mg/m3 (as barium)	0.5 mg/m3 (as barium)
Deionized water	to 100	7732-18-5		

SECTION 3 – HAZARD IDENTIFICATION

Emergency Overview: ROUTE(S) OF ENTRY: Ingestion & Skin. TARGET ORGAN(S): Eyes, skin

Potential Health Effects

Eyes: Irritant.

Skin: Irritant. Contact can cause irritation.

Ingestion: Toxic. May cause systemic poisoning; produces severe abdominal pain, dyspnea, paralysis, cyanosis, death.

Inhalation: NA

Chronic Exposure: No Data.

Carcinogenicity: NTP No IARC No OSHA No

Medical Conditions Aggravated by Exposure: Eye and skin conditions

SECTION 4 – FIRST AID MEASURES

Eyes: Immediately flush eyes with water for 20 minutes or until chemical is removed. Call physician.

Skin: Wash skin thoroughly with soap and water.

Ingestion: Give large amounts of water. Call physician. Induce vomiting under direction of physician. DO NOT induce vomiting or give anything by mouth to a person who is unconscious, rapidly losing consciousness, or convulsing.

Inhalation: NA

SECTION 5 – FIREFIGHTING MEASURES

Flash Point: NA°C/NA°F

Autoignition Temp: NA°C/NA°F

Hazardous Products of Combustion: No Data.

Flammable Limits in Air: LEL: NA UEL: NA

Extinguishing Media: Dry chemical, carbon dioxide, water spray or foam

Fire and Explosion Hazards: May emit toxic fumes of chlorine, hydrogen chloride.

Special Firefighting Procedures: Wear self-contained (positive pressure if available) breathing apparatus and special protective clothing

SECTION 6 – ACCIDENTAL RELEASE MEASURES

Spill or Leak: Absorb with vermiculite or other inert material. Containerize for later disposal.

SECTION 7 – HANDLING AND STORAGE

Handling Procedures and Equipment: Avoid contact with eyes, skin, and clothing. Avoid breathing chemical. Wash thoroughly after handling.

Storage Requirements: Cool, dry area. Avoid direct sunlight.

SECTION 8 – EXPOSURE CONTROLS/PERSONAL PROTECTION

Respiratory Protection: No Data.

Eye Protection: safety glasses

Protective Clothing: General purpose gloves, lab coat

Exposure Guidelines: No Data.

Specific Engineering Controls (such as ventilation, enclosed process): No Data.

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

<u>Physical Form:</u> Liquid	<u>Freezing Point:</u> No Data. °C/No Data. °F	<u>% Volatile by Weight:</u> BY VOLUME: 80%
<u>Color:</u> Clear, colorless	<u>Vapor Density [air =1]:</u> .6	<u>Evaporation Rate:</u> No Data.
<u>Odor:</u> None	<u>Vapor Pressure:</u> (mm Hg): 17	<u>Specific Gravity:</u> 1.2
<u>Boiling Point:</u> 100-102°C/212-215°F	<u>Solubility in Water:</u> Soluble	<u>pH (concentrate):</u> 6.7

SECTION 10 – STABILITY AND REACTIVITY

Chemical Stability: No Data.

Hazardous Polymerization: No Data.

Incompatibilities: No Data.

Reactive Conditions to avoid: Extreme heat, temperatures.

Decomposition Products: No Data.

SECTION 11 – TOXICOLOGICAL INFORMATION

<u>Hazardous Ingredients</u>	<u>CAS #</u>	<u>EINECS #</u>	<u>LD 50 of Ingredient (Specify Species)</u>	<u>LC50 of Ingredient (Specify Species)</u>
Barium chloride			LD50(oral-rat): 118 mg/kg LDLo(oral-hmn): 11.4 mg/kg	

SECTION 12 – ECOLOGICAL INFORMATION

<u>Hazardous Ingredients</u>	<u>Aquatic Toxicity Data</u>
No Data.	

SECTION 13 – DISPOSAL CONSIDERATIONS

Waste Disposal: Incineration or other method to comply with all local, state, and federal regulations.

SECTION 14 – TRANSPORTATION INFORMATION

Special Shipping Information: Not Regulated.

<u>Purview</u>	<u>Proper Shipping Name</u>	<u>UN Number</u>	<u>Packing Group</u>	<u>Hazard Class</u>
DOT (Land)	Not Regulated.			
IMO (Water)	No Data.			
ICAO (Air)	No Data.			

SECTION 15 – REGULATORY INFORMATION

WHMIS Classification: (Workplace Hazardous Material Information System)	No Data.
SARA Title III: (Superfund Amendments & Reauthorization Act)	Barium chloride is subject to the reporting requirements of SARA Title III Section 313 and 40 CFR 372.
OSHA: (Occupational Safety & Health Administration)	No Data.
TSCA: (Toxic Substance Control Act)	No Data.
VOC: (volatile Organic Compounds)	No Data.
CPR: (Canadian Controlled Products Regulations)	This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations.
EINECS: (European Inventory of Existing Commercial Chemical Substances)	No Data.
DSL / NDSL: (Canadian Domestic Substance List)(Non-Domestic Substance List)	No Data.
CERCLA: (Comprehensive Response Compensation & Liability Act)	No Data.
IDL: (Canadian Ingredient Disclosure List)	No Data.
HFPA (HMIS) Rating: (Hazardous Materials Identification System)	Health: 1 Flammability: 0 Reactivity: 0 Specific: NA

SECTION 16 – OTHER INFORMATION

No Data.

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<u>Street Address</u> 2008 Altom Court	<u>City</u> St. Louis	<u>State</u> MO	<u>Postal Code</u> 63146-4151	<u>Last Update</u> 5/23/07
<u>Product Name</u> Calcium Buffer	<u>Product Number</u> W017-0	<u>Product Use</u> Inorganic alkali solution for water testing.		<u>EPA Registration #</u> N/A

SECTION 2 – COMPOSITION/INFORMATION ON INGREDIENTS

<u>Hazardous Ingredients</u>	<u>% By Wt.</u>	<u>CAS Number</u>	<u>TLV</u>	<u>PEL</u>
Sodium hydroxide	<25	1310-73-2	2 mg/m3	2 mg/m3
Deionized water	to 100	7732-18-5		

SECTION 3 – HAZARD IDENTIFICATION

<u>Emergency Overview:</u> ROUTE(S) OF ENTRY: Ingestion Skin. TARGET ORGAN(S): Eyes, skin
<u>Potential Health Effects</u>
<u>Eyes:</u> Corrosive. Contact causes burns, corneal damage, possible blindness.
<u>Skin:</u> Corrosive. Contact causes burns.
<u>Ingestion:</u> Corrosive. Causes burns of mouth, throat, esophagus, stomach.
<u>Inhalation:</u> NA
<u>Chronic Exposure:</u> No Data.
<u>Carcinogenicity:</u> NTP No IARC No OSHA No
<u>Medical Conditions Aggravated by Exposure:</u> Eye and skin conditions

SECTION 4 – FIRST AID MEASURES

<u>Eyes:</u> Immediately flush eyes with water for 20 minutes or until chemical is removed. Call physician.
<u>Skin:</u> Wash skin thoroughly with soap and water.
<u>Ingestion:</u> Give large amounts of water. Follow with milk or raw egg whites beaten in water. Call physician. DO NOT INDUCE VOMITING. DO NOT give anything by mouth to a person who is unconscious, rapidly losing consciousness, or convulsing.
<u>Inhalation:</u> NA

SECTION 5 – FIREFIGHTING MEASURES

<u>Flash Point:</u> NA°C/NA°F
<u>Autoignition Temp:</u> NA°C/NA°F
<u>Hazardous Products of Combustion:</u> LEL: NA UEL: NA
<u>Flammable Limits in Air:</u> No Data.
<u>Extinguishing Media:</u> Dry chemical, carbon dioxide, water spray or foam
<u>Fire and Explosion Hazards:</u> May react with metals to produce hydrogen gas. May emit toxic or irritating fumes.
<u>Special Firefighting Procedures:</u> Wear self-contained (positive pressure if available) breathing apparatus and special protective clothing

SECTION 6 – ACCIDENTAL RELEASE MEASURES

Spill or Leak: Neutralize with dilute acid. Absorb with vermiculite or other inert material. Containerize for later disposal.

SECTION 7 – HANDLING AND STORAGE

Handling Procedures and Equipment: Avoid contact with eyes, skin, and clothing. Avoid breathing chemical. Wash thoroughly after handling.

Storage Requirements: Cool, dry area. Avoid direct sunlight.

SECTION 8 – EXPOSURE CONTROLS/PERSONAL PROTECTION

Respiratory Protection: No Data.

Eye Protection: safety glasses, face shield.

Protective Clothing: Rubber gloves, lab coat, rubber apron,

Exposure Guidelines: No Data.

Specific Engineering Controls (such as ventilation, enclosed process): No Data.

