



## Hercules® Glug® Bath Liquid Drain Opener

HCC Holdings, Inc. an Oatey Affiliate

Version No: 1.6

Safety Data Sheet according to OSHA HazCom Standard (2012) requirements

Issue Date: **02/03/2022**

Print Date: **02/03/2022**

S.GHS.USA.EN

### SECTION 1 Identification

#### Product Identifier

|                                      |                                                                                                   |
|--------------------------------------|---------------------------------------------------------------------------------------------------|
| <b>Product name</b>                  | Hercules® Glug® Bath Liquid Drain Opener                                                          |
| <b>Synonyms</b>                      | Not Available                                                                                     |
| <b>Proper shipping name</b>          | Corrosive liquid, basic, inorganic, n.o.s. (contains sodium hypochlorite and potassium hydroxide) |
| <b>Other means of identification</b> | 20450 and 20455                                                                                   |

#### Recommended use of the chemical and restrictions on use

|                                 |                      |
|---------------------------------|----------------------|
| <b>Relevant identified uses</b> | Liquid Drain Cleaner |
|---------------------------------|----------------------|

#### Name, address, and telephone number of the chemical manufacturer, importer, or other responsible party

|                                |                                                          |
|--------------------------------|----------------------------------------------------------|
| <b>Registered company name</b> | HCC Holdings, Inc. an Oatey Affiliate                    |
| <b>Address</b>                 | 4700 West 160th Street Cleveland, OH 44135 United States |
| <b>Telephone</b>               | 216-267-7100                                             |
| <b>Fax</b>                     | Not Available                                            |
| <b>Website</b>                 | Not Available                                            |
| <b>Email</b>                   | info@oatey.com                                           |

#### Emergency phone number

|                                          |                                                |
|------------------------------------------|------------------------------------------------|
| <b>Association / Organisation</b>        | Chemtrec                                       |
| <b>Emergency telephone numbers</b>       | 1-800-424-9300 (Outside the US 1-703-527-3887) |
| <b>Other emergency telephone numbers</b> | Emergency First Aid: 1-877-740-5015            |


### SECTION 2 Hazard(s) identification

#### Classification of the substance or mixture

|                       |                                                                                                                     |
|-----------------------|---------------------------------------------------------------------------------------------------------------------|
| <b>Classification</b> | Skin Corrosion/Irritation Category 1B, Corrosive to Metals Category 1, Serious Eye Damage/Eye Irritation Category 1 |
|-----------------------|---------------------------------------------------------------------------------------------------------------------|

#### Label elements

## Hercules® Glug® Bath Liquid Drain Opener

|                            |                                                                                   |
|----------------------------|-----------------------------------------------------------------------------------|
| <b>Hazard pictogram(s)</b> |  |
|----------------------------|-----------------------------------------------------------------------------------|

|                    |               |
|--------------------|---------------|
| <b>Signal word</b> | <b>Danger</b> |
|--------------------|---------------|

**Hazard statement(s)**

|  |                                          |
|--|------------------------------------------|
|  | Causes severe skin burns and eye damage. |
|  | May be corrosive to metals.              |

**Hazard(s) not otherwise classified**

Not Applicable

**Precautionary statement(s) Prevention**

|  |                                                                                  |
|--|----------------------------------------------------------------------------------|
|  | Do not breathe mist/vapours/spray.                                               |
|  | Wash all exposed external body areas thoroughly after handling.                  |
|  | Wear protective gloves, protective clothing, eye protection and face protection. |
|  | Keep only in original container.                                                 |

**Precautionary statement(s) Response**

|  |                                                                                                                                  |
|--|----------------------------------------------------------------------------------------------------------------------------------|
|  | IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.                                                                               |
|  | IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.                              |
|  | 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/doctor/physician/first aider.                                                                   |
|  | Wash contaminated clothing before reuse.                                                                                         |
|  | Absorb spillage to prevent material damage.                                                                                      |
|  | IF INHALED: Remove person to fresh air and keep comfortable for breathing.                                                       |

**Precautionary statement(s) Storage**

|  |                                                                       |
|--|-----------------------------------------------------------------------|
|  | Store locked up.                                                      |
|  | Store in corrosive resistant/ container with a resistant inner liner. |

**Precautionary statement(s) Disposal**

|  |                                                                                                                                  |
|--|----------------------------------------------------------------------------------------------------------------------------------|
|  | Dispose of contents/container to authorised hazardous or special waste collection point in accordance with any local regulation. |
|--|----------------------------------------------------------------------------------------------------------------------------------|

**SECTION 3 Composition / information on ingredients****Substances**

See section below for composition of Mixtures

**Mixtures**

| CAS No    | %[weight] | Name                       |
|-----------|-----------|----------------------------|
| 1310-73-2 | 0.1-1     | <u>sodium hydroxide</u>    |
| 1310-58-3 | 1-3       | <u>potassium hydroxide</u> |
| 7681-52-9 | 1-5       | <u>sodium hypochlorite</u> |
| 1344-09-8 | 1-5       | <u>sodium metasilicate</u> |

The specific chemical identity and/or exact percentage (concentration) of composition has been withheld as a trade secret.

**SECTION 4 First-aid measures****Description of first aid measures**

|                    |                                                 |
|--------------------|-------------------------------------------------|
| <b>Eye Contact</b> | If this product comes in contact with the eyes: |
|--------------------|-------------------------------------------------|

Continued...

