



Safety Data Sheet

Section 1: Identification of the Product/Company

Product Identifier:**Product Name:** CHLORSTAIN**Product Code:** 233 SERIES**Relevant identified uses of the substance or mixture****Recommended use:**

For professional use to chemically acid stain concrete or masonry substrates

Uses advised against:

Use only as intended

Details of the supplier of the safety data sheet**Manufacturer:**

Super Stone Inc.
1251 Burlington Street
Opa-Locka, FL 33054
United States
www.superstone.com
(305) 681-3561

Telephone (General)

Emergency telephone number**Manufacturer:**

(800) 424-9300 (Chemtrec) USA
+ 1 (703) 527-3887 (Chemtrec) International

Section 2: Hazards Identification

Classification of the substance or mixture**GHS-US classification**

Corrosive to metal	Category 1, H290
Acute toxicity, Oral:	Category 3, H301
Acute toxicity, Dermal:	Category 3, H311
Acute toxicity, Inhalation:	Category 3, H331
Acute toxicity, skin burns, serious eye damage	Category 1A, 1B, 1C, H314
Chronic toxicity, carcinogenicity, STOT, skin, lungs	Category 1B, H350



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Label elements

GHS-US labeling

The substance is classified and labeled according to the Globally Harmonized System (GHS).

Hazard Pictograms (GHS-US)



Signal words (GHS-US):

Warning

Hazards statements (GHS-US):

H290 May be corrosive to metals
H301 Toxic if swallowed
H311 Toxic in contact with skin
H314 Causes severe skin burns and eye damage
H318 Causes serious eye damage
H331 Toxic if inhaled
H335 Causes respiratory irritation
H350 May cause cancer, RE, STOT, lungs, skin

Precautionary statements (GHS-US)

Prevention:

P102 Keep out of reach of children
P202 Do not handle until all safety precautions have been read and understood
P234 Keep only in original container
P261 Avoid breathing fume/ gas/ mist/ vapors/ spray
P262 Do not get into eyes, on skin, or on clothing
P264 Wash thoroughly after handling
P271 Use only outdoors or in a well ventilated area



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P273 Avoid release into the environment
P280 Wear protective gloves/ protective clothing/
eye protection/ face protection see section 8 PPE
P284 Wear respiratory protection, see section 8
PPE

Response:

P301+P311 IF SWALLOWED: Immediately call a
POISON CENTER or emergency
P301 +P330 + P331 IF SWALLOWED: rinse mouth,
DO NOT induce vomiting.
P303 + P361+P353 IF ON SKIN (or hair): Remove /
Take off immediately all contaminated clothing.
Rinse skin with water. Shower
P304 + P340+P310 IF INHALED: Move person to
fresh air, keep comfortable for breathing.
Immediately call a POISON CENTER or doctor /
physician.
P305 + PP351 + P338 + P310 IF IN EYES: Rinse
cautiously with water for several minutes. Remove
contact lenses, if present and easy to do. Continue
rinsing. Immediately call a POISON CENTER or
doctor / physician
P363 Wash contaminated clothing before reuse
P390 Absorb spillage to prevent material damage.

Storage:

P403+P233 Store in a well-ventilated place. Keep
container with a resistant inner lining
P405 Store locked up
P406 Store in corrosive resistant stainless steel
container with a resistant inner lining

Disposal:

P501 Dispose of contents and containers in
accordance with local, regional and international
regulations



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Precautionary statements are listed according to the United Nations Globally Harmonized System of Classification and Labeling of Chemicals (GHS)-Annex III

Other hazards

May contain unreacted hexavalent chromium. May cause cancer after repeated exposure, refer to OSHA 1910.1026. Refer to section 16 for wording of terms.

