GHS Classifications Category

HEALTH HAZARDS

H301-Acute Oral Toxicity: 3
H311-Acute Dermal Toxicity: 3
H332-Acute Inhalation toxicity: 4
H314-Skin Corrosion/Skin Irritation: 1B
H319-Eye Damage/Irritation: 2A
H317-Skin Sensitization: 1
H340-Germ Cell Mutagenicity: 1A
H351-Carcinogenicity: 2
H361-Reproductive toxicity: 2
H373-Specific Target Organ Toxicity RE: 2

PHYSICAL HAZARDS Category

H225-Flammability: 2
H290-Corrosive to Metals: 1

ENVIRONMENTAL HAZARD

Acute environmental Hazards: 3
Pictogram or Hazard Symbols

Danger: Toxic if swallowed.
Toxic in contact with skin.

Warning: Harmful if inhaled.
Causes serious eye irritation.
May cause an allergic skin reaction.

Danger: Causes severe skin burns and eye damage.
Warning: May be corrosive to metals.

Danger: May cause genetic defects.
Warning: Suspected of causing cancer.
Suspected of damaging fertility or the unborn child.
May cause damage to organs through prolonged or repeated exposure.

Danger: Highly flammable liquid and vapor.
Precautionary Statement Prevention

H301
P264 Wash thoroughly after handling.
P270 Do not eat, drink, or smoke when using this product.
P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor.
P330 Rinse Mouth.
P405 Store locked up.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

H311
P280 Wear protective gloves, clothing, and eye and face protection.
P302 + P352 If on skin, wash with plenty of water. Remove contact lenses if present and easy to do so. Continue rinsing.
P312 Call a physician if you feel unwell
P361 + P363 Take off immediately all contaminated clothing and wash it before reuse.
P405 Store locked up.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

H322
P261 Avoid breathing fumes/mist/vapors.
P304 + P340 If inhaled, remove person to fresh air and keep comfortable for breathing.
P1 Use only outdoors or in a well-ventilated area.
P312 Call a physician if you feel unwell.

H314
P260 Do not breathe fume/gas/mist/vapors.
P264 Wash thoroughly after handling.
P280 Wear protective gloves, clothing, and eye and face protection.
P301 + P330 + P331 If swallowed, rinse mouth. Do not induce vomiting.
P303 + P361 + P353 If on skin (or hair) take off immediately all contaminated clothing. Rinse skin with water.
P363 Wash contaminated clothing before reuse.
P304 + P340 If inhaled, remove person to fresh air and keep comfortable for breathing.
P310 Seek medical assistance if exposed.
P405 Store locked up.
P305 + P351 + P338 If in eyes, rinse cautiously with water for several minutes.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

H319
P305 + P351 + P338 If in eyes, rinse cautiously with water for several minutes.
P337 + P313 If eye irritation persists, get medical advice/attention.
P285 In case of inadequate ventilation, wear respiratory protection.

H317
P272 Contaminated work clothing should not be allowed out of the work place.
IF ON SKIN: Wash with plenty of soap and water.
P363 Wash contaminated clothing before reuse.

H340
P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P281 Use personal protective equipment as required.
P308 + P313 If exposed or concerned: Get medical advice/attention.
P405 Store locked up
P501 Dispose of contents/container to... in accordance with local/regional/national/international regulations (to be specified)

H351
P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P281 Use personal protective equipment as required.
P308 + P313 If exposed or concerned: Get medical advice/attention.

H361
P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P281 Use personal protective equipment as required.
P308 + P313 If exposed or concerned: Get medical advice/attention.
P405 Store locked up
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

H373
P260 Do not breathe fume/gas/mist/vapors.
P314 Get medical advice/attention if you feel unwell.
H272
P210 Keep away from heat, flames, and hot surfaces. No smoking.
P220 Store away from combustible materials. Incompatible with: reducing agents, easily oxidized materials, organic materials and metal powders.
P221 Take any precaution to avoid mixing with combustibles.
P370 + P378 In case of fire (see section 5)

H225
P210 Keep away from heat, flames, and hot surfaces. No smoking.
P233 Keep container tightly closed.
P241 Use explosive-proof equipment.
P242 Use only non-sparking tools.
P243 Take precautionary measures against static discharge.
P280 Wear protective gloves, clothing, and eye and face protection.
P303 + P361 + P353 If on skin (or hair) take off immediately all contaminated clothing. Rinse skin with water.
P370 + P378 In case of fire use .... to extinguish.
P403 + P235 Store in a well-ventilated place. Keep cool.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.
Section 3 - Composition, Information on Ingredients

<table>
<thead>
<tr>
<th>CAS#</th>
<th>Chemical Name</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1333-82-0</td>
<td>Chromic Acid</td>
<td>2 w/v</td>
</tr>
<tr>
<td>7732-18-5</td>
<td>Water</td>
<td>100 v/v</td>
</tr>
</tbody>
</table>

Section 4 - First Aid Measures

**Eye Exposure:** May result in corneal injury and possible burns; in case of contact flush eyes well for 15 minutes, lifting the lower and upper eyelids occasionally. May cause permanent eye damage. Seek medical attention.