## Hercules® Glug® Bath Liquid Drain Opener

|                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|---------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                     | <ul style="list-style-type: none"> <li>▶ Immediately hold eyelids apart and flush the eye continuously with running water.</li> <li>▶ Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids.</li> <li>▶ Continue flushing until advised to stop by the Poisons Information Centre or a doctor, or for at least 15 minutes.</li> <li>▶ Transport to hospital or doctor without delay.</li> <li>▶ Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Skin Contact</b> | <p>If skin or hair contact occurs:</p> <ul style="list-style-type: none"> <li>▶ Immediately flush body and clothes with large amounts of water, using safety shower if available.</li> <li>▶ Quickly remove all contaminated clothing, including footwear.</li> <li>▶ Wash skin and hair with running water. Continue flushing with water until advised to stop by the Poisons Information Centre.</li> <li>▶ Transport to hospital, or doctor.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Inhalation</b>   | <ul style="list-style-type: none"> <li>▶ If fumes or combustion products are inhaled remove from contaminated area.</li> <li>▶ Lay patient down. Keep warm and rested.</li> <li>▶ Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures.</li> <li>▶ Apply artificial respiration if not breathing, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained. Perform CPR if necessary.</li> <li>▶ Transport to hospital, or doctor, without delay.</li> <li>▶ Inhalation of vapours or aerosols (mists, fumes) may cause lung oedema.</li> <li>▶ Corrosive substances may cause lung damage (e.g. lung oedema, fluid in the lungs).</li> <li>▶ As this reaction may be delayed up to 24 hours after exposure, affected individuals need complete rest (preferably in semi-recumbent posture) and must be kept under medical observation even if no symptoms are (yet) manifested.</li> <li>▶ Before any such manifestation, the administration of a spray containing a dexamethasone derivative or beclomethasone derivative may be considered.</li> </ul> <p><b>This must definitely be left to a doctor or person authorised by him/her.</b><br/>(ICSC13719)</p> |
| <b>Ingestion</b>    | <ul style="list-style-type: none"> <li>▶ For advice, contact a Poisons Information Centre or a doctor at once.</li> <li>▶ Urgent hospital treatment is likely to be needed.</li> <li>▶ If swallowed do <b>NOT</b> induce vomiting.</li> <li>▶ If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration.</li> <li>▶ Observe the patient carefully.</li> <li>▶ Never give liquid to a person showing signs of being sleepy or with reduced awareness; i.e. becoming unconscious.</li> <li>▶ Give water to rinse out mouth, then provide liquid slowly and as much as casualty can comfortably drink.</li> <li>▶ Transport to hospital or doctor without delay.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |

**Most important symptoms and effects, both acute and delayed**

See Section 11

**Indication of any immediate medical attention and special treatment needed**

For acute or repeated exposures to hypochlorite solutions:

- ▶ Release of small amounts of hypochlorous acid and acid gases from the stomach following ingestion, is usually too low to cause damage but may be irritating to mucous membranes. Buffering with antacid may be helpful if discomfort is evident.
- ▶ Evaluate as potential caustic exposure.
- ▶ Decontaminate skin and eyes with copious saline irrigation. Check exposed eyes for corneal abrasions with fluorescein staining.
- ▶ Emesis or lavage and catharsis may be indicated for mild caustic exposure.
- ▶ Chlorine exposures require evaluation of acid/base and respiratory status.
- ▶ Inhalation of vapours or mists may result in pulmonary oedema.

ELLENHORN and BARCELOUX: Medical Toxicology.

For acute or short-term repeated exposures to highly alkaline materials:

- ▶ Respiratory stress is uncommon but present occasionally because of soft tissue edema.
- ▶ Unless endotracheal intubation can be accomplished under direct vision, cricothyroidotomy or tracheotomy may be necessary.
- ▶ Oxygen is given as indicated.
- ▶ The presence of shock suggests perforation and mandates an intravenous line and fluid administration.
- ▶ Damage due to alkaline corrosives occurs by liquefaction necrosis whereby the saponification of fats and solubilisation of proteins allow deep penetration into the tissue.

Alkalis continue to cause damage after exposure.

INGESTION:

- ▶ Milk and water are the preferred diluents

No more than 2 glasses of water should be given to an adult.

- ▶ Neutralising agents should never be given since exothermic heat reaction may compound injury.

\* Catharsis and emesis are absolutely contra-indicated.

\* Activated charcoal does not absorb alkali.

\* Gastric lavage should not be used.

Supportive care involves the following:

- ▶ Withhold oral feedings initially.
- ▶ If endoscopy confirms transmucosal injury start steroids only within the first 48 hours.
- ▶ Carefully evaluate the amount of tissue necrosis before assessing the need for surgical intervention.

Continued...

## Hercules® Glug® Bath Liquid Drain Opener

- ▶ Patients should be instructed to seek medical attention whenever they develop difficulty in swallowing (dysphagia).

### SKIN AND EYE:

- ▶ Injury should be irrigated for 20-30 minutes.

Eye injuries require saline. [Ellenhorn & Barceloux: Medical Toxicology]

Depending on the degree of exposure, periodic medical examination is indicated. The symptoms of lung oedema often do not manifest until a few hours have passed and they are aggravated by physical effort. Rest and medical observation is therefore essential. Immediate administration of an appropriate spray, by a doctor or a person authorised by him/her should be considered.

(ICSC24419/24421)

## SECTION 5 Fire-fighting measures

### Extinguishing media

- ▶ Water spray or fog.
- ▶ Foam.
- ▶ Dry chemical powder.
- ▶ BCF (where regulations permit).
- ▶ Carbon dioxide.

### Special hazards arising from the substrate or mixture

|                             |             |
|-----------------------------|-------------|
| <b>Fire Incompatibility</b> | None known. |
|-----------------------------|-------------|

### Special protective equipment and precautions for fire-fighters

|                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Fire Fighting</b>         | <ul style="list-style-type: none"> <li>▶ Alert Fire Department and tell them location and nature of hazard.</li> <li>▶ Wear full body protective clothing with breathing apparatus.</li> <li>▶ Prevent, by any means available, spillage from entering drains or water course.</li> <li>▶ Use fire fighting procedures suitable for surrounding area.</li> <li>▶ <b>Do not</b> approach containers suspected to be hot.</li> <li>▶ Cool fire exposed containers with water spray from a protected location.</li> <li>▶ If safe to do so, remove containers from path of fire.</li> <li>▶ Equipment should be thoroughly decontaminated after use.</li> </ul> |
| <b>Fire/Explosion Hazard</b> | May emit corrosive fumes.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |

## SECTION 6 Accidental release measures

### Personal precautions, protective equipment and emergency procedures

See section 8

### Environmental precautions

See section 12

### Methods and material for containment and cleaning up

|                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|---------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Minor Spills</b> | <ul style="list-style-type: none"> <li>▶ Drains for storage or use areas should have retention basins for pH adjustments and dilution of spills before discharge or disposal of material.</li> <li>▶ Check regularly for spills and leaks.</li> <li>▶ Clean up all spills immediately.</li> <li>▶ Avoid breathing vapours and contact with skin and eyes.</li> <li>▶ Control personal contact with the substance, by using protective equipment.</li> <li>▶ Contain and absorb spill with sand, earth, inert material or vermiculite.</li> <li>▶ Wipe up.</li> <li>▶ Place in a suitable, labelled container for waste disposal.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Major Spills</b> | <ul style="list-style-type: none"> <li>▶ Clear area of personnel and move upwind.</li> <li>▶ Alert Fire Department and tell them location and nature of hazard.</li> <li>▶ Wear full body protective clothing with breathing apparatus.</li> <li>▶ Prevent, by any means available, spillage from entering drains or water course.</li> <li>▶ Consider evacuation (or protect in place).</li> <li>▶ Stop leak if safe to do so.</li> <li>▶ Contain spill with sand, earth or vermiculite.</li> <li>▶ Collect recoverable product into labelled containers for recycling.</li> <li>▶ Neutralise/decontaminate residue (see Section 13 for specific agent).</li> <li>▶ Collect solid residues and seal in labelled drums for disposal.</li> <li>▶ Wash area and prevent runoff into drains.</li> <li>▶ After clean up operations, decontaminate and launder all protective clothing and equipment before storing and re-using.</li> <li>▶ If contamination of drains or waterways occurs, advise emergency services.</li> </ul> |

Continued...