Unknown acute toxicity (GHS-US)

No data available

Section 3: Composition/information on ingredients

Substances

Name	Product Identifier	% by weight	GHS-US classification
Hydrochloric Acid	CAS # 7647-01-0 EINECS # 231-595-7	5-10	Corrosive to metals 1, H290 Skin corrosion irritation 1A,1B, 1C, H314 Serious eye damage 1, H318 STOT SE 3, H335
Copper Chloride	CAS # 10215-13-0 EINECS # unlisted	1-13	Acute toxicity oral 4, H302 Skin irritation 2, H315 Eye irritation 2, H319 Aquatic acute toxicity 1, H400 Aquatic chronic toxicity 1, H410
Iron Chloride	CAS # 7705-08-0 EINECS # 231-729-4	1-28	Corrosive to metals 1, H290 Acute toxicity oral 4, H302 Acute toxicity dermal 5, H313 Skin irritation 2, H315 Serious eye damage 1, H318 Acute aquatic toxicity 2, H401 Chronic aquatic toxicity 2, H411
Sodium Dichromate	CAS # 7789-12-0	1-3	Acute toxicity oral 3, H301 Acute toxicity dermal 4, H312



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	EINECS # 234-190-3		Acute toxicity inhalation 2, H330 Skin corrosion/irritation 1, H314 Serious eye damage/irritant 1, H319 Respiratory sensitization 1A, H334 Skin sensitization 1, H317 Germ cell mutagenicity 1B, H340 Carcinogenicity 1B, H350 Reproductive toxicity 1B, H360 STOT RE 1, H372 Oxidizing solids 2, H272
Manganese Chloride	CAS # 13446-34-9 EINECS # unlisted	1-9	Acute toxicity oral 4, H302 Aquatic acute toxicity 3, H402 STOT RE 2, H373

Amounts specified are typical and do not represent a specification. Any other ingredients are either proprietary, non-hazardous or present in amounts below the reportable limits.

Section 4: First aid measures

Description of necessary first aid measures

First-aid measures general:

Provide general supportive measures (comfort, warmth, rest). Seek medical attention for all exposures except minor instances of inhalation or skin contact. First-aid procedures should be reviewed by appropriate personnel familiar with hydrochloric acid and its conditions of use in the workplace.

First-aid measures after inhalation:

Take precautions to ensure your own safety before attempting rescue. Wear appropriate personal protective equipment and use the 'buddy' system. Remove the victim to fresh air. If breathing has stopped, begin artificial respiration, or if the heart has stopped, begin cardiopulmonary resuscitation (CPR) immediately. Oxygen should be administered by a trained person. Ensure victim is completely at rest - allow no physical exertion. Symptoms may be delayed for up to 48 hours. Immediately transport victim to an emergency medical facility.

First-aid measures after skin contact:

Avoid direct contact. Wear impervious protective gloves if necessary. Immediately flush contaminated areas with lukewarm, gently running water for at least 20 minutes. Under running



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water, remove contaminated clothing, shoes, and leather goods such as watchbands and belts. Do not interrupt flushing - have emergency vehicle wait if necessary. Transport victim to emergency medical facility. Decontaminate clothing, shoes and leather goods before reuse or discarding.

First-aid measures after eye contact:

Immediately flush contaminated eye(s) with lukewarm, gently running water for at least 30 minutes while holding the eyelid(s) open. Take care not to rinse contaminated water into a non-affected eye. Neutral saline solution may be used for flushing if available. Do not interrupt flushing -keep emergency vehicle waiting if necessary. If irritation persists, repeat flushing. Transport victim to emergency medical facility.

First-aid measures after ingestion:

Never give anything by mouth if victim is rapidly losing consciousness, or is unconscious or is convulsing. Have victim rinse mouth thoroughly with water. DO NOT INDUCE VOMITING. Have victim drink 300 mL (10 oz.) of water. If milk is available, administer AFTER the water. If vomiting occurs naturally, have the victim lean forward to reduce risk of aspiration. Repeat administration of water. Immediately transport to emergency medical facility.

Most important and effects, both acute and delayed

Symptoms:

If eye contact occurs, quickly rinse eyes with large amounts of fresh water, continue rinsing at least 15 minutes.

Blindness can result from single exposure. Have an eyewash station as close as possible to area where product is used.

Ingestion will cause burning of mouth and throat along with nausea and vomiting, call a POISON CENTER (800) 222-1222 or 911. Inhalation will cause irritation of the upper respiratory system and lungs and may result in permanent damage.

Indication of any immediate medical attention and special treatment needed

Contact a Poison Control Center for additional treatment information.

Section 5: Firefighting measures

Extinguishing media

Suitable extinguishing media:

Dry chemical, alcohol-resistant foam, or CO₂

Special hazards arising from the substance or mixture

Fire hazard:

The product is non-combustible

Explosion hazard:



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Releases flammable hydrogen gas when reacting with metal

Reactivity:

Releases flammable hydrogen gas when reacting with metal

Advice for firefighters

Firefighting instructions:

Use water spray to keep fire exposed containers cool.