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

<u>Physical Form:</u> Liquid	<u>Freezing Point:</u> No Data. °C/No Data. °F	<u>% Volatile by Weight:</u> BY VOLUME: 80%
<u>Color:</u> Clear, colorless	<u>Vapor Density [air =1]:</u> .6	<u>Evaporation Rate:</u> No Data.
<u>Odor:</u> None	<u>Vapor Pressure:</u> (mm Hg): 17	<u>Specific Gravity:</u> 1.1
<u>Boiling Point:</u> 102°C/215°F	<u>Solubility in Water:</u> Soluble	<u>pH (concentrate):</u> 13.4

SECTION 10 – STABILITY AND REACTIVITY

Chemical Stability: No Data.

Hazardous Polymerization: No Data.

Incompatibilities: No Data.

Reactive Conditions to avoid: Extreme heat, temperatures. Contact with strong acids, metals, aldehydes, organic halogens.

Decomposition Products: No Data.

SECTION 11 – TOXICOLOGICAL INFORMATION

<u>Hazardous Ingredients</u>	<u>CAS #</u>	<u>EINECS #</u>	<u>LD 50 of Ingredient (Specify Species)</u>	<u>LC50 of Ingredient (Specify Species)</u>
Sodium hydroxide	1310-73-2		LD50(oral-rat): 140-340 mg/kg	

SECTION 12 – ECOLOGICAL INFORMATION

<u>Hazardous Ingredients</u>	<u>Aquatic Toxicity Data</u>
No Data.	

SECTION 13 – DISPOSAL CONSIDERATIONS

Waste Disposal: Incineration or other method to comply with all local, state, and federal regulations.

SECTION 14 – TRANSPORTATION INFORMATION

Special Shipping Information: DOT Regulated.

<u>Purview</u>	<u>Proper Shipping Name</u>	<u>UN Number</u>	<u>Packing Group</u>	<u>Hazard Class</u>
DOT (Land)				ORM-D
IMO (Water)	No Data.			
ICAO (Air)	No Data.			

SECTION 15 – REGULATORY INFORMATION

WHMIS Classification: (Workplace Hazardous Material Information System)	No Data.
SARA Title III: (Superfund Amendments & Reauthorization Act)	No Data.
OSHA: (Occupational Safety & Health Administration)	No Data.
TSCA: (Toxic Substance Control Act)	No Data.
VOC: (volatile Organic Compounds)	No Data.
CPR: (Canadian Controlled Products Regulations)	This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations.
EINECS: (European Inventory of Existing Commercial Chemical Substances)	No Data.
DSL / NDSL: (Canadian Domestic Substance List)(Non-Domestic Substance List)	No Data.
CERCLA: (Comprehensive Response Compensation & Liability Act)	No Data.
IDL: (Canadian Ingredient Disclosure List)	No Data.
HFPA (HMIS) Rating: (Hazardous Materials Identification System)	Health: 3 Flammability: 0 Reactivity: 1 Special: NA

SECTION 16 – OTHER INFORMATION

No Data.

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<u>Street Address</u> 2008 Altom Court	<u>City</u> St. Louis	<u>State</u> MO	<u>Postal Code</u> 63146-4151	<u>Last Update</u> 5/23/07
<u>Product Name</u> Calcium Indicator Powder	<u>Product Number</u> W017-0	<u>Product Use</u> Inorganic salt/organic dye mixture for water testing.	<u>EPA Registration #</u> N/A	

SECTION 2 – COMPOSITION/INFORMATION ON INGREDIENTS

<u>Hazardous Ingredients</u>	<u>% By Wt.</u>	<u>CAS Number</u>	<u>TLV</u>	<u>PEL</u>
Potassium chloride	>50	7447-40-7	NE	NE
Calcon	<1	2538-85-4	NE	NE

SECTION 3 – HAZARD IDENTIFICATION

Emergency Overview: ROUTE(S) OF ENTRY: Inhalation Ingestion Skin. TARGET ORGAN(S): Eyes, skin, respiratory tract

Potential Health Effects

Eyes: Irritant

Skin: Irritant. Contact may cause staining.

Ingestion: Irritant. May cause gastrointestinal irritation.

Inhalation: Irritant

Chronic Exposure: No Data.

Carcinogenicity: NTP No IARC No OSHA No

Medical Conditions Aggravated by Exposure: Eye, skin, and respiratory conditions

SECTION 4 – FIRST AID MEASURES

Eyes: Immediately flush eyes with water for 15 minutes. Call physician.

Skin: Wash skin thoroughly with soap and water.

Ingestion: Give large amounts of water. Call physician. Induce vomiting under direction of physician.

Inhalation: Remove to fresh air. Call physician.

SECTION 5 – FIREFIGHTING MEASURES

Flash Point: NA°C/NA°F

Autoignition Temp: No Data. °C/No Data. °F

Hazardous Products of Combustion: No Data.

Flammable Limits in Air: LEL: NA UEL: NA

Extinguishing Media: NA

Fire and Explosion Hazards: May emit toxic fumes of chlorine.

Special Firefighting Procedures: Wear self-contained (positive pressure if available) breathing apparatus and full-protective clothing

SECTION 6 – ACCIDENTAL RELEASE MEASURES

Spill or Leak: Sweep up. Avoid raising dust. Containerize for later disposal.

SECTION 7 – HANDLING AND STORAGE

Handling Procedures and Equipment: Avoid contact with eyes, skin, and clothing. Avoid breathing chemical. Wash thoroughly after handling.

Storage Requirements: Cool, dry area. Avoid direct sunlight.

SECTION 8 – EXPOSURE CONTROLS/PERSONAL PROTECTION

Respiratory Protection: No Data.

Eye Protection: safety glasses

Protective Clothing: General purpose gloves, lab coat, dust mask

Exposure Guidelines: No Data.

Specific Engineering Controls (such as ventilation, enclosed process): No Data.

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

<u>Physical Form:</u> Solid	<u>Freezing Point:</u> NA°C/NA°F	<u>% Volatile by Weight:</u> 1%
<u>Color:</u> purple-brown crystals	<u>Vapor Density [air =1]:</u> NA	<u>Evaporation Rate:</u> NA
<u>Odor:</u> None	<u>Vapor Pressure:</u> NA	<u>Specific Gravity:</u> 2
<u>Boiling Point:</u> NA°C/NA°F	<u>Solubility in Water:</u> Soluble	<u>pH (concentrate):</u> NA

SECTION 10 – STABILITY AND REACTIVITY

Chemical Stability: No Data.

Hazardous Polymerization: No Data.

Incompatibilities: No Data.

Reactive Conditions to avoid: Extreme heat, temperatures. Contact with strong oxidizers, bromine trifluoride, (sulfuric acid + potassium permanganate).

Decomposition Products: No Data.

SECTION 11 – TOXICOLOGICAL INFORMATION

<u>Hazardous Ingredients</u>	<u>CAS #</u>	<u>EINECS #</u>	<u>LD 50 of Ingredient (Specify Species)</u>	<u>LC50 of Ingredient (Specify Species)</u>
Potassium chloride	7447-40-7		LDLo(oral-hmn): 500 mg/kg	

SECTION 12 – ECOLOGICAL INFORMATION

<u>Hazardous Ingredients</u>	<u>Aquatic Toxicity Data</u>
No Data.	

SECTION 13 – DISPOSAL CONSIDERATIONS

Waste Disposal: Incineration or other method to comply with all local, state, and federal regulations.

SECTION 14 – TRANSPORTATION INFORMATION

Special Shipping Information: Not Regulated.

<u>Purview</u>	<u>Proper Shipping Name</u>	<u>UN Number</u>	<u>Packing Group</u>	<u>Hazard Class</u>
DOT (Land)	No Data.			
IMO (Water)	No Data.			
ICAO (Air)	No Data.			

SECTION 15 – REGULATORY INFORMATION

WHMIS Classification: (Workplace Hazardous Material Information System)	No Data.
SARA Title III: (Superfund Amendments & Reauthorization Act)	No Data.
OSHA: (Occupational Safety & Health Administration)	No Data.
TSCA: (Toxic Substance Control Act)	No Data.
VOC: (volatile Organic Compounds)	No Data.
CPR: (Canadian Controlled Products Regulations)	This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations.
EINECS: (European Inventory of Existing Commercial Chemical Substances)	No Data.
DSL / NDSL: (Canadian Domestic Substance List)(Non-Domestic Substance List)	No Data.
CERCLA: (Comprehensive Response Compensation & Liability Act)	No Data.
IDL: (Canadian Ingredient Disclosure List)	No Data.
HFPA (HMIS) Rating: (Hazardous Materials Identification System)	Health: 0 Flammability: 0 Reactivity: 0 Specific: NA

SECTION 16 – OTHER INFORMATION

No Data.

