

**1 – PRODUCT IDENTIFICATION**

**PRODUCT NAME:**.....**4072**  
**PRODUCT NUMBER:** .....4072  
**DESCRIPTION:** .....Closed System Treatment  
**OTHER MEANS OF IDENTIFICATION:** .....Gold alkaline liquid with a faint characteristic odor  
**RECOMMENDED USE:** .....Closed system water treatment. Not for use in food preservation. Not for use in drinking water.  
**RESTRICTIONS ON USE:** .....Use only as directed.

**COMPANY:** ..... CHEMTRON CORPORATION  
3500 Harry S. Truman Blvd  
St. Charles, MO 63301  
636-940-5445 (Mon-Fri., 8:00-4:00)  
www.chemtroncorporation.com

**EMERGENCY PHONE:** .....(800) 424-9300 (CHEMTREC)  
**REVISION DATE:** .....June 30, 2020

**2 – HAZARDS IDENTIFICATION**

**EMERGENCY OVERVIEW:**.....Corrosive. Gold alkaline liquid with a faint characteristic odor. Product is corrosive to eyes, skin, respiratory system, and some metals. May react with acid and evolve toxic gases. Product is not flammable, but contact with metal may generate flammable hydrogen gas. If evaporated to dryness, sodium nitrite ingredient is an oxidizer

**CLASSIFICATION 29 CFR 1910.1200:** ..... Product is hazardous by OSHA criteria.

Oxidizing liquids; Oxidizing solids.....Category 2  
Corrosive to Metals .....Category 1  
Acute toxicity, oral.....Category 3  
Skin corrosion/irritation .....Category 1A  
Serious eye damage/eye irritation ...Category 1  
Specific target organ toxicity, single exposure; Respiratory tract irritation.....Category 3  
Reproductive toxicity .....Category 1B  
Hazardous to the aquatic environment, acute hazard .....Category 1



**GHS SIGNAL WORD:** .....**Danger**

**GHS HAZARD STATEMENTS:**.....H272: May intensify fire; oxidizer  
H290: May be corrosive to metals  
H301: Toxic if swallowed  
H314: Causes severe skin burns and eye damage



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- H318: Causes serious eye damage
- H335: May cause respiratory irritation
- H360: May damage fertility or the unborn child
- H400: Very toxic to aquatic life

**GHS PRECAUTIONARY STATEMENTS:**.....P210: Keep away from heat, hot surface, sparks, open flames and other ignition sources. - No smoking.  
 P220: Keep away from clothing and other combustible materials.  
 P221: Take any precaution to avoid mixing with combustibles/...  
 P234: Keep only in original container.  
 P260: Do not breathe dust/fume/gas/mist/vapors/spray.  
 P264: Wash hands thoroughly after handling.  
 P270: Do not eat, drink or smoke when using this product.  
 P273: Avoid release to the environment.  
 P280: Wear protective gloves/protective clothing/eye protection/face protection.  
 P312: Call a POISON CENTER or doctor/... if you feel unwell.  
 P330: Rinse mouth.  
 P363: Wash contaminated clothing before reuse.  
 P390: Absorb spillage to prevent material damage.  
 P391: Collect spillage.  
 P301+P310: IF SWALLOWED: Immediately call a POISON CENTER/doctor/...  
 P303+P361+P353: IF ON SKIN (or hair): Take off Immediately all contaminated clothing. Rinse SKIN with water [or shower].  
 P304+P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
 P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do - continue rinsing.  
 P370+P378: In case of fire: Use appropriate extinguisher.  
 P405: Store locked up.  
 P501: Dispose of contents/container in accordance to federal, state and local laws.

## 3 – COMPOSITION / INFORMATION ON INGREDIENTS

| HAZARDOUS INGREDIENT | PERCENT | CAS NUMBER |
|----------------------|---------|------------|
| Sodium nitrite       | 30-35   | 7632-00-0  |
| Sodium hydroxide     | 1-5     | 1310-73-2  |
| Sodium tolyltriazole | 1-5     | 64665-57-2 |
| Boric Acid           | 1-5     | 10043-35-3 |

The exact percent by weight of the ingredients in this formulation is proprietary.

## 4 – FIRST-AID MEASURES

**BREATHING (INHALATION):**..If inhaled: If breathing is difficult, remove person to fresh air and keep comfortable for breathing. If experiencing respiratory symptoms: Call a doctor.  
**SWALLOWING (INGESTION):**..If swallowed: Rinse mouth. Do NOT induce vomiting unless and/or until directed to do so by a medical professional. Immediately, call a poison control center or doctor.