Protection during firefighting:

Reactions with metals and water can liberate hydrogen gas and may form explosive mixture in the air. At high temperatures, toxic corrosive fumes of anhydrous gas may be emitted. Because fire may produce toxic thermal decomposition products, use a self-contained breathing apparatus (SCBA) with a full face-piece operated in pressure-demand or positive-pressure mode.

Additional information

Section 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures

General measures:

Evacuate unnecessary personnel from spill area and keep unprotected persons upwind. Wear appropriate personal protective equipment. Ventilate area. Vapor is heavier than air and will collect in low areas. Do not touch the spilled hydrochloric acid.

For non-emergency personnel

Protective equipment:

Wear chemical resistance (impervious) gloves

Emergency procedures:

Evacuate unnecessary personnel

For emergency responders

Protective equipment:

Equip clean-up crew with proper protection. Use appropriate personal protection equipment (PPE)

Emergency procedures:

Ventilate area

Environmental precautions

Implement spill control plan. Stop or reduce leak if safe to do so. Prevent from entering sanitary or storm sewers, waterways, or confined spaces. Use inert materials such as earth or sand to form a dike.



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Methods and material for containment and cleaning up

Spills may be absorbed using cement powder or fly ash and shoveled into containers. Neutralize spills with lime, sodium bicarbonate or crushed limestone and prevent runoff. Notify proper authorities if runoff should occur.

Reference to other sections

See Section 7 for information on safe handling

See Section 8 for information on personal protective equipment

See Section 13 for disposal information

Section 7: Handling and storage

Precautions for safe handling

Additional hazards when processed:

Precautions for safe handling:

Prevent release of vapor or mist into workplace air. Ensure adequate ventilation. Have emergency equipment readily available. When diluting, slowly add acid to the water to avoid boiling or splattering. Keep containers closed when not in use. Wash face and hands thoroughly after handling and before eating, drinking or using tobacco products.

Hygiene measures:

Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking.

Conditions for safe storage, including any incompatibilities

Storage conditions:

Store in cool, dry, well-ventilated area, out of direct sunlight and away from heat sources. Store away from incompatible materials such as oxidizing materials, reducing materials, and strong bases

Storage area:

Store in cool, dry, well-ventilated area, out of direct sunlight and away from heat sources. Store away from incompatible materials such as oxidizing materials, reducing materials, and strong bases

Special rules on packaging:

Do not store in open, unlabeled or mislabeled containers. Keep containers closed at all times when not in use.

Specific end use(s)

Etching stain



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Section 8: Exposure controls/personal protection

Control parameters

Occupational exposure limits:

Chemical Name	CAS #/EC#	EXPOSURE LIMITS
Hydrochloric Acid	7647-01-0 / 231-595-7	OSHA PEL 5 ppm ACGIH TLV 5 ppm
Copper Chloride	10215-13-0 / unlisted	OSHA PEL 15 mg/m ³ ACGIH TLV 10 mg/m ³
Iron Chloride	7705-08-0 / 231-729-4	OSHA PEL 2 mg/m ³ ACGIH TLV 2 mg/m ³
Sodium Dichromate	7789-12-0 / 234-190-3	OSHA PEL 0.1 mg/m ³ ACGIH TLV 0.05 mg/m ³
Manganese Chloride	13446-34-9 / unlisted	OSHA PEL 3 mg/m ³ ACGIH TLV 3 mg/m ³

Exposure controls

Appropriate engineering controls:

Ensure all national/local regulations are observed. Gas detectors should be used when flammable gases/vapors may be released. Proper grounding procedures to avoid static electricity should be followed. Use explosion proof equipment. Ensure adequate ventilation, especially in confined areas.

Personal protective equipment:

Wear fire-proof clothing, protective goggles and gloves. Wear respiratory protection in a poor ventilated environment.

Hand protection:

Wear chemically resistant protective gloves

Eye protection:

Chemical goggles or safety glasses

Skin and body protection:

Wear fireproof clothing

Respiratory protection:



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If exposure limits are exceeded or irritation is experienced, NIOSH approved respiratory protection should be worn.