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<u>Street Address</u> 2008 Altom Court	<u>City</u> St. Louis	<u>State</u> MO	<u>Postal Code</u> 63146-4151	<u>Last Update</u> 5/21/07
<u>Product Name</u> Chromate Indicator	<u>Product Number</u> 4798-2 & W017-0	<u>Product Use</u> Inorganic salt solution for water testing.	<u>EPA Registration #</u> N/A	

SECTION 2 – COMPOSITION/INFORMATION ON INGREDIENTS

<u>Hazardous Ingredients</u>	<u>% By Wt.</u>	<u>CAS Number</u>	<u>TLV</u>	<u>PEL</u>
Potassium chromate	5	7789-00-6	TLV: 52 ug/m3 (as Cr(VI)) STEL: NE	5 ug/m3 (as Cr(VI))
Deionized water	to 100	7732-18-5		

SECTION 3 – HAZARD IDENTIFICATION

<u>Emergency Overview:</u> ROUTE(S) OF ENTRY: Ingestion & Skin. TARGET ORGAN(S): Eyes, skin, kidneys
<u>Potential Health Effects</u>
<u>Eyes:</u> Irritant. Contact may cause conjunctivitis.
<u>Skin:</u> Irritant. Contact may cause dermatitis.
<u>Ingestion:</u> May cause severe gastrointestinal irritation, circulatory collapse, coma, toxic nephritis.
<u>Inhalation:</u> NA
<u>Chronic Exposure:</u> No Data.
<u>Carcinogenicity:</u> NTP Yes IARC Yes OSHA Yes. Potassium chromate is not listed specifically in the NTP Annual Report on Carcinogens (latest edition) but would be included under "chromium and certain chromium compounds".
<u>Medical Conditions Aggravated by Exposure:</u> Eye and skin conditions

SECTION 4 – FIRST AID MEASURES

<u>Eyes:</u> Immediately flush eyes with water for 20 minutes or until chemical is removed. Call physician.
<u>Skin:</u> Wash skin thoroughly with soap and water.
<u>Ingestion:</u> Give large amounts of water. Call physician. Induce vomiting under direction of physician. DO NOT induce vomiting or give anything by mouth to a person who is unconscious, rapidly losing consciousness, or convulsing.
<u>Inhalation:</u> NA

SECTION 5 – FIREFIGHTING MEASURES

<u>Flash Point:</u> NA°C/NA°F
<u>Autoignition Temp:</u> NA°C/NA°F
<u>Hazardous Products of Combustion:</u> No Data.
<u>Flammable Limits in Air:</u> LEL: NA UEL: NA
<u>Extinguishing Media:</u> Dry chemical, carbon dioxide, water spray or foam
<u>Fire and Explosion Hazards:</u> Contact with combustible materials may increase fire intensity. May emit toxic fumes.
<u>Special Firefighting Procedures:</u> Wear self-contained (positive pressure if available) breathing apparatus and full-protective clothing

SECTION 6 – ACCIDENTAL RELEASE MEASURES

Spill or Leak: Absorb with vermiculite or other inert material. Containerize for later disposal.

SECTION 7 – HANDLING AND STORAGE

Handling Procedures and Equipment: Avoid contact with eyes, skin, and clothing. Avoid breathing chemical. Wash thoroughly after handling.

Storage Requirements: Cool, dry area. Avoid direct sunlight.

SECTION 8 – EXPOSURE CONTROLS/PERSONAL PROTECTION

Respiratory Protection: No Data.

Eye Protection: Safety glasses.

Protective Clothing: General purpose gloves, lab coat

Exposure Guidelines: No Data.

Specific Engineering Controls (such as ventilation, enclosed process): No Data.

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

<u>Physical Form:</u> Liquid	<u>Freezing Point:</u> No Data. °C/No Data. °F	<u>% Volatile by Weight:</u> BY VOLUME: 95%
<u>Color:</u> Clear, yellow	<u>Vapor Density [air =1]:</u> .6	<u>Evaporation Rate:</u> No Data.
<u>Odor:</u> None	<u>Vapor Pressure:</u> (mm Hg): 17	<u>Specific Gravity:</u> 1.04
<u>Boiling Point:</u> 100-107°C/212-215°F	<u>Solubility in Water:</u> Soluble	<u>pH (concentrate):</u> 9.1

SECTION 10 – STABILITY AND REACTIVITY

Chemical Stability: No Data.

Hazardous Polymerization: No Data.

Incompatibilities: No Data.

Reactive Conditions to avoid: Extreme heat, temperatures. Contact with strong reducing agents, combustible materials.

Decomposition Products: No Data.

SECTION 11 – TOXICOLOGICAL INFORMATION

<u>Hazardous Ingredients</u>	<u>CAS #</u>	<u>EINECS #</u>	<u>LD 50 of Ingredient (Specify Species)</u>	<u>LC50 of Ingredient (Specify Species)</u>
Potassium chromate	7789-00-6		LDLo(oral-hmn): 50 mg/kg	

SECTION 12 – ECOLOGICAL INFORMATION

<u>Hazardous Ingredients</u>	<u>Aquatic Toxicity Data</u>
No Data.	

SECTION 13 – DISPOSAL CONSIDERATIONS

Waste Disposal: To comply with all local, state, and federal regulations.

SECTION 14 – TRANSPORTATION INFORMATION

Special Shipping Information: Not Regulated.

<u>Purview</u>	<u>Proper Shipping Name</u>	<u>UN Number</u>	<u>Packing Group</u>	<u>Hazard Class</u>
DOT (Land)	Not Regulated.			
IMO (Water)	Not Regulated.			
ICAO (Air)	Not Regulated.			

SECTION 15 – REGULATORY INFORMATION

WHMIS Classification: (Workplace Hazardous Material Information System)	No Data.
SARA Title III: (Superfund Amendments & Reauthorization Act)	Potassium chromate is subject to the reporting requirements of SARA Title III Section 313 and 40 CFR 372.
OSHA: (Occupational Safety & Health Administration)	No Data.
TSCA: (Toxic Substance Control Act)	No Data.
VOC: (volatile Organic Compounds)	No Data.
CPR: (Canadian Controlled Products Regulations)	This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations.
EINECS: (European Inventory of Existing Commercial Chemical Substances)	No Data.
DSL / NDSL: (Canadian Domestic Substance List)(Non-Domestic Substance List)	No Data.
CERCLA: (Comprehensive Response Compensation & Liability Act)	No Data.
IDL: (Canadian Ingredient Disclosure List)	No Data.
HFPA (HMIS) Rating: (Hazardous Materials Identification System)	Health: 3 Flammability: 0 Reactivity: 3 Special: OX

SECTION 16 – OTHER INFORMATION

No Data.

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MATERIAL SAFETY DATA SHEET

SECTION 1 – CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

<u>Company Name</u> Nu-Calgon Wholesaler, Inc.	<u>Phone Number</u> (314) 469-7000 / (800) 554-5499	<u>CHEMTREC</u> (800) 424-9300		
<u>Street Address</u> 2008 Altom Court	<u>City</u> St. Louis	<u>State</u> MO	<u>Postal Code</u> 63146-4151	<u>Last Update</u> 5/21/07
<u>Product Name</u> Hardness Buffer	<u>Product Number</u> 4798-2 & W017-0	<u>Product Use</u> Alkaline solution for water test	<u>EPA Registration #</u> N/A	

SECTION 2 – COMPOSITION/INFORMATION ON INGREDIENTS

<u>Hazardous Ingredients</u>	<u>% By Wt.</u>	<u>CAS Number</u>	<u>TLV</u>	<u>PEL</u>
Ammonium hydroxide	<30	1336-21-6	TLV: 18 mg/m3 (as ammonia) STEL: 27 mg/m3 (as ammonia)	35 mg/m3 (as ammonia)
Ammonium chloride	<10	12125-02-9	NE	NE
Ammonium sulfide	<1	12135-76-1	NE	NE
Deionized water	to 100	7732-18-5		

SECTION 3 – HAZARD IDENTIFICATION

Emergency Overview: ROUTE(S) OF ENTRY: Inhalation, Ingestion & Skin. TARGET ORGAN(S): Eyes, skin, respiratory tract.

Potential Health Effects

Eyes: Corrosive. Contact causes severe burns.

Skin: Corrosive. Contact causes severe burns.

Ingestion: Corrosive. Causes severe irritation or burns of mouth, esophagus, stomach.

Inhalation: Irritant

Chronic Exposure: No Data.

Carcinogenicity: NTP No IARC No OSHA No

Medical Conditions Aggravated by Exposure: Eye, skin, and respiratory conditions

SECTION 4 – FIRST AID MEASURES

Eyes: Immediately flush eyes with water for 20 minutes or until chemical is removed. Call physician.

Skin: Wash skin thoroughly with soap and water.

Ingestion: Give large amounts of water or large amounts of water with milk of magnesia. Call physician. DO NOT INDUCE VOMITING. DO NOT give anything by mouth to a person who is unconscious, rapidly losing consciousness, or convulsing.