## Hercules® Glug® Bath Liquid Drain Opener

Personal Protective Equipment advice is contained in Section 8 of the SDS.

### SECTION 7 Handling and storage

#### Precautions for safe handling

|                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|--------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Safe handling</b>     | <ul style="list-style-type: none"> <li>▶ Avoid all personal contact, including inhalation.</li> <li>▶ Wear protective clothing when risk of exposure occurs.</li> <li>▶ Use in a well-ventilated area.</li> <li>▶ <b>WARNING:</b> To avoid violent reaction, <b>ALWAYS</b> add material to water and <b>NEVER</b> water to material.</li> <li>▶ Avoid smoking, naked lights or ignition sources.</li> <li>▶ Avoid contact with incompatible materials.</li> <li>▶ When handling, <b>DO NOT</b> eat, drink or smoke.</li> <li>▶ Keep containers securely sealed when not in use.</li> <li>▶ Avoid physical damage to containers.</li> <li>▶ Always wash hands with soap and water after handling.</li> <li>▶ Work clothes should be laundered separately. Launder contaminated clothing before re-use.</li> <li>▶ Use good occupational work practice.</li> <li>▶ Observe manufacturer's storage and handling recommendations contained within this SDS.</li> <li>▶ Atmosphere should be regularly checked against established exposure standards to ensure safe working conditions are maintained.</li> </ul> |
| <b>Other information</b> | <ul style="list-style-type: none"> <li>▶ Store in original containers.</li> <li>▶ Keep containers securely sealed.</li> <li>▶ Store in a cool, dry, well-ventilated area.</li> <li>▶ Store away from incompatible materials and foodstuff containers.</li> <li>▶ Protect containers against physical damage and check regularly for leaks.</li> <li>▶ Observe manufacturer's storage and handling recommendations contained within this SDS.</li> <li>▶ <b>DO NOT</b> store near acids, or oxidising agents</li> <li>▶ No smoking, naked lights, heat or ignition sources.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |

#### Conditions for safe storage, including any incompatibilities

|                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|--------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Suitable container</b>      | <p>Liquid inorganic hypochlorites shall not be transported in unlined metal drums. Inner packagings shall be fitted with vented closures and plastics drums and carboys shall have vented closures or be performance tested to a minimum of 250 kPa. All non-vented packagings shall be filled so that the ullage is at least 10% at 21-25 deg.C. Vented packagings may be filled to an ullage not less than 5% at 21-25 deg.C, provided that this ullage does not result in leakage from, nor distortion of, the packaging.</p> <ul style="list-style-type: none"> <li>▶ Lined metal can, lined metal pail/ can.</li> <li>▶ Plastic pail.</li> <li>▶ Polyliner drum.</li> <li>▶ Packing as recommended by manufacturer.</li> <li>▶ Check all containers are clearly labelled and free from leaks.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Storage incompatibility</b> | <ul style="list-style-type: none"> <li>▶ Contact with acids produces toxic fumes</li> <li>▶ Presence of rust (iron oxide) or other metal oxides catalyses decomposition of inorganic hypochlorites.</li> <li>▶ Contact with water can cause heating and decomposition giving off chlorine and oxygen gases. Solid hypochlorites in contact with water or moisture may generate sufficient heat to ignite combustible materials. Thermal decomposition can be sustained in the absence of oxygen.</li> <li>▶ Contact with acids produces toxic fumes of chlorine.</li> <li>▶ Bottles of strong sodium hypochlorite solution (10-14% available chlorine) burst in storage due to failure of the cap designed to vent oxygen slowly during storage. A hot summer may have exacerbated the situation. Vent caps should be checked regularly (using full personal protection) and hypochlorites should not be stored in direct sunlight or at temperatures exceeding 18 deg. C</li> <li>▶ Anhydrous solid hypochlorite may decompose violently on heating or if subject to friction.</li> <li>▶ Inorganic hypochlorites reacts violently with many incompatible materials including fuels, oils, wood, paper, etc. which become readily ignitable. Avoid contact with peroxides glycerine, lubricating oil, combustibles, amines, solvents, charcoal, metal oxides and salts, copper, mercaptan, sulfur, organic sulfides, turpentine.</li> <li>▶ Contact of hypochlorites with nitromethane, alcohols, glycerol, phenol or diethylene glycol monomethyl ether results in ignition.</li> <li>▶ Ammonia or primary aliphatic or aromatic amines may react with hypochlorites to form N-mono- or di-chloramines which are explosively unstable (but less so than nitrogen trichloride). Contact in drains between effluents containing ammonium salts and hypochlorites and acid lead to the formation of nitrogen trichloride which decomposed explosively. Whilst cleaning a brewery tank, reaction between an acidified ammonium sulfate cleaning preparation and sodium hypochlorite, lead nitrogen chloride formation and violent explosion</li> <li>▶ Interaction of ethyleneimine (aziridine) with hypochlorites gives an explosive N-chloro compound</li> <li>▶ Interaction of metal hypochlorites with nitrogenous materials may lead to the formation of nitrogen trichloride with explosive decomposition.</li> <li>▶ Metal oxides catalyse the oxygen decomposition of the hypochlorite.</li> <li>▶ Heating with carbon under confinement can result in explosion. Explosive interaction has occurred with carbonised food residues. After an attempt to clean these using bleach, and after heating, sodium chlorate appears to have been formed with</li> </ul> |

Continued...