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- EYES:** .....Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing for 15 minutes. Immediately, call a doctor
- SKIN (DERMAL):** .....If on skin (or hair): Immediately, take off all contaminated clothing. Rinse skin with water. Use safety shower if available. Immediately, call a doctor.
- ACUTE SYMPTOMS:**.....Irritation or burns to eyes, skin, or mucous membranes. Injury may result in permanent damage to eyesight or permanent scars on skin. In the event of product ingestion, potential toxic effects due to sodium nitrite ingredient include nausea, vomiting, convulsions, cyanosis, methemoglobinemia, coma, and death.
- DELAYED EFFECTS:** .....Skin irritation, respiratory irritation; reduced respiratory function may manifest slowly if exposure is not sufficient to elicit acute effects. Following a very low dose oral exposure, methemoglobinemia may also manifest in a delayed manner.
- IMMEDIATE OR SPECIAL TREATMENT:** .....After contact with product, immediately flush eyes and/or skin with water for 15 minutes. If safety shower or eye wash is plumbed to cold water, it may be necessary to move victim to a locker room shower or elsewhere to obtain a lukewarm water source before the 15 minute flush is complete. After the 15 minute flush, seek medical treatment. Sodium nitrite ingredient (15-20% of product) is potentially toxic if oral dose is significant. If ingested, contact poison control immediately and get medical attention. In rare cases, induction of vomiting may be warranted. Induction of vomiting is generally not prescribed for corrosive liquids due to the destructive effects of the corrosive liquid on esophageal tissues. However, if patient is at risk of life threatening methemoglobinemia, appropriate treatment should be determined by physician and options may include induction of vomiting or gastric lavage.

### 5 – FIRE-FIGHTING MEASURES

- EXTINGUISHING MEDIA:**.....Use water. Do not use dry chemicals or foams. CO2 or Halon® may provide limited control. **LARGE FIRE:** Flood fire area with water from a distance.
- SPECIAL FIRE FIGHTING PROCEDURES:** .....Product is corrosive to eyes, skin, and respiratory system. Closed containers may rupture (due to buildup of pressure) when exposed to extreme heat. Contact with some metals may generate explosive hydrogen gas. Thermal decomposition under fire conditions may produce corrosive aerosols, metal oxide fumes, oxides of nitrogen including nitrogen dioxide, and oxides of carbon. If evaporated to dryness, sodium nitrite ingredient is an oxidizer. Wear self-contained breathing apparatus and full turn-out gear. If possible, move containers away from fire. Cool fire exposed containers with water spray. If containers rupture or leak, product may evolve nitrogen dioxide gas or other oxides of nitrogen under extreme heat.

### 6 – ACCIDENTAL RELEASE MEASURES

- SPILL PROCEDURES:**.....Contain and collect spills with commercial absorbents. Unused product or spill cleanup residues may be RCRA hazardous waste by the characteristic of corrosivity (D002). Consult local authorities for appropriate waste classification and disposal options in your location.
- PERSONAL PRECAUTIONS:**....Wear chemical splash goggles and protective industrial rubber gloves. When conditions warrant use, add face shield, apron, and/or rubber boots. If spill escapes to sanitary sewer, notify local public works authorities. If spill escapes to the environment, notify state and federal EPA and, if appropriate, the Coast Guard. For CERCLA RQ see section 15.

**7 – HANDLING and STORAGE**

**STORAGE:** .....Store product in closed container in well ventilated, secure area. Protect containers against physical damage. Protect label. Empty containers retain product residues and all label hazards are still present until container is thoroughly cleaned. The recommended disposal for rinse waters from empty units is discharge to the treated system.

**HANDLING:**.....Open container slowly until pressure is relieved. Avoid spillage. Clean up small spills and drips promptly. Dry sodium nitrite is an oxidizer. Do not allow accumulation of dried product residues on combustible material like cardboard or wood. Protect product from contamination. Avoid contact between this product and other chemicals, especially acids. Avoid contact with metals during handling. Do not transfer into metal containers. Contact with many metals (see Section 10) may generate explosive hydrogen gas. The recommended disposal for rinse waters from empty units is discharge to the treated system.