Inhalation: Remove to fresh air. Call physician.

SECTION 5 – FIREFIGHTING MEASURES

Flash Point: NA°C/NA°F

Autoignition Temp: No Data. °C/No Data. °F

Hazardous Products of Combustion: No Data.

Flammable Limits in Air: LEL: 16% as NH₃ UEL: 27% as NH₃

Extinguishing Media: Dry chemical, carbon dioxide, water spray or foam

Fire and Explosion Hazards: May emit toxic fumes of sulfur oxides, nitrogen oxides, ammonia, hydrogen sulfide, hydrogen chloride.

Special Firefighting Procedures: Wear self-contained (positive pressure if available) breathing apparatus and special protective clothing

SECTION 6 – ACCIDENTAL RELEASE MEASURES

Spill or Leak: Neutralize with dilute acid. Absorb with vermiculite or other inert material. Containerize for later disposal.

SECTION 7 – HANDLING AND STORAGE

Handling Procedures and Equipment: Avoid contact with eyes, skin, and clothing. Avoid breathing chemical. Wash thoroughly after handling.

Storage Requirements: Cool, dry, well-ventilated area. Avoid direct sunlight.

SECTION 8 – EXPOSURE CONTROLS/PERSONAL PROTECTION

Respiratory Protection: No Data.

Eye Protection: Safety glasses, face shield.

Protective Clothing: Rubber gloves, lab coat, rubber apron.

Exposure Guidelines: No Data.

Specific Engineering Controls (such as ventilation, enclosed process): adequate ventilation

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

<u>Physical Form:</u> Liquid	<u>Freezing Point:</u> No Data. °C/No Data. °F	<u>% Volatile by Weight:</u> by volume 92%
<u>Color:</u> Colorless to yellow	<u>Vapor Density [air =1]:</u> .6	<u>Evaporation Rate:</u> No Data.
<u>Odor:</u> Sulfidic/ammonical	<u>Vapor Pressure:</u> (mm Hg):143	<u>Specific Gravity:</u> .97
<u>Boiling Point:</u> 49-60°C/120-140°F	<u>Solubility in Water:</u> Soluble	<u>pH (concentrate):</u> 10.6

SECTION 10 – STABILITY AND REACTIVITY

Chemical Stability: No Data.

Hazardous Polymerization: No Data.

Incompatibilities: No Data.

Reactive Conditions to avoid: Extreme heat, temperatures. Contact with acids, strong oxidizers, metals.

Decomposition Products: No Data.

SECTION 11 – TOXICOLOGICAL INFORMATION

<u>Hazardous Ingredients</u>	<u>CAS #</u>	<u>EINECS #</u>	<u>LD 50 of Ingredient (Specify Species)</u>	<u>LC50 of Ingredient (Specify Species)</u>
Ammonium hydroxide	1336-21-6		LD50(orl-rat): 350 mg/kg	No Data.
Ammonium sulfide	12135-76-1		LD50(orl-rat): 168 mg/kg	No Data.
Ammonium chloride	12125-02-9		LD50(orl-rat): 1650 mg/kg	No Data.

SECTION 12 – ECOLOGICAL INFORMATION

<u>Hazardous Ingredients</u>	<u>Aquatic Toxicity Data</u>
No Data.	

SECTION 13 – DISPOSAL CONSIDERATIONS

Waste Disposal: To comply with all local, state, and federal regulations.

SECTION 14 – TRANSPORTATION INFORMATION

Special Shipping Information: DOT Regulated.

<u>Purview</u>	<u>Proper Shipping Name</u>	<u>UN Number</u>	<u>Packing Group</u>	<u>Hazard Class</u>
DOT (Land)		No Data.	No Data.	ORM-D
IMO (Water)	No Data.			
ICAO (Air)	No Data.			

SECTION 15 – REGULATORY INFORMATION

WHMIS Classification: (Workplace Hazardous Material Information System)	No Data.
SARA Title III: (Superfund Amendments & Reauthorization Act)	Ammonium hydroxide is subject to the reporting requirements of SARA Title III Section 313 and 40 CFR 372.
OSHA: (Occupational Safety & Health Administration)	No Data.
TSCA: (Toxic Substance Control Act)	No Data.
VOC: (volatile Organic Compounds)	No Data.
CPR: (Canadian Controlled Products Regulations)	This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations.
EINECS: (European Inventory of Existing Commercial Chemical Substances)	No Data.
DSL / NDSL: (Canadian Domestic Substance List)(Non-Domestic Substance List)	No Data.
CERCLA: (Comprehensive Response Compensation & Liability Act)	No Data.
IDL: (Canadian Ingredient Disclosure List)	No Data.
HFPA (HMIS) Rating: (Hazardous Materials Identification System)	Health: 3 Flammability: 1 Reactivity: 2 Special: NA

SECTION 16 – OTHER INFORMATION

No Data.

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MATERIAL SAFETY DATA SHEET

SECTION 1 – CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

<u>Company Name</u> Nu-Calgon Wholesaler, Inc.	<u>Phone Number</u> (314) 469-7000 / (800) 554-5499	<u>CHEMTREC</u> (800) 424-9300		
<u>Street Address</u> 2008 Altom Court	<u>City</u> St. Louis	<u>State</u> MO	<u>Postal Code</u> 63146-4151	<u>Last Update</u> 5/21/07
<u>Product Name</u> Hardness Indicator Powder	<u>Product Number</u> 4798-2 & W017-0	<u>Product Use</u> Organic dye/sucrose mixture for water testing.	<u>EPA Registration #</u> N/A	

SECTION 2 – COMPOSITION/INFORMATION ON INGREDIENTS

<u>Hazardous Ingredients</u>	<u>% By Wt.</u>	<u>CAS Number</u>	<u>TLV</u>	<u>PEL</u>
Sucrose	to 100	57-50-1		
Nonhazardous ingredients	<1			

SECTION 3 – HAZARD IDENTIFICATION

<u>Emergency Overview:</u> Inhalation, Ingestion & Skin. Eyes, skin, respiratory tract.
<u>Potential Health Effects</u>
<u>Eyes:</u> Contact may cause irritation.
<u>Skin:</u> Contact may cause staining.
<u>Ingestion:</u> Irritant. May cause gastrointestinal irritation.
<u>Inhalation:</u> Irritant.
<u>Chronic Exposure:</u> No Data.
<u>Carcinogenicity:</u> NTP No IARC No OSHA No
<u>Medical Conditions Aggravated by Exposure:</u> Eye, skin, and respiratory conditions

SECTION 4 – FIRST AID MEASURES

<u>Eyes:</u> Immediately flush eyes with water for 20 minutes or until chemical is removed. Call physician.
<u>Skin:</u> Wash skin thoroughly with soap and water.
<u>Ingestion:</u> Give large amounts of water. Call physician. Induce vomiting under direction of physician. DO NOT induce vomiting or give anything by mouth to a person who is unconscious, rapidly losing consciousness, or convulsing.
<u>Inhalation:</u> Remove to fresh air. Call physician.

SECTION 5 – FIREFIGHTING MEASURES

<u>Flash Point:</u> NA°C/NA°F
<u>Autoignition Temp:</u> NA°C/NA°F
<u>Hazardous Products of Combustion:</u> No Data.
<u>Flammable Limits in Air:</u> LEL: NA UEL: NA
<u>Extinguishing Media:</u> Dry chemical, carbon dioxide, water spray or foam
<u>Fire and Explosion Hazards:</u> May emit toxic fumes of carbon monoxide, nitrogen oxides and produce oxygen.
<u>Special Firefighting Procedures:</u> Wear self-contained (positive pressure if available) breathing apparatus and full-protective clothing

SECTION 6 – ACCIDENTAL RELEASE MEASURES

Spill or Leak: Sweep up. Avoid raising dust. Containerize for later disposal.

SECTION 7 – HANDLING AND STORAGE

Handling Procedures and Equipment: Avoid contact with eyes, skin, and clothing. Avoid breathing chemical. Wash thoroughly after handling.

Storage Requirements: Cool, dry area. Avoid direct sunlight.

SECTION 8 – EXPOSURE CONTROLS/PERSONAL PROTECTION

Respiratory Protection: dust mask

Eye Protection: safety glasses.

Protective Clothing: General purpose gloves, lab coat,

Exposure Guidelines: No Data.

Specific Engineering Controls (such as ventilation, enclosed process): No Data.

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

<u>Physical Form:</u> Solid	<u>Freezing Point:</u> NA°C/NA°F	<u>% Volatile by Weight:</u> by volume 1%
<u>Color:</u> purple crystals	<u>Vapor Density [air =1]:</u> NA	<u>Evaporation Rate:</u> NA
<u>Odor:</u> None	<u>Vapor Pressure:</u> NA	<u>Specific Gravity:</u> 1.6
<u>Boiling Point:</u> NA°C/NA°F	<u>Solubility in Water:</u> Soluble	<u>pH (concentrate):</u> NA

SECTION 10 – STABILITY AND REACTIVITY

Chemical Stability: No Data.