## Hercules® Glug® Bath Liquid Drain Opener

consequent violent explosion

- ▶ Removal of formic acid from industrial waste streams with sodium hypochlorite solutions produced explosion at 55 deg. C.
- ▶ Explosions following reaction with methanol are attributed to formation of methyl hypochlorite.
- ▶ When finely divided materials such as sugar, wood dust and paper are contaminated with hypochlorite solution they burn more readily when dry.
- ▶ Calcium hypochlorite with over 60% 'active' chlorine ignites on contact with lubricating oils, damp sulfur, organic thiols or sulfides
- ▶ Incompatible with sanitising bowl cleaners containing bisulfites.
- ▶ Avoid contact with copper, aluminium and their alloys.

## SECTION 8 Exposure controls / personal protection

## Control parameters

## Occupational Exposure Limits (OEL)

## INGREDIENT DATA


| Source                                               | Ingredient          | Material name       | TWA           | STEL          | Peak          | Notes         |
|------------------------------------------------------|---------------------|---------------------|---------------|---------------|---------------|---------------|
| US OSHA Permissible Exposure Limits (PELs) Table Z-1 | sodium hydroxide    | Sodium hydroxide    | 2 mg/m3       | Not Available | Not Available | Not Available |
| US NIOSH Recommended Exposure Limits (RELs)          | sodium hydroxide    | Sodium hydroxide    | Not Available | Not Available | 2 mg/m3       | Not Available |
| US ACGIH Threshold Limit Values (TLV)                | sodium hydroxide    | Sodium hydroxide    | Not Available | Not Available | 2 mg/m3       | Not Available |
| US NIOSH Recommended Exposure Limits (RELs)          | potassium hydroxide | Potassium hydroxide | Not Available | Not Available | 2 mg/m3       | Not Available |
| US ACGIH Threshold Limit Values (TLV)                | potassium hydroxide | Potassium hydroxide | Not Available | Not Available | 2 mg/m3       | Not Available |

## Exposure controls

| Appropriate engineering controls                                                                                                                                                                                    | <p>Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard. Well-designed engineering controls can be highly effective in protecting workers and will typically be independent of worker interactions to provide this high level of protection.</p> <p>The basic types of engineering controls are:</p> <p>Process controls which involve changing the way a job activity or process is done to reduce the risk.</p> <p>Enclosure and/or isolation of emission source which keeps a selected hazard 'physically' away from the worker and ventilation that strategically 'adds' and 'removes' air in the work environment. Ventilation can remove or dilute an air contaminant if designed properly. The design of a ventilation system must match the particular process and chemical or contaminant in use.</p> <p>Employers may need to use multiple types of controls to prevent employee overexposure.</p> <p>Local exhaust ventilation usually required. If risk of overexposure exists, wear approved respirator. Correct fit is essential to obtain adequate protection. Supplied-air type respirator may be required in special circumstances. Correct fit is essential to ensure adequate protection.</p> <p>An approved self contained breathing apparatus (SCBA) may be required in some situations.</p> <p>Provide adequate ventilation in warehouse or closed storage area. Air contaminants generated in the workplace possess varying 'escape' velocities which, in turn, determine the 'capture velocities' of fresh circulating air required to effectively remove the contaminant.</p> |                      |            |                                                                          |                                 |                                                                                                                                                                                                                     |                            |                                                                                                                                                                |                            |                                                                                                                                                      |                                 |                        |                        |                                                       |                                 |                                                            |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|------------|--------------------------------------------------------------------------|---------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|------------------------|------------------------|-------------------------------------------------------|---------------------------------|------------------------------------------------------------|
|                                                                                                                                                                                                                     | <table border="1"> <thead> <tr> <th>Type of Contaminant:</th> <th>Air Speed:</th> </tr> </thead> <tbody> <tr> <td>solvent, vapours, degreasing etc., evaporating from tank (in still air).</td> <td>0.25-0.5 m/s<br/>(50-100 f/min.)</td> </tr> <tr> <td>aerosols, fumes from pouring operations, intermittent container filling, low speed conveyer transfers, welding, spray drift, plating acid fumes, pickling (released at low velocity into zone of active generation)</td> <td>0.5-1 m/s (100-200 f/min.)</td> </tr> <tr> <td>direct spray, spray painting in shallow booths, drum filling, conveyer loading, crusher dusts, gas discharge (active generation into zone of rapid air motion)</td> <td>1-2.5 m/s (200-500 f/min.)</td> </tr> <tr> <td>grinding, abrasive blasting, tumbling, high speed wheel generated dusts (released at high initial velocity into zone of very high rapid air motion).</td> <td>2.5-10 m/s<br/>(500-2000 f/min.)</td> </tr> </tbody> </table> <p>Within each range the appropriate value depends on:</p> <table border="1"> <thead> <tr> <th>Lower end of the range</th> <th>Upper end of the range</th> </tr> </thead> <tbody> <tr> <td>1: Room air currents minimal or favourable to capture</td> <td>1: Disturbing room air currents</td> </tr> <tr> <td>2: Contaminants of low toxicity or of nuisance value only.</td> <td>2: Contaminants of high toxicity</td> </tr> </tbody> </table>                                                                                                                                                                                                                 | Type of Contaminant: | Air Speed: | solvent, vapours, degreasing etc., evaporating from tank (in still air). | 0.25-0.5 m/s<br>(50-100 f/min.) | aerosols, fumes from pouring operations, intermittent container filling, low speed conveyer transfers, welding, spray drift, plating acid fumes, pickling (released at low velocity into zone of active generation) | 0.5-1 m/s (100-200 f/min.) | direct spray, spray painting in shallow booths, drum filling, conveyer loading, crusher dusts, gas discharge (active generation into zone of rapid air motion) | 1-2.5 m/s (200-500 f/min.) | grinding, abrasive blasting, tumbling, high speed wheel generated dusts (released at high initial velocity into zone of very high rapid air motion). | 2.5-10 m/s<br>(500-2000 f/min.) | Lower end of the range | Upper end of the range | 1: Room air currents minimal or favourable to capture | 1: Disturbing room air currents | 2: Contaminants of low toxicity or of nuisance value only. |
| Type of Contaminant:                                                                                                                                                                                                | Air Speed:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                      |            |                                                                          |                                 |                                                                                                                                                                                                                     |                            |                                                                                                                                                                |                            |                                                                                                                                                      |                                 |                        |                        |                                                       |                                 |                                                            |
| solvent, vapours, degreasing etc., evaporating from tank (in still air).                                                                                                                                            | 0.25-0.5 m/s<br>(50-100 f/min.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                      |            |                                                                          |                                 |                                                                                                                                                                                                                     |                            |                                                                                                                                                                |                            |                                                                                                                                                      |                                 |                        |                        |                                                       |                                 |                                                            |
| aerosols, fumes from pouring operations, intermittent container filling, low speed conveyer transfers, welding, spray drift, plating acid fumes, pickling (released at low velocity into zone of active generation) | 0.5-1 m/s (100-200 f/min.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                      |            |                                                                          |                                 |                                                                                                                                                                                                                     |                            |                                                                                                                                                                |                            |                                                                                                                                                      |                                 |                        |                        |                                                       |                                 |                                                            |
| direct spray, spray painting in shallow booths, drum filling, conveyer loading, crusher dusts, gas discharge (active generation into zone of rapid air motion)                                                      | 1-2.5 m/s (200-500 f/min.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                      |            |                                                                          |                                 |                                                                                                                                                                                                                     |                            |                                                                                                                                                                |                            |                                                                                                                                                      |                                 |                        |                        |                                                       |                                 |                                                            |
| grinding, abrasive blasting, tumbling, high speed wheel generated dusts (released at high initial velocity into zone of very high rapid air motion).                                                                | 2.5-10 m/s<br>(500-2000 f/min.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                      |            |                                                                          |                                 |                                                                                                                                                                                                                     |                            |                                                                                                                                                                |                            |                                                                                                                                                      |                                 |                        |                        |                                                       |                                 |                                                            |
| Lower end of the range                                                                                                                                                                                              | Upper end of the range                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                      |            |                                                                          |                                 |                                                                                                                                                                                                                     |                            |                                                                                                                                                                |                            |                                                                                                                                                      |                                 |                        |                        |                                                       |                                 |                                                            |
| 1: Room air currents minimal or favourable to capture                                                                                                                                                               | 1: Disturbing room air currents                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                      |            |                                                                          |                                 |                                                                                                                                                                                                                     |                            |                                                                                                                                                                |                            |                                                                                                                                                      |                                 |                        |                        |                                                       |                                 |                                                            |
| 2: Contaminants of low toxicity or of nuisance value only.                                                                                                                                                          | 2: Contaminants of high toxicity                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                      |            |                                                                          |                                 |                                                                                                                                                                                                                     |                            |                                                                                                                                                                |                            |                                                                                                                                                      |                                 |                        |                        |                                                       |                                 |                                                            |