**Dermal Exposure:** Obtain medical attention: May cause skin sensitization, and allergic reaction.

**Oral Exposure:** Harmful if swallowed. Get Medical Attention immediately. Do not induce vomiting;

**Inhalation Exposure:** If inhaled, remove to fresh air. If not breathing give artificial respiration. Seek medical attention.

Section 5 - Fire Fighting Measures

**NFPA** HEALTH 2  FLAMMABILITY 1  REACTIVITY 1

**Extinguishing media:** Water spray. Neutralize with soda ash or slaked lime

**Special fire fighting procedures:** Wear chemically retardant gear and NIOSH approved self-contained breathing apparatus. Thermal decomposition produces irritating and toxic fumes.

**Flash Point:** 165 deg C

Section 6 - Accidental Release Measures

**Methods for Cleaning up:** Use proper personal protective equipment as indicated in section 8. Clean up spills immediately, observing precautions in the protective equipment section.

Section 7 - Handling and Storage
Wash thoroughly after handling. Keep container closed tightly. Avoid contact with combustibles. Use with adequate ventilation or respiratory protection. Do not store near combustibles or in direct sunlight. Store in a cool, dry, well-ventilated area away from incompatible substances.

Section 8 - Exposure Controls, Personal Protection

**Respiratory protection:** Wear NIOSH program complying with requirements of 29 CFR 1910.134 is recommended.

**Ventilation:** Local ventilation through fume hoods or laminar flow stations is also preferred.

**Personal Protective Equipment:**
Other: Wear appropriate government approved respirator, chemical-resistant gloves, safety goggles/ face shield.

Section 9 - Physical and Chemical Properties

**Physical State:** Liquid

**Appearance:** Amber

**Vapor Density:** N/A

**Evaporation Rate:** N/A

**Viscosity:** N/A

**Decomposition Temperature:** N/A

**Solubility:** Soluble.

Section 10 - Stability and Reactivity

**Chemical Stability:** Stable at room temperature in closed containers under normal storage and handling conditions.

**Conditions to avoid:** Excess heat, sunlight, confined spaces.

**Hazardous Decomposition Products:** Carbon monoxide, carbon dioxide, phenol.

**Hazardous Polymerization:** Will not occur.

**Incompatibilities with other materials:** Strong oxidizing agents, strong base, caustics.

Section 11 - Toxicological Information

**RTECS#:**

**LD50/LC50:**

CAS# 1333-82-0

Acute oral (LD50): 80mg/kg [Rat]

Acute oral (LD50): 127mg/kg [Mouse]

**Carcinogenicity:**

CAS# 1333-82-0: Classified A1 [confirmed for human] by ACGIH, Classified proven for IARC.

NTP, or CA Prop 65 - Not Available

**Route of exposure:**

Absorbed through skin. Dermal contact. Eye contact. Inhalation. Ingestion.
Conditions aggravated by exposure:
The substance may be toxic to kidneys, liver, gastrointestinal tract, upper respiratory tract, skin, eyes. Repeated or prolonged exposure to the substance can produce target organ damage.

Section 12 - Ecological Information

Ecotoxicity Fish: Not Available
Environmental Toxicity: Not Available.

Section 13 - Disposal Considerations

Appropriate method of disposal of substance or preparation:
Handled as hazardous waste and sent to an RCRA approved incinerator or disposed in an RCRA approved wasted facility.

Section 14 – Transport Information

DOT

Proper shipping name: Chromic Acid Solution
Primary Hazard class/division: 8(Corrosive)
UN/NA Number: UN 1755
Packing group: II

Section 15 - Regulatory Information

Symbol: T Toxic

Risk and Safety phrases
R5 - Heating may cause an explosion.
R8 - Contact with combustible material may cause fire.
R20 - Harmful by inhalation.
R21 - Harmful in contact with skin.
R22 - Harmful if swallowed.
R34 - Causes burns.
R36 - Irritating to eyes.
S 1 - Keep locked up
S 3 - Keep in a cool place
S 24 - Avoid contact with skin
S 25 - Avoid contact with eyes

The following component of this product is regulated as a toxic chemical under section 313 or Title III SARA, and 40 CFR 372: hydrochloric Acid CAS# 7647-01-0
The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall Rowley Biochemical, Inc. be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if Rowley Biochemical, Inc. has been advised of the possibility of such damages.