Hazardous Polymerization: No Data.

Incompatibilities: No Data.

Reactive Conditions to avoid: Extreme heat, temperatures.

Decomposition Products: No Data.

SECTION 11 – TOXICOLOGICAL INFORMATION

<u>Hazardous Ingredients</u>	<u>CAS #</u>	<u>EINECS #</u>	<u>LD 50 of Ingredient (Specify Species)</u>	<u>LC50 of Ingredient (Specify Species)</u>
No Data.				

SECTION 12 – ECOLOGICAL INFORMATION

<u>Hazardous Ingredients</u>	<u>Aquatic Toxicity Data</u>
No Data.	

SECTION 13 – DISPOSAL CONSIDERATIONS

Waste Disposal: Incineration or other method to comply with all local, state, and federal regulations.

SECTION 14 – TRANSPORTATION INFORMATION

Special Shipping Information: Not Regulated.

<u>Purview</u>	<u>Proper Shipping Name</u>	<u>UN Number</u>	<u>Packing Group</u>	<u>Hazard Class</u>
DOT (Land)	Not Regulated.			
IMO (Water)	No Data.			
ICAO (Air)	No Data.			

SECTION 15 – REGULATORY INFORMATION

WHMIS Classification: (Workplace Hazardous Material Information System)	No Data.
SARA Title III: (Superfund Amendments & Reauthorization Act)	No Data.
OSHA: (Occupational Safety & Health Administration)	No Data.
TSCA: (Toxic Substance Control Act)	No Data.
VOC: (volatile Organic Compounds)	No Data.
CPR: (Canadian Controlled Products Regulations)	This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations.
EINECS: (European Inventory of Existing Commercial Chemical Substances)	No Data.
DSL / NDSL: (Canadian Domestic Substance List)(Non-Domestic Substance List)	No Data.
CERCLA: (Comprehensive Response Compensation & Liability Act)	No Data.
IDL: (Canadian Ingredient Disclosure List)	No Data.
HFPA (HMIS) Rating: (Hazardous Materials Identification System)	Health: 0 Flammability: 0 Reactivity: 0 Specific: NA

SECTION 16 – OTHER INFORMATION

No Data.

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MATERIAL SAFETY DATA SHEET

SECTION 1 – CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

<u>Company Name</u> Nu-Calgon Wholesaler, Inc.	<u>Phone Number</u> (314) 469-7000 / (800) 554-5499		<u>CHEMTREC</u> (800) 424-9300	
<u>Street Address</u> 2008 Altom Court	<u>City</u> St. Louis	<u>State</u> MO	<u>Postal Code</u> 63146-4151	<u>Last Update</u> 5/22/07
<u>Product Name</u> Hardness Reagent	<u>Product Number</u> 4798-2 & W017-0	<u>Product Use</u> Organic chelant solution for water testing.		<u>EPA Registration #</u> N/A

SECTION 2 – COMPOSITION/INFORMATION ON INGREDIENTS

<u>Hazardous Ingredients</u>	<u>% By Wt.</u>	<u>CAS Number</u>	<u>TLV</u>	<u>PEL</u>
Ethylenediaminetetraacetic Acid	<5	60-00-4		
Nonhazardous ingredients	<1	N/A		
Deionized water	to 100	7732-18-5		

SECTION 3 – HAZARD IDENTIFICATION

Emergency Overview: ROUTE(S) OF ENTRY: Ingestion & Skin. TARGET ORGAN(S): Eyes, skin

Potential Health Effects

Eyes: Contact may cause irritation.

Skin: Contact may cause irritation.

Ingestion: Large quantities may cause gastrointestinal irritation.

Inhalation: NA

Chronic Exposure: No Data.

Carcinogenicity: NTP No IARC No OSHA No

Medical Conditions Aggravated by Exposure: Eye and skin conditions

SECTION 4 – FIRST AID MEASURES

Eyes: Immediately flush eyes with water for 20 minutes or until chemical is removed. Call physician.

Skin: Wash skin thoroughly with soap and water.

Ingestion: Give large amounts of water. Call physician. Treat symptoms as needed. DO NOT give anything by mouth to a person who is unconscious, rapidly losing consciousness, or convulsing.

Inhalation: NA

SECTION 5 – FIREFIGHTING MEASURES

Flash Point: N/A°C/N/A°F

Autoignition Temp: No Data. °C/No Data. °F

Hazardous Products of Combustion: No Data.

Flammable Limits in Air: LEL: NA UEL: NA

Extinguishing Media: Dry chemical, carbon dioxide, water spray or foam

Fire and Explosion Hazards: May emit toxic fumes of nitrogen oxides, sodium oxide.

Special Firefighting Procedures: Wear self-contained (positive pressure if available) breathing apparatus and full-protective clothing

SECTION 6 – ACCIDENTAL RELEASE MEASURES

Spill or Leak: Absorb with vermiculite or other inert material. Containerize for later disposal.

SECTION 7 – HANDLING AND STORAGE

Handling Procedures and Equipment: Avoid contact with eyes, skin, and clothing. Avoid breathing chemical. Wash thoroughly after handling.

Storage Requirements: Cool, dry area. Avoid direct sunlight.

SECTION 8 – EXPOSURE CONTROLS/PERSONAL PROTECTION

Respiratory Protection: No Data.

Eye Protection: safety glasses

Protective Clothing: General purpose gloves & lab coat

Exposure Guidelines: No Data.

Specific Engineering Controls (such as ventilation, enclosed process): No Data.

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

<u>Physical Form:</u> Liquid	<u>Freezing Point:</u> No Data. °C/No Data. °F	<u>% Volatile by Weight:</u> BY VOLUME: 99%
<u>Color:</u> Clear, colorless	<u>Vapor Density [air =1]:</u> .6	<u>Evaporation Rate:</u> No Data.
<u>Odor:</u> None	<u>Vapor Pressure:</u> (mm Hg): 17	<u>Specific Gravity:</u> 1
<u>Boiling Point:</u> 100°C/212°F	<u>Solubility in Water:</u> Soluble	<u>pH (concentrate):</u> 8.1

SECTION 10 – STABILITY AND REACTIVITY

Chemical Stability: No Data.

Hazardous Polymerization: No Data.

Incompatibilities: No Data.

Reactive Conditions to avoid: Extreme heat, temperatures.

Decomposition Products: No Data.

SECTION 11 – TOXICOLOGICAL INFORMATION

<u>Hazardous Ingredients</u>	<u>CAS #</u>	<u>EINECS #</u>	<u>LD 50 of Ingredient (Specify Species)</u>	<u>LC50 of Ingredient (Specify Species)</u>
Ethylenediaminetetraacetic acid	60-00-4		LD50(oral-rat): 2000 mg/kg	

SECTION 12 – ECOLOGICAL INFORMATION

<u>Hazardous Ingredients</u>	<u>Aquatic Toxicity Data</u>
No Data.	

SECTION 13 – DISPOSAL CONSIDERATIONS

Waste Disposal: Incineration or other method to comply with all local, state, and federal regulations.

SECTION 14 – TRANSPORTATION INFORMATION

Special Shipping Information: Not Regulated.

<u>Purview</u>	<u>Proper Shipping Name</u>	<u>UN Number</u>	<u>Packing Group</u>	<u>Hazard Class</u>
DOT (Land)	Not Regulated.			
IMO (Water)	No Data.			
ICAO (Air)	No Data.			

SECTION 15 – REGULATORY INFORMATION

WHMIS Classification: (Workplace Hazardous Material Information System)	No Data.
SARA Title III: (Superfund Amendments & Reauthorization Act)	No Data.
OSHA: (Occupational Safety & Health Administration)	No Data.
TSCA: (Toxic Substance Control Act)	No Data.
VOC: (volatile Organic Compounds)	No Data.
CPR: (Canadian Controlled Products Regulations)	This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations.
EINECS: (European Inventory of Existing Commercial Chemical Substances)	No Data.
DSL / NDSL: (Canadian Domestic Substance List)(Non-Domestic Substance List)	No Data.
CERCLA: (Comprehensive Response Compensation & Liability Act)	No Data.
IDL: (Canadian Ingredient Disclosure List)	No Data.
HFPA (HMIS) Rating: (Hazardous Materials Identification System)	Health: 0 Flammability: 0 Reactivity: 0 Specific: NA

SECTION 16 – OTHER INFORMATION

No Data.

The information contained herein is based on the data available to us and is believed to be correct. However, Nu-Calgon Wholesaler Inc. makes no warranty, expressed, or implied, regarding the accuracy of this data or the results to be obtained from the use thereof. Nu-Calgon Wholesaler Inc. assumes no liability for injury from the use of the product described herein.