Continued...

## Hercules® Glug® Bath Liquid Drain Opener

|                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                              |
|--------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------|
|                                | <p>3: Intermittent, low production.</p> <p>4: Large hood or large air mass in motion</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | <p>3: High production, heavy use</p> <p>4: Small hood-local control only</p> |
|                                | <p>Simple theory shows that air velocity falls rapidly with distance away from the opening of a simple extraction pipe. Velocity generally decreases with the square of distance from the extraction point (in simple cases). Therefore the air speed at the extraction point should be adjusted, accordingly, after reference to distance from the contaminating source. The air velocity at the extraction fan, for example, should be a minimum of 1-2 m/s (200-400 f/min) for extraction of solvents generated in a tank 2 meters distant from the extraction point. Other mechanical considerations, producing performance deficits within the extraction apparatus, make it essential that theoretical air velocities are multiplied by factors of 10 or more when extraction systems are installed or used.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                              |
| <b>Personal protection</b>     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                              |
| <b>Eye and face protection</b> | <ul style="list-style-type: none"> <li>▶ Safety glasses with unperforated side shields may be used where continuous eye protection is desirable, as in laboratories; spectacles are not sufficient where complete eye protection is needed such as when handling bulk-quantities, where there is a danger of splashing, or if the material may be under pressure.</li> <li>▶ Chemical goggles whenever there is a danger of the material coming in contact with the eyes; goggles must be properly fitted.</li> <li>▶ Full face shield (20 cm, 8 in minimum) may be required for supplementary but never for primary protection of eyes; these afford face protection.</li> <li>▶ Alternatively a gas mask may replace splash goggles and face shields.</li> <li>▶ Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lenses or restrictions on use, should be created for each workplace or task. This should include a review of lens absorption and adsorption for the class of chemicals in use and an account of injury experience. Medical and first-aid personnel should be trained in their removal and suitable equipment should be readily available. In the event of chemical exposure, begin eye irrigation immediately and remove contact lens as soon as practicable. Lens should be removed at the first signs of eye redness or irritation - lens should be removed in a clean environment only after workers have washed hands thoroughly. [CDC NIOSH Current Intelligence Bulletin 59], [AS/NZS 1336 or national equivalent]</li> </ul> |                                                                              |
| <b>Skin protection</b>         | See Hand protection below                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                              |
| <b>Hands/feet protection</b>   | <ul style="list-style-type: none"> <li>▶ Elbow length PVC gloves</li> <li>▶ When handling corrosive liquids, wear trousers or overalls outside of boots, to avoid spills entering boots.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                              |
| <b>Body protection</b>         | See Other protection below                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                              |
| <b>Other protection</b>        | <ul style="list-style-type: none"> <li>▶ Overalls.</li> <li>▶ PVC Apron.</li> <li>▶ PVC protective suit may be required if exposure severe.</li> <li>▶ Eyewash unit.</li> <li>▶ Ensure there is ready access to a safety shower.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                              |

**Respiratory protection**

- Respirators may be necessary when engineering and administrative controls do not adequately prevent exposures.
- The decision to use respiratory protection should be based on professional judgment that takes into account toxicity information, exposure measurement data, and frequency and likelihood of the worker's exposure - ensure users are not subject to high thermal loads which may result in heat stress or distress due to personal protective equipment (powered, positive flow, full face apparatus may be an option).
- Published occupational exposure limits, where they exist, will assist in determining the adequacy of the selected respiratory protection. These may be government mandated or vendor recommended.
- Certified respirators will be useful for protecting workers from inhalation of particulates when properly selected and fit tested as part of a complete respiratory protection program.
- Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN143) dust masks. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU)
- Use approved positive flow mask if significant quantities of dust becomes airborne.
- Try to avoid creating dust conditions.

Class P2 particulate filters are used for protection against mechanically and thermally generated particulates or both.