Thermal hazard protection:

Wear suitable protection clothing

Other information:

When using, do not eat, drink or smoke

Section 9: Physical and chemical properties

Information on basic physical and chemical properties

Physical state:	Liquid
Appearance:	Colored solution
Color:	Translucent to slightly opaque
Odor:	Slightly acid to acid
Odor threshold:	Not determined
pH:	< 2
Relative evaporation rate (butyl acetate=1):	None established
Boiling Range:	>214-223° F
Melting point:	Not Determined
Freezing point:	Not Determined
Auto-ignition temperature:	Not Applicable
Decomposition temperature:	Not Determined
Flammability (solid, gas):	Not Applicable
Vapor pressure:	Not Determined
Flash Point:	Not Applicable
Flash Point Method:	Not Applicable
Relative vapor density @ 20 ° C:	Not determined
Relative density:	1.0-1.5
Density:	8.3- 12.5 lbs / gal
Solubility:	Completely soluble in water
Log Pow:	Not available
Log Kow:	Not available
Viscosity, kinematic:	Not available
Viscosity, dynamic:	Not available
Explosive properties:	None known
Oxidizing properties:	
Explosive limits:	Not determined



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Other information:

No further relevant information available

Section 10: Stability and reactivity

Reactivity

Acid stain is stable at room temperature in closed containers under normal storage and handling conditions.

Chemical Stability

Product is stable under normal storage conditions

Conditions to Avoid

Heat, open flame, reactive metals and strong oxidizers

Incompatible Materials

Contact with common metals, including aluminum or magnesium, may produce hydrogen which may form explosive mixtures in the air.

Hazardous Decomposition Products

Thermal oxidative decomposition of acid stain can product toxic and hazardous gases including fumes of hydrogen chloride and oxides of copper and chromium.

Section 11: Toxicological information

Information on toxicological effects

TOXICITY MEASURES:

Chemical Name	LD50/LC50
Hydrochloric Acid	Inhalation LC50: Rat 3,124 ppm Dermal LD50: Rabbit 5,010 mg/kg
Sodium Dichromate	Inhalation LC50: Rat 0.124 mg/L 4 h Dermal LD50: Rabbit 1,000 mg/kg Oral LD50: Rat 50 mg/kg
Manganese Chloride	Oral LD50: Rat 1,484 mg/kg

Likely Routes of Exposure: Inhalation, ingestion, eyes and skin

Symptoms Related to the Physical, Chemical and Toxicological Characteristics: N/A

Delayed and Immediate Effects and Also Chronic Effects from Short and Long Term Exposure:



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The severity of damage depends on the duration of the exposure. In general, solutions and mists with a pH of 3 or less are a significant health concern. Contact with alkali liquids will generate heat. Contact with most metals will generate flammable hydrogen gas.

Effects of Short-Term (Acute) Exposure:

Inhalation: Vapor or mist in the 50 to 100 ppm range can cause severe nasal irritation, sore throat, choking, coughing and difficulty breathing. Prolonged exposures can cause burns and ulcers to the nose and throat. Severe exposures for a few minutes at 1000 to 2000 ppm can cause a life-threatening accumulation of fluid in the lungs called pulmonary edema. Symptoms of pulmonary edema such as shortness of breath may be delayed for 48 hours after exposure.

Skin Contact:

Contact with liquid can cause irritation and burns. Vapor or mist may cause redness, irritation and burns if contact is prolonged.

Eye Contact:

Low concentrations of vapor or mist (10 - 35 ppm) can be immediately irritating and result in redness. Concentrated vapor, mist or splashed liquid can cause severe irritation, burns and permanent blindness.

Ingestion:

Liquid can cause corrosive burns to mouth, throat, esophagus and stomach. Symptoms may include difficulty in swallowing, intense thirst, nausea, vomiting, diarrhea, and in severe cases, collapse and death. Small amounts of acid which enter the lungs during ingestion or vomiting (aspiration) can cause serious lung injury and death.

Effects of Long-Term (Chronic) Exposure:

Repeated and prolonged exposure to low concentrations of mist or vapor can cause discoloration and damage to tooth enamel, bleeding of the nose and gums, gastrointestinal symptoms, and chronic bronchitis and gastritis. Repeated exposure to low concentrations of liquid, mist or vapor can cause redness, swelling, sensitization, and pain (dermatitis). Metallic taste and garlic breath are signs of selenium absorption. No evidence of carcinogenicity in human studies. This product does not accumulate in the body.