MATERIAL SAFETY DATA SHEET

SECTION 1 – CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

<u>Company Name</u> Nu-Calgon Wholesaler, Inc.	<u>Phone Number</u> (314) 469-7000 / (800) 554-5499			<u>CHEMTREC</u> (800) 424-9300
<u>Street Address</u> 2008 Altom Court	<u>City</u> St. Louis	<u>State</u> MO	<u>Postal Code</u> 63146-4151	<u>Last Update</u> 5/23/07
<u>Product Name</u> Hydrochloric Acid .12N	<u>Product Number</u> W017-0	<u>Product Use</u> Inorganic acid solution for water testing.		<u>EPA Registration #</u> N/A

SECTION 2 – COMPOSITION/INFORMATION ON INGREDIENTS

<u>Hazardous Ingredients</u>	<u>% By Wt.</u>	<u>CAS Number</u>	<u>TLV</u>	<u>PEL</u>
Hydrochloric acid	<1	7647-01-0	TLV: 7 mg/m3 (ceiling) STEL: NE	7 mg/m3 (ceiling)
Deionized water	to 100	7732-18-5		

SECTION 3 – HAZARD IDENTIFICATION

Emergency Overview: ROUTE(S) OF ENTRY: Inhalation Ingestion Skin. TARGET ORGAN(S): Eyes, skin, respiratory tract

Potential Health Effects

Eyes: Irritant. Contact may cause burns.

Skin: Irritant. Contact may cause burns.

Ingestion: Irritant. May cause gastrointestinal irritation.

Inhalation: Irritant

Chronic Exposure: No Data.

Carcinogenicity: NTP No IARC No OSHA No

Medical Conditions Aggravated by Exposure: Eye, skin, respiratory conditions

SECTION 4 – FIRST AID MEASURES

Eyes: Immediately flush eyes with water for 20 minutes or until chemical is removed. Call physician.

Skin: Wash skin thoroughly with baking soda, soap and water.

Ingestion: Give large amounts of water or large amounts of water with milk of magnesia. Call physician. DO NOT INDUCE VOMITING. DO NOT give anything by mouth to a person who is unconscious, rapidly losing consciousness or convulsing.

Inhalation: Remove to fresh air. Call physician.

SECTION 5 – FIREFIGHTING MEASURES

Flash Point: NA°C/NA°F

Autoignition Temp: NA°C/NA°F

Hazardous Products of Combustion: No Data.

Flammable Limits in Air: LEL: NA UEL: NA

Extinguishing Media: Dry chemical, carbon dioxide, water spray or foam

Fire and Explosion Hazards: May react with metals to produce hydrogen gas. May emit toxic fumes of hydrogen chloride, chlorine.

Special Firefighting Procedures: Wear self-contained (positive pressure if available) breathing apparatus and special protective clothing

SECTION 6 – ACCIDENTAL RELEASE MEASURES

Spill or Leak: Neutralize with soda ash. Absorb with vermiculite or other inert material. Containerize for later disposal.

SECTION 7 – HANDLING AND STORAGE

Handling Procedures and Equipment: Avoid contact with eyes, skin, and clothing. Avoid breathing chemical. Wash thoroughly after handling.

Storage Requirements: Cool, dry area. Avoid direct sunlight.

SECTION 8 – EXPOSURE CONTROLS/PERSONAL PROTECTION

Respiratory Protection: No Data.

Eye Protection: safety glasses

Protective Clothing: General purpose gloves, lab coat

Exposure Guidelines: No Data.

Specific Engineering Controls (such as ventilation, enclosed process): No Data.

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

<u>Physical Form:</u> Liquid	<u>Freezing Point:</u> No Data. °C/No Data. °F	<u>% Volatile by Weight:</u> BY VOLUME: 100%
<u>Color:</u> Clear, colorless	<u>Vapor Density [air =1]:</u> 1.3	<u>Evaporation Rate:</u> No Data.
<u>Odor:</u> None	<u>Vapor Pressure:</u> (mm Hg): 17	<u>Specific Gravity:</u> 1.02
<u>Boiling Point:</u> 100°C/213°F	<u>Solubility in Water:</u> Soluble	<u>pH (concentrate):</u> 1.1

SECTION 10 – STABILITY AND REACTIVITY

Chemical Stability: No Data.

Hazardous Polymerization: No Data.

Incompatibilities: No Data.

Reactive Conditions to avoid: Extreme heat, temperatures. Contact with strong bases, metals, oxidizers.

Decomposition Products: No Data.

SECTION 11 – TOXICOLOGICAL INFORMATION

<u>Hazardous Ingredients</u>	<u>CAS #</u>	<u>EINECS #</u>	<u>LD 50 of Ingredient (Specify Species)</u>	<u>LC50 of Ingredient (Specify Species)</u>
Hydrochloric acid	7647-01-0		LD50(oral-rbt): 900 mg/kg	LC50(ihl-rat): 3124 ppm/1H

SECTION 12 – ECOLOGICAL INFORMATION

<u>Hazardous Ingredients</u>	<u>Aquatic Toxicity Data</u>
No Data.	

SECTION 13 – DISPOSAL CONSIDERATIONS

Waste Disposal: Incineration or other method to comply with all local, state, and federal regulations.

SECTION 14 – TRANSPORTATION INFORMATION

Special Shipping Information: DOT Regulated.

<u>Purview</u>	<u>Proper Shipping Name</u>	<u>UN Number</u>	<u>Packing Group</u>	<u>Hazard Class</u>
DOT (Land)				ORM-D
IMO (Water)	No Data.			
ICAO (Air)	No Data.			

SECTION 15 – REGULATORY INFORMATION

WHMIS Classification: (Workplace Hazardous Material Information System)	No Data.
SARA Title III: (Superfund Amendments & Reauthorization Act)	No Data.
OSHA: (Occupational Safety & Health Administration)	No Data.
TSCA: (Toxic Substance Control Act)	No Data.
VOC: (volatile Organic Compounds)	No Data.
CPR: (Canadian Controlled Products Regulations)	This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations.
EINECS: (European Inventory of Existing Commercial Chemical Substances)	No Data.
DSL / NDSL: (Canadian Domestic Substance List)(Non-Domestic Substance List)	No Data.
CERCLA: (Comprehensive Response Compensation & Liability Act)	No Data.
IDL: (Canadian Ingredient Disclosure List)	No Data.
HFPA (HMIS) Rating: (Hazardous Materials Identification System)	Health: 1 Flammability: 0 Reactivity: 0 Specific: NA

SECTION 16 – OTHER INFORMATION

No Data.

The information contained herein is based on the data available to us and is believed to be correct. However, Nu-Calgon Wholesaler Inc. makes no warranty, expressed, or implied, regarding the accuracy of this data or the results to be obtained from the use thereof. Nu-Calgon Wholesaler Inc. assumes no liability for injury from the use of the product described herein.



MATERIAL SAFETY DATA SHEET

SECTION 1 – CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

<u>Company Name</u> Nu-Calgon Wholesaler, Inc.	<u>Phone Number</u> (314) 469-7000 / (800) 554-5499			<u>CHEMTREC</u> (800) 424-9300
<u>Street Address</u> 2008 Altom Court	<u>City</u> St. Louis	<u>State</u> MO	<u>Postal Code</u> 63146-4151	<u>Last Update</u> 5/23/07
<u>Product Name</u> Iodide Iodate Reagent	<u>Product Number</u> W017-0	<u>Product Use</u> Inorganic salt solution for water testing.		<u>EPA Registration #</u> N/A

SECTION 2 – COMPOSITION/INFORMATION ON INGREDIENTS

<u>Hazardous Ingredients</u>	<u>% By Wt.</u>	<u>CAS Number</u>	<u>TLV</u>	<u>PEL</u>
Potassium iodide	<5	7681-11-0	NA	NA
Potassium hydroxide	<1	1310-58-3	2mg/m3 (coiling)	
Nonhazardous ingredients	<1	NA		
Deionized water	to 100	7732-18-5		

SECTION 3 – HAZARD IDENTIFICATION

Emergency Overview: ROUTE(S) OF ENTRY: Ingestion Skin. TARGET ORGAN(S): Eyes, skin

Potential Health Effects

Eyes: Contact may cause irritation.

Skin: Contact may cause irritation.

Ingestion: Irritant. May cause gastrointestinal irritation.

Inhalation: NA

Chronic Exposure: No Data.

Carcinogenicity: NTP No IARC No OSHA No

Medical Conditions Aggravated by Exposure: Eye and skin conditions

SECTION 4 – FIRST AID MEASURES

Eyes: Immediately flush eyes with water for 20 minutes or until chemical is removed. Call physician.

Skin: Wash skin thoroughly with soap and water.