P2 is a respiratory filter rating under various international standards, Filters at least 94% of airborne particles

Suitable for:

- Relatively small particles generated by mechanical processes eg. grinding, cutting, sanding, drilling, sawing.
- Sub-micron thermally generated particles e.g. welding fumes, fertilizer and bushfire smoke.
- Biologically active airborne particles under specified infection control applications e.g. viruses, bacteria, COVID-19, SARS

**SECTION 9 Physical and chemical properties****Information on basic physical and chemical properties**

|                   |              |
|-------------------|--------------|
| <b>Appearance</b> | Clear Liquid |
|-------------------|--------------|

## Hercules® Glug® Bath Liquid Drain Opener

|                                                     |                |                                                |               |
|-----------------------------------------------------|----------------|------------------------------------------------|---------------|
| <b>Physical state</b>                               | Liquid         | <b>Relative density (Water = 1)</b>            | Not Available |
| <b>Odour</b>                                        | No odor        | <b>Partition coefficient n-octanol / water</b> | Not Available |
| <b>Odour threshold</b>                              | Not Available  | <b>Auto-ignition temperature (°C)</b>          | Not Available |
| <b>pH (as supplied)</b>                             | 12.4           | <b>Decomposition temperature</b>               | Not Available |
| <b>Melting point / freezing point (°C)</b>          | Not Available  | <b>Viscosity (cP)</b>                          | 10            |
| <b>Initial boiling point and boiling range (°C)</b> | 100            | <b>Molecular weight (g/mol)</b>                | Not Available |
| <b>Flash point (°C)</b>                             | >100           | <b>Taste</b>                                   | Not Available |
| <b>Evaporation rate</b>                             | Not Available  | <b>Explosive properties</b>                    | Not Available |
| <b>Flammability</b>                                 | Not Applicable | <b>Oxidising properties</b>                    | Not Available |
| <b>Upper Explosive Limit (%)</b>                    | Not Available  | <b>Surface Tension (dyn/cm or mN/m)</b>        | Not Available |
| <b>Lower Explosive Limit (%)</b>                    | Not Available  | <b>Volatile Component (%vol)</b>               | Not Available |
| <b>Vapour pressure (kPa)</b>                        | Not Available  | <b>Gas group</b>                               | Not Available |
| <b>Solubility in water</b>                          | Miscible       | <b>pH as a solution (Not Available%)</b>       | Not Available |
| <b>Vapour density (Air = 1)</b>                     | 1.125          | <b>VOC g/L</b>                                 | 0             |

## SECTION 10 Stability and reactivity

|                                           |                                                                                                                                                                                                      |
|-------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Reactivity</b>                         | Reacts violently with strong acids.<br>This product may react with oxidizing agents.                                                                                                                 |
| <b>Chemical stability</b>                 | <ul style="list-style-type: none"> <li>▶ Unstable in the presence of incompatible materials.</li> <li>▶ Product is considered stable.</li> <li>▶ Hazardous polymerisation will not occur.</li> </ul> |
| <b>Possibility of hazardous reactions</b> | No dangerous reaction known under conditions of normal use.                                                                                                                                          |
| <b>Conditions to avoid</b>                | See section 7                                                                                                                                                                                        |
| <b>Incompatible materials</b>             | See section 7                                                                                                                                                                                        |
| <b>Hazardous decomposition products</b>   | No hazardous decomposition products are known.                                                                                                                                                       |

## SECTION 11 Toxicological information

## Information on toxicological effects

|                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|---------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Inhaled</b>      | The material can cause respiratory irritation in some persons. The body's response to such irritation can cause further lung damage.<br>Inhaling corrosive bases may irritate the respiratory tract. Symptoms include cough, choking, pain and damage to the mucous membrane.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Ingestion</b>    | Ingestion of alkaline corrosives may produce burns around the mouth, ulcerations and swellings of the mucous membranes, profuse saliva production, with an inability to speak or swallow. Both the oesophagus and stomach may experience burning pain; vomiting and diarrhoea may follow.<br>Accidental ingestion of the material may be damaging to the health of the individual.<br>Swallowing hypochlorites may cause burning in the mouth and throat, abdominal cramps, nausea, vomiting, diarrhea, pain, inflammation of the mouth and stomach, low blood pressure, shock, confusion and delirium. Severe poisonings may lead to convulsion, coma and death. Hypochlorites irritate the mouth, throat and stomach; the hypochlorous acid liberated in the stomach can cause tearing of the stomach wall, with bleeding, and can be fatal. |
| <b>Skin Contact</b> | The material can produce severe chemical burns following direct contact with the skin.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |

Continued...



## Hercules® Glug® Bath Liquid Drain Opener

|         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|---------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|         | <p>Skin contact with alkaline corrosives may produce severe pain and burns; brownish stains may develop. The corroded area may be soft, gelatinous and necrotic; tissue destruction may be deep.</p> <p>Contact may cause severe itchiness, skin lesions and mild eczema. Exudation and sloughing may occur. Two patients were reported with chronic allergic dermatitis of the hand, related to sensitization to sodium hypochlorite as the active component of laundry bleach.</p> <p>Open cuts, abraded or irritated skin should not be exposed to this material</p> <p>Entry into the blood-stream, through, for example, cuts, abrasions or lesions, may produce systemic injury with harmful effects. Examine the skin prior to the use of the material and ensure that any external damage is suitably protected.</p> |
| Eye     | <p>If applied to the eyes, this material causes severe eye damage.</p> <p>Direct eye contact with corrosive bases can cause pain and burns. There may be swelling, epithelium destruction, clouding of the cornea and inflammation of the iris. Mild cases often resolve; severe cases can be prolonged with complications such as persistent swelling, scarring, permanent cloudiness, bulging of the eye, cataracts, eyelids glued to the eyeball and blindness.</p>                                                                                                                                                                                                                                                                                                                                                       |
| Chronic | <p>Repeated or prolonged exposure to corrosives may result in the erosion of teeth, inflammatory and ulcerative changes in the mouth and necrosis (rarely) of the jaw. Bronchial irritation, with cough, and frequent attacks of bronchial pneumonia may ensue. Repeated or long-term occupational exposure is likely to produce cumulative health effects involving organs or biochemical systems.</p> <p>Long-term exposure to respiratory irritants may result in airways disease, involving difficulty breathing and related whole-body problems.</p>                                                                                                                                                                                                                                                                    |

|                                   |   |                          |   |
|-----------------------------------|---|--------------------------|---|
| Acute Toxicity                    | ✗ | Carcinogenicity          | ✗ |
| Skin Irritation/Corrosion         | ✓ | Reproductivity           | ✗ |
| Serious Eye Damage/Irritation     | ✓ | STOT - Single Exposure   | ✗ |
| Respiratory or Skin sensitisation | ✗ | STOT - Repeated Exposure | ✗ |
| Mutagenicity                      | ✗ | Aspiration Hazard        | ✗ |