Medical Conditions Aggravated By Exposure:

Pre-existing respiratory and skin disorders.



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Section 12: Ecological information

All work practices must be aimed at eliminating environmental contamination.

Toxicity

Moderate toxicity to aquatic life.

Persistence and degradability

No data available

Bio-accumulative potential

The constituents of this product have a potential for bio-accumulation of metals.

Mobility in soil

This product is highly mobile in wet soil

Other adverse effects

Not determined for this product

Section 13: Disposal considerations

Waste treatment methods

Regional legislation (waste):

Dispose of unused contents (incineration) in accordance with national and local regulations.

Waste disposal recommendations:

Ensure the use of properly authorized waste management companies where appropriate.

Section 14: Transport information

In accordance with ICAO/IATA/DOT/TGD

UN Number: UN 3264

UN Proper Shipping Name: Corrosive Liquid, Acidic, Inorganic, N.O.S., (Contains Hydrochloric Acid)

Transportation Hazard Class: 8

Packing Group, if Applicable: III

Marine Pollutant: For most colors

Section 15: Regulatory information

U.S. Federal Regulations

U.S. OSHA Regulatory Status:



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This material is classified as hazardous under OSHA regulations

U.S SARA Reporting Requirements:

CHEMICAL	SECTION 311/312 EHS	SECTION 313
Hydrochloric Acid	Yes	Yes
Manganese Chloride	Yes	Yes
Sodium Dichromate	Yes	Yes
Iron Chloride	Yes	No
Copper Chloride	Yes	Yes

Toxic Substances Control Act (TSCA):

All components of this product are included on the TSCA inventory

U.S. CERCLA Reportable Quantity (RQ):

Hydrochloric Acid is subjected to reporting requirements

California Safe Drinking Water and Toxic Enforcement Act (Proposition 65):

This product does contain certain chemicals known to the State of California to cause cancer or developmental harm.

European Inventory of Existing Chemicals (EINECS):

All of the components of this product are included on EINECS.

Section 16: Other information

Indication of changes:

Other information:

Full text of H phrases:

STOT RE	Specific Target Organ Toxicity-Repeated Exposure
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NFPA health hazard: 3-Short exposure could cause serious, temporary or moderate residual injury.

NFPA fire hazard: 0-Material will not burn under typical fire conditions

NFPA reactivity: 1-Normally stable, but can become unstable at elevated temperatures and pressures

Notice to Reader

The information provided herein is believed to be accurate at the time of preparation or prepared from sources deemed to be reliable, but it is the full responsibility of the user to investigate and comprehend other pertinent sources of information, to comply with all laws and procedures applicable to the safe handling and use of the product and to determine the suitability of the product for its intended use. **Super Stone Inc. makes no warranty, expressed or implied, concerning the product or merchantability or fitness thereof for any purpose or concerning the accuracy of any information provided by Super Stone Inc.,** except that the product shall conform to Super Stone's specification.



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Section 1: Identification of the Product/Company

Product Identifier:

Product Name: CHLORSTAIN EXTENDER

Product Code: CLST*EXTENDER

Relevant identified uses of the substance or mixture

Recommended use:

For professional use to chemically acid stain concrete or masonry substrates

Uses advised against:

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Details of the supplier of the safety data sheet

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Section 2: Hazards Identification

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Label elements

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Hazard Pictograms (GHS-US)



Signal words (GHS-US):

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Take off immediately all contaminated clothing.
Rinse skin with water. Shower
P304 + P340+P310 IF INHALED: Move person to
fresh air, keep comfortable for breathing.
Immediately call a POISON CENTER or doctor /
physician.
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cautiously with water for several minutes. Remove
contact lenses, if present and easy to do. Continue
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P390 Absorb spillage to prevent material damage.

Storage:

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container with a resistant inner lining
P405 Store locked up
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container with a resistant inner lining

Disposal:

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Manganese Chloride	CAS # 13446-34-9 EINECS # unlisted	1-9	Acute toxicity oral 4, H302 Aquatic acute toxicity 3, H402 STOT RE 2, H373

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Description of necessary first aid measures

First-aid measures general:

Provide general supportive measures (comfort, warmth, rest). Seek medical attention for all exposures except minor instances of inhalation of skin contact. First -aid procedures should be reviewed by appropriate personnel familiar with hydrochloric acid and its conditions of use in the workplace.