Ingestion: Give large amounts of water. Call physician. Induce vomiting under direction of physician. DO NOT induce vomiting or give anything by mouth to a person who is unconscious, rapidly losing consciousness, or convulsing.

Inhalation: NA

SECTION 5 – FIREFIGHTING MEASURES

Flash Point: NA°C/NA°F

Autoignition Temp: NA°C/NA°F

Hazardous Products of Combustion: No Data.

Flammable Limits in Air: LEL: NA UEL: NA

Extinguishing Media: Dry chemical, carbon dioxide, water spray or foam

Fire and Explosion Hazards: May release elemental iodine upon contact with acids and other chemicals. May emit toxic fumes of iodine, potassium oxide.

Special Firefighting Procedures: Wear self-contained (positive pressure if available) breathing apparatus and full-protective clothing

SECTION 6 – ACCIDENTAL RELEASE MEASURES

Spill or Leak: Absorb with vermiculite or other inert material. Containerize for later disposal.

SECTION 7 – HANDLING AND STORAGE

Handling Procedures and Equipment: Avoid contact with eyes, skin, and clothing. Avoid breathing chemical. Wash thoroughly after handling.

Storage Requirements: Cool, dry area. Avoid direct sunlight.

SECTION 8 – EXPOSURE CONTROLS/PERSONAL PROTECTION

Respiratory Protection: No Data.

Eye Protection: safety glasses

Protective Clothing: General purpose gloves, lab coat

Exposure Guidelines: No Data.

Specific Engineering Controls (such as ventilation, enclosed process): No Data.

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

<u>Physical Form:</u> Liquid	<u>Freezing Point:</u> No Data. °C/No Data. °F	<u>% Volatile by Weight:</u> BY VOLUME: 99%
<u>Color:</u> Clear, colorless	<u>Vapor Density [air =1]:</u> .6	<u>Evaporation Rate:</u> No Data.
<u>Odor:</u> None	<u>Vapor Pressure:</u> (mm Hg): 17	<u>Specific Gravity:</u> 1.01
<u>Boiling Point:</u> 100°C/212°F	<u>Solubility in Water:</u> Soluble	<u>pH (concentrate):</u> 12

SECTION 10 – STABILITY AND REACTIVITY

Chemical Stability: No Data.

Hazardous Polymerization: No Data.

Incompatibilities: No Data.

Reactive Conditions to avoid: Extreme heat, temperatures. Contact with acids.

Decomposition Products: No Data.

SECTION 11 – TOXICOLOGICAL INFORMATION

<u>Hazardous Ingredients</u>	<u>CAS #</u>	<u>EINECS #</u>	<u>LD 50 of Ingredient (Specify Species)</u>	<u>LC50 of Ingredient (Specify Species)</u>
Potassium iodide	7681-11-0		LD50(oral-mus): 1862 mg/kg	
Potassium hydroxide	1310-58-3		LD50 (oral-rat): 365 mg/kg	

SECTION 12 – ECOLOGICAL INFORMATION

<u>Hazardous Ingredients</u>	<u>Aquatic Toxicity Data</u>
No Data.	

SECTION 13 – DISPOSAL CONSIDERATIONS

Waste Disposal: Incineration or other method to comply with all local, state, and federal regulations.

SECTION 14 – TRANSPORTATION INFORMATION

Special Shipping Information: Not Regulated.

<u>Purview</u>	<u>Proper Shipping Name</u>	<u>UN Number</u>	<u>Packing Group</u>	<u>Hazard Class</u>
DOT (Land)	Not Regulated.			
IMO (Water)	No Data.			
ICAO (Air)	No Data.			

SECTION 15 – REGULATORY INFORMATION

WHMIS Classification: (Workplace Hazardous Material Information System)	No Data.
SARA Title III: (Superfund Amendments & Reauthorization Act)	No Data.
OSHA: (Occupational Safety & Health Administration)	No Data.
TSCA: (Toxic Substance Control Act)	No Data.
VOC: (volatile Organic Compounds)	No Data.
CPR: (Canadian Controlled Products Regulations)	This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations.
EINECS: (European Inventory of Existing Commercial Chemical Substances)	No Data.
DSL / NDSL: (Canadian Domestic Substance List)(Non-Domestic Substance List)	No Data.
CERCLA: (Comprehensive Response Compensation & Liability Act)	No Data.
IDL: (Canadian Ingredient Disclosure List)	No Data.
HFPA (HMIS) Rating: (Hazardous Materials Identification System)	Health: 0 Flammability: 0 Reactivity: 0 Specific: NA

SECTION 16 – OTHER INFORMATION

No Data.

The information contained herein is based on the data available to us and is believed to be correct. However, Nu-Calgon Wholesaler Inc. makes no warranty, expressed, or implied, regarding the accuracy of this data or the results to be obtained from the use thereof. Nu-Calgon Wholesaler Inc. assumes no liability for injury from the use of the product described herein.



MATERIAL SAFETY DATA SHEET

SECTION 1 – CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

<u>Company Name</u> Nu-Calgon Wholesaler, Inc.	<u>Phone Number</u> (314) 469-7000 / (800) 554-5499			<u>CHEMTREC</u> (800) 424-9300
<u>Street Address</u> 2008 Altom Court	<u>City</u> St. Louis	<u>State</u> MO	<u>Postal Code</u> 63146-4151	<u>Last Update</u> 5/23/07
<u>Product Name</u> Silver Nitrate Reagent	<u>Product Number</u> 4798-2 & W017-0	<u>Product Use</u> Inorganic salt solution for water testing.		<u>EPA Registration #</u> N/A

SECTION 2 – COMPOSITION/INFORMATION ON INGREDIENTS

<u>Hazardous Ingredients</u>	<u>% By Wt.</u>	<u>CAS Number</u>	<u>TLV</u>	<u>PEL</u>
Silver nitrate	<5	7761-88-8	TLV: .01 mg/m3 (as silver) STEL: NE	.01 mg/m3 (as silver)
Deionized water	to 100	7732-18-5		

SECTION 3 – HAZARD IDENTIFICATION

Emergency Overview: ROUTE(S) OF ENTRY: Ingestion & Skin. TARGET ORGAN(S): Eyes, skin

Potential Health Effects

Eyes: Irritant. Contact can cause severe irritation.

Skin: Irritant. Contact causes staining.

Ingestion: Irritant. May cause gastrointestinal irritation, abdominal pain.

Inhalation: NA

Chronic Exposure: No Data.

Carcinogenicity: NTP No IARC No OSHA No

Medical Conditions Aggravated by Exposure: Eye and skin conditions

SECTION 4 – FIRST AID MEASURES

Eyes: Immediately flush eyes with water for 20 minutes or until chemical is removed. Call physician.

Skin: Wash skin thoroughly with soap and water.

Ingestion: Give large amounts of water. Call physician. Induce vomiting under direction of physician. DO NOT induce vomiting or give anything by mouth to a person who is unconscious, rapidly losing consciousness, or convulsing.

Inhalation: NA

SECTION 5 – FIREFIGHTING MEASURES

Flash Point: NA°C/NA°F

Autoignition Temp: No Data. °C/No Data. °F

Hazardous Products of Combustion: No Data.

Flammable Limits in Air: LEL: NA UEL: NA

Extinguishing Media: Water only

Fire and Explosion Hazards: May ignite other combustible materials. Reacts with organics to produce flammable products. May emit toxic fumes of nitrogen oxides.

Special Firefighting Procedures: Wear self-contained (positive pressure if available) breathing apparatus and full-protective clothing

SECTION 6 – ACCIDENTAL RELEASE MEASURES

Spill or Leak: Absorb with vermiculite or other inert material. Containerize for later disposal.

SECTION 7 – HANDLING AND STORAGE

Handling Procedures and Equipment: Avoid contact with eyes, skin, and clothing. Avoid breathing chemical. Wash thoroughly after handling.

Storage Requirements: Cool, dry area. Avoid direct sunlight.

SECTION 8 – EXPOSURE CONTROLS/PERSONAL PROTECTION

Respiratory Protection: No Data.

Eye Protection: Safety glasses

Protective Clothing: General purpose gloves, lab coat

Exposure Guidelines: No Data.

Specific Engineering Controls (such as ventilation, enclosed process): No Data.

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

<u>Physical Form:</u> Liquid	<u>Freezing Point:</u> No Data. °C/No Data. °F	<u>% Volatile by Weight:</u> BY VOLUME: 98%
<u>Color:</u> Clear, colorless	<u>Vapor Density [air =1]:</u> .6	<u>Evaporation Rate:</u> No Data.
<u>Odor:</u> None	<u>Vapor Pressure:</u> (mm Hg): 17	<u>Specific Gravity:</u> 1
<u>Boiling Point:</u> 100°C/212°F	<u>Solubility in Water:</u> Soluble	<u>pH (concentrate):</u> 4.4

SECTION 10 – STABILITY AND REACTIVITY

Chemical Stability: No Data.