**8 – EXPOSURE CONTROLS / PERSONAL PROTECTION**

**EXPOSURE LIMITS:** .....Exposure limits for the formulated product are not established. Exposure limits for some hazardous ingredient(s) are:

| INGREDIENT                       | SOURCE & PARAMETER | EXPOSURE LIMIT |
|----------------------------------|--------------------|----------------|
| Sodium Hydroxide                 | NIOSH REL          | 2 mg/m3        |
|                                  | OSHA PEL           | 2 mg/m3        |
| Boric acid, as borate compounds, | ACGIH TWA          | 2 mg/m3        |

**PROTECTIVE CLOTHING:** .....Wear chemical splash goggles and protective industrial rubber gloves. When conditions warrant use, add face shield, apron, and/or rubber boots.

**ADDITIONAL MEASURES:**.....General exhaust ventilation is adequate. Employ work practices and product transfer practices that avoid spills, drips, or contact with any incompatible material.

**NOTE:** .....If product contacts acid or other incompatible material, nitrogen dioxide gas may evolve from nitrite. The ACGIH TWA for nitrogen dioxide is 0.2 ppm. The NIOSH IDLH for nitrogen dioxide is 20 ppm.

OSHA - Occupational Safety and Health Administration; ACGIH - American Conference of Governmental Industrial Hygienists; NIOSH - National Institute for Occupational Safety and Health; PEL - Permissible Exposure Limit; TWA – Time Weighted Average; TLV - Threshold Limit Value; REL - Recommended Exposure Limit; STEL - Short Term Exposure Limit; IDLH - Immediately Dangerous to Life or Health.

**9 – PHYSICAL / CHEMICAL PROPERTIES**

**APPEARANCE:** .....Gold alkaline liquid

**ODOR:** .....Faint characteristic odor

**BOILING POINT:** .....>212° F

**VAPOR PRESSURE:**.....Not known, similar to water

**VAPOR DENSITY (AIR=1):** .....Not known, similar to water

**SPECIFIC GRAVITY:** .....1.28-1.35

**pH:** .....12-13.5

**SOLUBILITY IN WATER:** .....Completely miscible in water.

**FLAMMABILITY:** .....Not Flammable

**EVAPORATION RATE:**.....Similar to water

**MELTING POINT/FREEZING POINT:** .....<32° F

**10 – STABILITY and REACTIVITY**

**STABILITY:**.....Stable at ambient temperatures and pressures.  
**HAZARDOUS DECOMP.:** .....May react violently with acid. Due to reactions, corrosive liquid may boil and splatter. Contact with acid will also release oxidizing, toxic, corrosive nitrogen dioxide gas. Reactions with aluminum, zinc, copper, and other metals may evolve flammable hydrogen gas. Polymerization will not occur.  
**INCOMPATIBILITY:**.....Acid, water, reducing agents, sulfites, and ammonia. Also avoid contact with most metals, including aluminum, zinc, copper, brass, bronze, lead, and tin.  
**HAZARDOUS REACTIONS:** .....Contact with acid, water (other than recommended use), or other incompatible materials.

**11 – TOXICOLOGICAL INFORMATION**

**LIKELY ROUTES OF EXPOSURE:** .....Eye or skin contact.  
**TOXICOLOGICAL CHARACTERISTICS:** .....Product is corrosive to eyes, skin, mucous membranes, and other tissues. Contact will irritate or burn eyes and skin. Permanent damage to eyesight is possible. Permanent scars are possible. The sodium nitrite ingredient is toxic if ingested. Symptoms of sodium nitrite toxicity include nausea, vomiting, convulsions, cyanosis, methemoglobinemia (interference with the blood's ability to carry oxygen), coma, and death. Life threatening damage to critical respiratory or gastrointestinal systems is also possible following overexposure. Inhalation of product in mist or aerosol form may do serious damage to respiratory system by burning lung tissues. Similar damage to the gastrointestinal system is possible following ingestion.  
**DELAYED EFFECTS:** .....Irritation to skin, eyes, or respiratory system may manifest slowly if exposure is not sufficient to elicit acute effects. The same may be true for methemoglobinemia following ingestion of a very small dose.  
**IMMEDIATE EFFECTS:** .....Irritation or burns to eyes, skin, or other tissues. If ingestion occurs - nausea, vomiting, convulsions, cyanosis, methemoglobinemia, coma, and death.  
**CHRONIC EFFECTS:** .....None known  
**NUMERICAL MEASURES OF TOXICITY:** .....No toxicology available on the formulated product.  
**LISTED CARCINOGEN:** .....None as carcinogens by IARC, NTP, or OSHA.

| INGREDIENTS      | DATA                          |
|------------------|-------------------------------|
| Sodium hydroxide | Oral Rat LD 50, 140-340 mg/kg |
| Sodium nitrite   | Oral rat LD50 85 mg/kg        |
| Boric acid       | Oral Rat LD50 2660 mg/kg      |