First-aid measures after inhalation:

Take precautions to ensure your own safety before attempting rescue. Wear appropriate personal protective equipment and use the 'buddy' system. Remove the victim to fresh air. If breathing has stopped, begin artificial respiration, or if the heart has stopped, begin cardiopulmonary resuscitation (CPR) immediately. Oxygen should be administered by a trained person. Ensure victim is completely at rest - allow no physical exertion. Symptoms may be delayed for up to 48 hours. Immediately transport victim to an emergency medical facility.

First-aid measures after skin contact:

Avoid direct contact. Wear impervious protective gloves if necessary. Immediately flush contaminated areas with lukewarm, gently running water for at least 20 minutes. Under running



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water, remove contaminated clothing, shoes, and leather goods such as watchbands and belts. Do not interrupt flushing - have emergency vehicle wait if necessary. Transport victim to emergency medical facility. Decontaminate clothing, shoes and leather goods before reuse or discarding.

First-aid measures after eye contact:

Immediately flush contaminated eye(s) with lukewarm, gently running water for at least 30 minutes while holding the eyelid(s) open. Take care not to rinse contaminated water into a non-affected eye. Neutral saline solution may be used for flushing if available. Do not interrupt flushing -keep emergency vehicle waiting if necessary. If irritation persists, repeat flushing. Transport victim to emergency medical facility.

First-aid measures after ingestion:

Never give anything by mouth if victim is rapidly losing consciousness, or is unconscious or is convulsing. Have victim rinse mouth thoroughly with water. DO NOT INDUCE VOMITING. Have victim drink 300 mL (10 oz.) of water. If milk is available, administer AFTER the water. If vomiting occurs naturally, have the victim lean forward to reduce risk of aspiration. Repeat administration of water. Immediately transport to emergency medical facility.

Most important and effects, both acute and delayed

Symptoms:

If eye contact occurs, quickly rinse eyes with large amounts of fresh water, continue rinsing at least 15 minutes.

Blindness can result from single exposure. Have an eyewash station as close as possible to area where product is used.

Ingestion will cause burning of mouth and throat along with nausea and vomiting, call a POISON CENTER (800) 222-1222 or 911. Inhalation will cause irritation of the upper respiratory system and lungs and may result in permanent damage.

Indication of any immediate medical attention and special treatment needed

Contact a Poison Control Center for additional treatment information.

Section 5: Firefighting measures

Extinguishing media

Suitable extinguishing media:

Dry chemical, alcohol-resistant foam, or CO₂

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Fire hazard:

The product is non-combustible

Explosion hazard:



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Reactivity:

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Advice for firefighters

Firefighting instructions:

Use water spray to keep fire exposed containers cool.

Protection during firefighting:

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Additional information

Section 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures

General measures:

Evacuate unnecessary personnel from spill area and keep unprotected persons upwind. Wear appropriate personal protective equipment. Ventilate area. Vapor is heavier than air and will collect in low areas. Do not touch the spilled hydrochloric acid.

For non-emergency personnel

Protective equipment:

Wear chemical resistance (impervious) gloves

Emergency procedures:

Evacuate unnecessary personnel

For emergency responders

Protective equipment:

Equip clean-up crew with proper protection. Use appropriate personal protection equipment (PPE)

Emergency procedures:

Ventilate area

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Reference to other sections

See Section 7 for information on safe handling

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Precautions for safe handling

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Prevent release of vapor or mist into workplace air. Ensure adequate ventilation. Have emergency equipment readily available. When diluting, slowly add acid to the water to avoid boiling or splattering. Keep containers closed when not in use. Wash face and hands thoroughly after handling and before eating, drinking or using tobacco products.

Hygiene measures:

Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking.

Conditions for safe storage, including any incompatibilities

Storage conditions:

Store in cool, dry, well-ventilated area, out of direct sunlight and away from heat sources. Store away from incompatible materials such as oxidizing materials, reducing materials, and strong bases

Storage area:

Store in cool, dry, well-ventilated area, out of direct sunlight and away from heat sources. Store away from incompatible materials such as oxidizing materials, reducing materials, and strong bases

Special rules on packaging:

Do not store in open, unlabeled or mislabeled containers. Keep containers closed at all times when not in use.