**Legend:** ✗ – Data either not available or does not fill the criteria for classification  
 ✓ – Data available to make classification

## SECTION 12 Ecological information

## Toxicity

|                                          |                 |                           |                               |                 |               |
|------------------------------------------|-----------------|---------------------------|-------------------------------|-----------------|---------------|
| Hercules® Glug® Bath Liquid Drain Opener | <b>Endpoint</b> | <b>Test Duration (hr)</b> | <b>Species</b>                | <b>Value</b>    | <b>Source</b> |
|                                          | Not Available   | Not Available             | Not Available                 | Not Available   | Not Available |
| sodium hydroxide                         | <b>Endpoint</b> | <b>Test Duration (hr)</b> | <b>Species</b>                | <b>Value</b>    | <b>Source</b> |
|                                          | EC50(ECx)       | 48h                       | Crustacea                     | 34.59-47.13mg/l | 4             |
|                                          | LC50            | 96h                       | Fish                          | 144-267mg/l     | 4             |
|                                          | EC50            | 48h                       | Crustacea                     | 34.59-47.13mg/l | 4             |
| potassium hydroxide                      | <b>Endpoint</b> | <b>Test Duration (hr)</b> | <b>Species</b>                | <b>Value</b>    | <b>Source</b> |
|                                          | NOEC(ECx)       | 24h                       | Fish                          | 28mg/l          | 2             |
|                                          | LC50            | 96h                       | Fish                          | 80mg/l          | 2             |
| sodium hypochlorite                      | <b>Endpoint</b> | <b>Test Duration (hr)</b> | <b>Species</b>                | <b>Value</b>    | <b>Source</b> |
|                                          | NOEC(ECx)       | 72h                       | Algae or other aquatic plants | 0.005mg/l       | 2             |
|                                          | LC50            | 96h                       | Fish                          | 0.037mg/l       | 2             |
|                                          | EC50            | 72h                       | Algae or other aquatic plants | 0.018mg/l       | 2             |
|                                          | EC50            | 48h                       | Crustacea                     | 0.01mg/l        | 4             |
|                                          | EC50            | 96h                       | Algae or other aquatic plants | ~0.1~0.4mg/l    | 2             |
| sodium metasilicate                      | <b>Endpoint</b> | <b>Test Duration (hr)</b> | <b>Species</b>                | <b>Value</b>    | <b>Source</b> |
|                                          | EC50(ECx)       | 48h                       | Crustacea                     | 0.28-0.57mg/l   | 4             |
|                                          | LC50            | 96h                       | Fish                          | 260-310mg/l     | 2             |

Continued...

## Hercules® Glug® Bath Liquid Drain Opener

|      |     |                               |               |   |
|------|-----|-------------------------------|---------------|---|
| EC50 | 72h | Algae or other aquatic plants | 207mg/l       | 2 |
| EC50 | 48h | Crustacea                     | 0.28-0.57mg/l | 4 |

**Legend:** *Extracted from 1. IUCLID Toxicity Data 2. Europe ECHA Registered Substances - Ecotoxicological Information - Aquatic Toxicity 4. US EPA, Ecotox database - Aquatic Toxicity Data 5. ECETOC Aquatic Hazard Assessment Data 6. NITE (Japan) - Bioconcentration Data 7. METI (Japan) - Bioconcentration Data 8. Vendor Data*

Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Do NOT allow product to come in contact with surface waters or to intertidal areas below the mean high water mark. Do not contaminate water when cleaning equipment or disposing of equipment wash-waters.

Wastes resulting from use of the product must be disposed of on site or at approved waste sites.

Prevent, by any means available, spillage from entering drains or water courses.

**DO NOT** discharge into sewer or waterways.

**Persistence and degradability**

| Ingredient       | Persistence: Water/Soil | Persistence: Air |
|------------------|-------------------------|------------------|
| sodium hydroxide | LOW                     | LOW              |

**Bioaccumulative potential**

| Ingredient       | Bioaccumulation        |
|------------------|------------------------|
| sodium hydroxide | LOW (LogKOW = -3.8796) |


**Mobility in soil**

| Ingredient       | Mobility         |
|------------------|------------------|
| sodium hydroxide | LOW (KOC = 14.3) |

**SECTION 13 Disposal considerations****Waste treatment methods**

|                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|-------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Product / Packaging disposal</b> | <ul style="list-style-type: none"> <li>▶ Containers may still present a chemical hazard/ danger when empty.</li> <li>▶ Return to supplier for reuse/ recycling if possible.</li> </ul> <p>Otherwise:</p> <ul style="list-style-type: none"> <li>▶ If container can not be cleaned sufficiently well to ensure that residuals do not remain or if the container cannot be used to store the same product, then puncture containers, to prevent re-use, and bury at an authorised landfill.</li> <li>▶ Where possible retain label warnings and SDS and observe all notices pertaining to the product.</li> <li>▶ Recycle wherever possible.</li> <li>▶ Consult manufacturer for recycling options or consult local or regional waste management authority for disposal if no suitable treatment or disposal facility can be identified.</li> <li>▶ Treat and neutralise at an approved treatment plant.</li> <li>▶ Treatment should involve: Neutralisation with suitable dilute acid followed by: burial in a land-fill specifically licensed to accept chemical and / or pharmaceutical wastes or Incineration in a licensed apparatus (after admixture with suitable combustible material).</li> <li>▶ Decontaminate empty containers. Observe all label safeguards until containers are cleaned and destroyed.</li> </ul> |
|-------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

**SECTION 14 Transport information****Labels Required**

|                         |                                                                                     |
|-------------------------|-------------------------------------------------------------------------------------|
|                         |  |
| <b>Marine Pollutant</b> | Yes                                                                                 |

**Land transport (DOT)**

|                                |                                                                                                   |
|--------------------------------|---------------------------------------------------------------------------------------------------|
| <b>UN number</b>               | 3266                                                                                              |
| <b>UN proper shipping name</b> | Corrosive liquid, basic, inorganic, n.o.s. (contains sodium hypochlorite and potassium hydroxide) |