Hazardous Polymerization: No Data.

Incompatibilities: No Data.

Reactive Conditions to avoid: Extreme heat, temperatures. Contact with organics, combustible materials.

Decomposition Products: No Data.

SECTION 11 – TOXICOLOGICAL INFORMATION

<u>Hazardous Ingredients</u>	<u>CAS #</u>	<u>EINECS #</u>	<u>LD 50 of Ingredient (Specify Species)</u>	<u>LC50 of Ingredient (Specify Species)</u>
Silver nitrate	7761-88-8		LD50(oral-mus): 50 mg/kg LDLo(unk-man): 29 mg/kg	

SECTION 12 – ECOLOGICAL INFORMATION

<u>Hazardous Ingredients</u>	<u>Aquatic Toxicity Data</u>
No Data.	

SECTION 13 – DISPOSAL CONSIDERATIONS

Waste Disposal: Incineration or other method to comply with all local, state, and federal regulations.

SECTION 14 – TRANSPORTATION INFORMATION

Special Shipping Information: DOT Regulated.

<u>Purview</u>	<u>Proper Shipping Name</u>	<u>UN Number</u>	<u>Packing Group</u>	<u>Hazard Class</u>
DOT (Land)				ORM-D
IMO (Water)	No Data.			
ICAO (Air)	No Data.			

SECTION 15 – REGULATORY INFORMATION

WHMIS Classification: (Workplace Hazardous Material Information System)	No Data.
SARA Title III: (Superfund Amendments & Reauthorization Act)	Silver nitrate is subject to the reporting requirements of SARA Title III Section 313 and 40 CFR 372.
OSHA: (Occupational Safety & Health Administration)	No Data.
TSCA: (Toxic Substance Control Act)	No Data.
VOC: (volatile Organic Compounds)	No Data.
CPR: (Canadian Controlled Products Regulations)	This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations.
EINECS: (European Inventory of Existing Commercial Chemical Substances)	No Data.
DSL / NDSL: (Canadian Domestic Substance List)(Non-Domestic Substance List)	No Data.
CERCLA: (Comprehensive Response Compensation & Liability Act)	No Data.
IDL: (Canadian Ingredient Disclosure List)	No Data.
HFPA (HMIS) Rating: (Hazardous Materials Identification System)	Health: 1 Flammability: 0 Reactivity: 0 Specific: OX

SECTION 16 – OTHER INFORMATION

No Data.

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MATERIAL SAFETY DATA SHEET

SECTION 1 – CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

<u>Company Name</u> Nu-Calgon Wholesaler, Inc.	<u>Phone Number</u> (314) 469-7000 / (800) 554-5499	<u>CHEMTREC</u> (800) 424-9300		
<u>Street Address</u> 2008 Altom Court	<u>City</u> St. Louis	<u>State</u> MO	<u>Postal Code</u> 63146-4151	<u>Last Update</u> 5/22/07
<u>Product Name</u> Sulfuric Acid	<u>Product Number</u> 4804-0, 4798-2 & W017-0	<u>Product Use</u> Inorganic acid solution for water testing.	<u>EPA Registration #</u> N/A	

SECTION 2 – COMPOSITION/INFORMATION ON INGREDIENTS

<u>Hazardous Ingredients</u>	<u>% By Wt.</u>	<u>CAS Number</u>	<u>TLV</u>	<u>PEL</u>
Sulfuric acid	5	7664-93-9	TLV: 1 mg/m3 STEL: 3 mg/m3	PEL: 1 mg/m3
Deionized water	to 100	7732-18-5		

SECTION 3 – HAZARD IDENTIFICATION

Emergency Overview: ROUTE(S) OF ENTRY: Ingestion & Skin. TARGET ORGAN(S): Eyes, skin.

Potential Health Effects

Eyes: Corrosive. Contact may cause severe burns.

Skin: Corrosive. Contact may cause severe burns.

Ingestion: Corrosive. May cause severe gastrointestinal irritation, burns of mouth, esophagus, and stomach.

Inhalation: NA

Chronic Exposure: No Data.

Carcinogenicity: NTP No IARC No OSHA No

Medical Conditions Aggravated by Exposure: Eye and skin conditions

SECTION 4 – FIRST AID MEASURES

Eyes: Immediately flush eyes and skin with water for 20 minutes or until chemical is removed. Call physician.

Skin: Wash skin thoroughly with soap and water.

Ingestion: Give large amounts of water or large amounts of water with milk of magnesia. Call physician. DO NOT INDUCE VOMITING. DO NOT give anything by mouth to a person who is unconscious, rapidly losing consciousness, or convulsing.

Inhalation: NA

SECTION 5 – FIREFIGHTING MEASURES

Flash Point: NA°C/NA°F

Autoignition Temp: No Data. °C/No Data. °F

Hazardous Products of Combustion: No Data.

Flammable Limits in Air: LEL: NA UEL: NA

Extinguishing Media: Dry chemical, carbon dioxide

Fire and Explosion Hazards: May react violently with water. May react with metals to produce hydrogen gas. May ignite combustible materials. May emit toxic fumes of sulfur oxides.

Special Firefighting Procedures: Wear self-contained (positive pressure if available) breathing apparatus and special protective clothing

SECTION 6 – ACCIDENTAL RELEASE MEASURES

Spill or Leak: Neutralize with soda ash. Absorb with vermiculite or other inert material. Containerize for later disposal.

SECTION 7 – HANDLING AND STORAGE

Handling Procedures and Equipment: Avoid contact with eyes, skin, and clothing. Avoid breathing chemical. Wash thoroughly after handling.

Storage Requirements: Cool, dry area. Avoid direct sunlight.

SECTION 8 – EXPOSURE CONTROLS/PERSONAL PROTECTION

Respiratory Protection: No Data.

Eye Protection: safety glasses, face shield

Protective Clothing: Rubber gloves, lab coat, rubber apron

Exposure Guidelines: No Data.

Specific Engineering Controls (such as ventilation, enclosed process): No Data.

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

<u>Physical Form:</u> Liquid	<u>Freezing Point:</u> No Data. °C/No Data. °F	<u>% Volatile by Weight:</u> 100%
<u>Color:</u> Clear, colorless	<u>Vapor Density [air =1]:</u> .6	<u>Evaporation Rate:</u> No Data.
<u>Odor:</u> None	<u>Vapor Pressure:</u> (mm Hg): 17	<u>Specific Gravity:</u> 1.03
<u>Boiling Point:</u> 110°C/230°F	<u>Solubility in Water:</u> Soluble	<u>pH (concentrate):</u> 0.6

SECTION 10 – STABILITY AND REACTIVITY

Chemical Stability: No Data.

Hazardous Polymerization: No Data.

Incompatibilities: No Data.

Reactive Conditions to avoid: Extreme heat, temperatures. Contact with strong alkali, metals.

Decomposition Products: No Data.

SECTION 11 – TOXICOLOGICAL INFORMATION

<u>Hazardous Ingredients</u>	<u>CAS #</u>	<u>EINECS #</u>	<u>LD 50 of Ingredient (Specify Species)</u>	<u>LC50 of Ingredient (Specify Species)</u>
Sulfuric acid	7664-93-9		LD50(oral-rat): 2140 mg/kg	

SECTION 12 – ECOLOGICAL INFORMATION

<u>Hazardous Ingredients</u>	<u>Aquatic Toxicity Data</u>
No Data.	

SECTION 13 – DISPOSAL CONSIDERATIONS

Waste Disposal: Incineration or other method to comply with all local, state, and federal regulations.

SECTION 14 – TRANSPORTATION INFORMATION

Special Shipping Information: DOT Regulated.

<u>Purview</u>	<u>Proper Shipping Name</u>	<u>UN Number</u>	<u>Packing Group</u>	<u>Hazard Class</u>
DOT (Land)				ORM-D
IMO (Water)	No Data.			
ICAO (Air)	No Data.			

SECTION 15 – REGULATORY INFORMATION

WHMIS Classification: (Workplace Hazardous Material Information System)	No Data.
SARA Title III: (Superfund Amendments & Reauthorization Act)	No Data.
OSHA: (Occupational Safety & Health Administration)	No Data.
TSCA: (Toxic Substance Control Act)	No Data.
VOC: (volatile Organic Compounds)	No Data.
CPR: (Canadian Controlled Products Regulations)	This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations.
EINECS: (European Inventory of Existing Commercial Chemical Substances)	No Data.
DSL / NDSL: (Canadian Domestic Substance List)(Non-Domestic Substance List)	No Data.
CERCLA: (Comprehensive Response Compensation & Liability Act)	No Data.
IDL: (Canadian Ingredient Disclosure List)	No Data.
HFPA (HMIS) Rating: (Hazardous Materials Identification System)	Health: 3 Flammability: 0 Reactivity: 1 Special: NA

SECTION 16 – OTHER INFORMATION

No Data.

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