Specific end use(s)

Etching stain



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Section 8: Exposure controls/personal protection

Control parameters

Occupational exposure limits:

Chemical Name	CAS #/EC#	EXPOSURE LIMITS
Hydrochloric Acid	7647-01-0 / 231-595-7	OSHA PEL 5 ppm ACGIH TLV 5 ppm
Copper Chloride	10215-13-0 / unlisted	OSHA PEL 15 mg/m ³ ACGIH TLV 10 mg/m ³
Iron Chloride	7705-08-0 / 231-729-4	OSHA PEL 2 mg/m ³ ACGIH TLV 2 mg/m ³
Sodium Dichromate	7789-12-0 / 234-190-3	OSHA PEL 0.1 mg/m ³ ACGIH TLV 0.05 mg/m ³
Manganese Chloride	13446-34-9 / unlisted	OSHA PEL 3 mg/m ³ ACGIH TLV 3 mg/m ³

Exposure controls

Appropriate engineering controls:

Ensure all national/local regulations are observed. Gas detectors should be used when flammable gases/vapors may be released. Proper grounding procedures to avoid static electricity should be followed. Use explosion proof equipment. Ensure adequate ventilation, especially in confined areas.

Personal protective equipment:

Wear fire-proof clothing, protective goggles and gloves. Wear respiratory protection in a poor ventilated environment.

Hand protection:

Wear chemically resistant protective gloves

Eye protection:

Chemical goggles or safety glasses

Skin and body protection:

Wear fireproof clothing

Respiratory protection:



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If exposure limits are exceeded or irritation is experienced, NIOSH approved respiratory protection should be worn.

Thermal hazard protection:

Wear suitable protection clothing

Other information:

When using, do not eat, drink or smoke

Section 9: Physical and chemical properties

Information on basic physical and chemical properties

Physical state:	Liquid
Appearance:	Colored solution
Color:	Translucent to slightly opaque
Odor:	Slightly acid to acid
Odor threshold:	Not determined
pH:	< 2
Relative evaporation rate (butyl acetate=1):	None established
Boiling Range:	>214-223° F
Melting point:	Not Determined
Freezing point:	Not Determined
Auto-ignition temperature:	Not Applicable
Decomposition temperature:	Not Determined
Flammability (solid, gas):	Not Applicable
Vapor pressure:	Not Determined
Flash Point:	Not Applicable
Flash Point Method:	Not Applicable
Relative vapor density @ 20 ° C:	Not determined
Relative density:	1.0-1.5
Density:	8.3- 12.5 lbs / gal
Solubility:	Completely soluble in water
Log Pow:	Not available
Log Kow:	Not available
Viscosity, kinematic:	Not available
Viscosity, dynamic:	Not available
Explosive properties:	None known
Oxidizing properties:	
Explosive limits:	Not determined



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Other information:

No further relevant information available

Section 10: Stability and reactivity

Reactivity

Acid stain is stable at room temperature in closed containers under normal storage and handling conditions.

Chemical Stability

Product is stable under normal storage conditions

Conditions to Avoid

Heat, open flame, reactive metals and strong oxidizers

Incompatible Materials

Contact with common metals, including aluminum or magnesium, may produce hydrogen which may form explosive mixtures in the air.

Hazardous Decomposition Products

Thermal oxidative decomposition of acid stain can product toxic and hazardous gases including fumes of hydrogen chloride and oxides of copper and chromium.

Section 11: Toxicological information

Information on toxicological effects

TOXICITY MEASURES:

Chemical Name	LD50/LC50
Hydrochloric Acid	Inhalation LC50: Rat 3,124 ppm Dermal LD50: Rabbit 5,010 mg/kg
Sodium Dichromate	Inhalation LC50: Rat 0.124 mg/L 4 h Dermal LD50: Rabbit 1,000 mg/kg Oral LD50: Rat 50 mg/kg
Manganese Chloride	Oral LD50: Rat 1,484 mg/kg

Likely Routes of Exposure: Inhalation, ingestion, eyes and skin

Symptoms Related to the Physical, Chemical and Toxicological Characteristics: N/A

Delayed and Immediate Effects and Also Chronic Effects from Short and Long Term Exposure:



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The severity of damage depends on the duration of the exposure. In general, solutions and mists with a pH of 3 or less are a significant health concern. Contact with alkali liquids will generate heat. Contact with most metals will generate flammable hydrogen gas.