**12 – ECOLOGICAL INFORMATION**

**ENVIRONMENTAL FATE AND DISTRIBUTION:** The sodium nitrite ingredient is acutely toxic to aquatic organisms. Significant contamination of small bodies of surface water or localized areas at the point of a spill may also elevate pH levels above tolerable levels for aquatic organisms. Aquatic toxicity data is not available for the formulated product. Aquatic toxicity data is available for some ingredients and closely related compounds:

| PRODUCT        | DATA   |
|----------------|--|
| Sodium nitrite | Rainbow trout 96 hr LC50 - 0.092-0-0.19 mg/l |

|                  |                                      |
|------------------|--------------------------------------|
| Sodium hydroxide | Mosquito Fish 96 hr LC50 80 mg/l     |
| Boric Acid       | Freshwater Fish 96 hr LC50 5600 mg/l |

**PERSISTENCE AND DEGRADABILITY:** .....Sodium nitrite is an inorganic chemical which can contribute a nutrient to living systems. Sodium nitrite is readily converted (oxidized) to nitrate in the environment. Nitrate is a primary macronutrient (as nitrogen) for all forms of plant life and many microorganisms. Consequently, the nitrite in this product will degrade in the environment due to both chemical reactions and biological uptake of nutrient nitrogen. Other ingredients are not persistent.

**BIOACCUMULATIVE POTENTIAL:** .....Product ingredients do not bioaccumulate.

**MOBILITY IN SOIL:** .....Not known. Product is water soluble and/or miscible.

**OTHER ADVERSE EFFECTS:** ..None known.

**13 –DISPOSAL CONSIDERATIONS**

**WASTE DISPOSAL:** .....Product is consumed during recommended use. Flush container residues to the treated system. If product is not consumed in use, material is RCRA hazardous waste due to the corrosivity characteristic (D002). State and local disposal regulations may differ from federal disposal regulations. Dispose of contents or container in accordance with local, state, and federal regulations.

**14 – TRANSPORTATION INFORMATION**

**PROPER SHIPPING NAME:**.....Corrosive Liquid, Oxidizing, N.O.S. (Sodium Hydroxide, Sodium Nitrite)

**HAZARD CLASS:** .....8, 5.1

**UN/NA NUMBER:** .....UN3093

**PACKAGING GROUP :** .....II



**ENVIRONMENTAL HAZARDS:** .....Product container meets or exceeds DOT requirements. Product is shipped to end user. No extraordinary measures are required for shipment in bulk tanks including totes. See 49 CFR 172.101 & 49 CFR172.102.

**TRANSPORT IN BULK:** .....Product container meets or exceeds DOT requirements. Product is shipped to end user. No extraordinary measures are required for shipment in bulk tanks including totes. See 49 CFR 172.101 & 49 CFR172.102.

**SPECIAL PRECAUTIONS:** .....If needed, see Column 7 entries in the DOT hazardous materials table and associated designations at 49 CFR172.102 for detailed descriptions of authorized containers, tank material specifications, maximum degree of filling, and minimum pressure tests.

**15 - REGULATIONS**

Contents of this MSDS comply with the OSHA Hazard Communication Standard 29CFR 1910.1200

EPA SRA Title III Chemical Listings:



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**TSCA STATUS:** .....All ingredients listed or exempt.

**SECTION 311/312:** .....

**SECTION 302:**.....

**SECTION 312:**.....Acute hazard

**SARA SECTION 313:**.....Sodium nitrite is listed at 40 CFR 372.65

**US EPA CERCLA:** .....Contains Sodium Hydroxide, 1-5%, CERCLA RQ is 1,000lbs

Contains Sodium Nitrite, 15-20%, CERCLA RQ is 500lbs

## 16 – OTHER INFORMATION

### NFPA HAZARD RANKING

| HEALTH | FIRE | REACTIVITY | SPECIAL |
|--------|------|------------|---------|
| 3      | 1    | 1          | Corr    |

### HMS HAZARD RANKING

| HEALTH | FIRE | REACTIVITY | PPE                         |
|--------|------|------------|-----------------------------|
| 3      | 0    | 1          | n or p or X (defined below) |

n - splash goggles

p - gloves

X - consult supervisor

This data is offered in good faith and believed to be accurate, but it is for the users to satisfy themselves of the product suitability for their own purpose. There is no warranty expressed or implied. The recommended hygiene and safe handling procedures are believed to be generally applicable.