Effects of Short-Term (Acute) Exposure:

Inhalation: Vapor or mist in the 50 to 100 ppm range can cause severe nasal irritation, sore throat, choking, coughing and difficulty breathing. Prolonged exposures can cause burns and ulcers to the nose and throat. Severe exposures for a few minutes at 1000 to 2000 ppm can cause a life-threatening accumulation of fluid in the lungs called pulmonary edema. Symptoms of pulmonary edema such as shortness of breath may be delayed for 48 hours after exposure.

Skin Contact:

Contact with liquid can cause irritation and burns. Vapor or mist may cause redness, irritation and burns if contact is prolonged.

Eye Contact:

Low concentrations of vapor or mist (10 - 35 ppm) can be immediately irritating and result in redness. Concentrated vapor, mist or splashed liquid can cause severe irritation, burns and permanent blindness.

Ingestion:

Liquid can cause corrosive burns to mouth, throat, esophagus and stomach. Symptoms may include difficulty in swallowing, intense thirst, nausea, vomiting, diarrhea, and in severe cases, collapse and death. Small amounts of acid which enter the lungs during ingestion or vomiting (aspiration) can cause serious lung injury and death.

Effects of Long-Term (Chronic) Exposure:

Repeated and prolonged exposure to low concentrations of mist or vapor can cause discoloration and damage to tooth enamel, bleeding of the nose and gums, gastrointestinal symptoms, and chronic bronchitis and gastritis. Repeated exposure to low concentrations of liquid, mist or vapor can cause redness, swelling, sensitization, and pain (dermatitis). Metallic taste and garlic breath are signs of selenium absorption. No evidence of carcinogenicity in human studies. This product does not accumulate in the body.

Medical Conditions Aggravated By Exposure:

Pre-existing respiratory and skin disorders.



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Section 12: Ecological information

All work practices must be aimed at eliminating environmental contamination.

Toxicity

Moderate toxicity to aquatic life.

Persistence and degradability

No data available

Bio-accumulative potential

The constituents of this product have a potential for bio-accumulation of metals.

Mobility in soil

This product is highly mobile in wet soil

Other adverse effects

Not determined for this product

Section 13: Disposal considerations

Waste treatment methods

Regional legislation (waste):

Dispose of unused contents (incineration) in accordance with national and local regulations.

Waste disposal recommendations:

Ensure the use of properly authorized waste management companies where appropriate.

Section 14: Transport information

In accordance with ICAO/IATA/DOT/TGD

UN Number: UN 3264

UN Proper Shipping Name: Corrosive Liquid, Acidic, Inorganic, N.O.S., (Contains Hydrochloric Acid)

Transportation Hazard Class: 8

Packing Group, if Applicable: III

Marine Pollutant: For most colors

Section 15: Regulatory information

U.S. Federal Regulations

U.S. OSHA Regulatory Status:



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This material is classified as hazardous under OSHA regulations

U.S SARA Reporting Requirements:

CHEMICAL	SECTION 311/312 EHS	SECTION 313
Hydrochloric Acid	Yes	Yes
Manganese Chloride	Yes	Yes
Sodium Dichromate	Yes	Yes
Iron Chloride	Yes	No
Copper Chloride	Yes	Yes

Toxic Substances Control Act (TSCA):

All components of this product are included on the TSCA inventory

U.S. CERCLA Reportable Quantity (RQ):

Hydrochloric Acid is subjected to reporting requirements

California Safe Drinking Water and Toxic Enforcement Act (Proposition 65):

This product does contain certain chemicals known to the State of California to cause cancer or developmental harm.

European Inventory of Existing Chemicals (EINECS):

All of the components of this product are included on EINECS.

Section 16: Other information

Indication of changes:

Other information:

Full text of H phrases:

STOT RE	Specific Target Organ Toxicity-Repeated Exposure
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NFPA health hazard: 3-Short exposure could cause serious, temporary or moderate residual injury.

NFPA fire hazard: 0-Material will not burn under typical fire conditions

NFPA reactivity: 1-Normally stable, but can become unstable at elevated temperatures and pressures

Notice to Reader

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