## Hercules® Glug® Bath Liquid Drain Opener

|                                     |                    |                              |
|-------------------------------------|--------------------|------------------------------|
| <b>Transport hazard class(es)</b>   | Class              | 8                            |
|                                     | Subrisk            | Not Applicable               |
| <b>Packing group</b>                | II                 |                              |
| <b>Environmental hazard</b>         | Yes                |                              |
| <b>Special precautions for user</b> | Hazard Label       | 8                            |
|                                     | Special provisions | 386, B2, IB2, T11, TP2, TP27 |

## Air transport (ICAO-IATA / DGR)

|                                     |                                                                                                     |                |
|-------------------------------------|-----------------------------------------------------------------------------------------------------|----------------|
| <b>UN number</b>                    | 3266                                                                                                |                |
| <b>UN proper shipping name</b>      | Corrosive liquid, basic, inorganic, n.o.s. * (contains sodium hypochlorite and potassium hydroxide) |                |
| <b>Transport hazard class(es)</b>   | ICAO/IATA Class                                                                                     | 8              |
|                                     | ICAO / IATA Subrisk                                                                                 | Not Applicable |
|                                     | ERG Code                                                                                            | 8L             |
| <b>Packing group</b>                | II                                                                                                  |                |
| <b>Environmental hazard</b>         | Yes                                                                                                 |                |
| <b>Special precautions for user</b> | Special provisions                                                                                  | A3 A803        |
|                                     | Cargo Only Packing Instructions                                                                     | 855            |
|                                     | Cargo Only Maximum Qty / Pack                                                                       | 30 L           |
|                                     | Passenger and Cargo Packing Instructions                                                            | 851            |
|                                     | Passenger and Cargo Maximum Qty / Pack                                                              | 1 L            |
|                                     | Passenger and Cargo Limited Quantity Packing Instructions                                           | Y840           |
|                                     | Passenger and Cargo Limited Maximum Qty / Pack                                                      | 0.5 L          |

## Sea transport (IMDG-Code / GGVSee)

|                                     |                                                                                                   |                |
|-------------------------------------|---------------------------------------------------------------------------------------------------|----------------|
| <b>UN number</b>                    | 3266                                                                                              |                |
| <b>UN proper shipping name</b>      | CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S. (contains sodium hypochlorite and potassium hydroxide) |                |
| <b>Transport hazard class(es)</b>   | IMDG Class                                                                                        | 8              |
|                                     | IMDG Subrisk                                                                                      | Not Applicable |
| <b>Packing group</b>                | II                                                                                                |                |
| <b>Environmental hazard</b>         | Yes                                                                                               |                |
| <b>Special precautions for user</b> | EMS Number                                                                                        | F-A , S-B      |
|                                     | Special provisions                                                                                | 274            |
|                                     | Limited Quantities                                                                                | 1 L            |

## Transport in bulk according to Annex II of MARPOL and the IBC code

Not Applicable

## Transport in bulk in accordance with MARPOL Annex V and the IMSBC Code

| Product name        | Group         |
|---------------------|---------------|
| sodium hydroxide    | Not Available |
| potassium hydroxide | Not Available |
| sodium hypochlorite | Not Available |
| sodium metasilicate | Not Available |

## Transport in bulk in accordance with the ICG Code

| Product name        | Ship Type     |
|---------------------|---------------|
| sodium hydroxide    | Not Available |
| potassium hydroxide | Not Available |

Continued...

## Hercules® Glug® Bath Liquid Drain Opener

| Product name        | Ship Type     |
|---------------------|---------------|
| sodium hypochlorite | Not Available |
| sodium metasilicate | Not Available |

## SECTION 15 Regulatory information

## Safety, health and environmental regulations / legislation specific for the substance or mixture

## sodium hydroxide is found on the following regulatory lists

US - Massachusetts - Right To Know Listed Chemicals

US ACGIH Threshold Limit Values (TLV)

US CWA (Clean Water Act) - List of Hazardous Substances

US DOE Temporary Emergency Exposure Limits (TEELs)

US NIOSH Recommended Exposure Limits (RELs)

US OSHA Permissible Exposure Limits (PELs) Table Z-1

US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory

US TSCA Chemical Substance Inventory - Interim List of Active Substances

## potassium hydroxide is found on the following regulatory lists

US - Massachusetts - Right To Know Listed Chemicals

US ACGIH Threshold Limit Values (TLV)

US CWA (Clean Water Act) - List of Hazardous Substances

US DOE Temporary Emergency Exposure Limits (TEELs)

US NIOSH Recommended Exposure Limits (RELs)

US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory

US TSCA Chemical Substance Inventory - Interim List of Active Substances

## sodium hypochlorite is found on the following regulatory lists

International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs

US - Massachusetts - Right To Know Listed Chemicals

US AIHA Workplace Environmental Exposure Levels (WEELs)

US CWA (Clean Water Act) - List of Hazardous Substances

US DOE Temporary Emergency Exposure Limits (TEELs)

US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory

US Toxicology Excellence for Risk Assessment (TERA) Workplace Environmental Exposure Levels (WEEL)

US TSCA Chemical Substance Inventory - Interim List of Active Substances

## sodium metasilicate is found on the following regulatory lists

US DOE Temporary Emergency Exposure Limits (TEELs)

US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory

US TSCA Chemical Substance Inventory - Interim List of Active Substances

## Federal Regulations

## Superfund Amendments and Reauthorization Act of 1986 (SARA)

## Section 311/312 hazard categories

|                                                              |     |
|--------------------------------------------------------------|-----|
| Flammable (Gases, Aerosols, Liquids, or Solids)              | No  |
| Gas under pressure                                           | No  |
| Explosive                                                    | No  |
| Self-heating                                                 | No  |
| Pyrophoric (Liquid or Solid)                                 | No  |
| Pyrophoric Gas                                               | No  |
| Corrosive to metal                                           | Yes |
| Oxidizer (Liquid, Solid or Gas)                              | No  |
| Organic Peroxide                                             | No  |
| Self-reactive                                                | No  |
| In contact with water emits flammable gas                    | No  |
| Combustible Dust                                             | No  |
| Carcinogenicity                                              | No  |
| Acute toxicity (any route of exposure)                       | No  |
| Reproductive toxicity                                        | No  |
| Skin Corrosion or Irritation                                 | Yes |
| Respiratory or Skin Sensitization                            | No  |
| Serious eye damage or eye irritation                         | Yes |
| Specific target organ toxicity (single or repeated exposure) | No  |
| Aspiration Hazard                                            | No  |
| Germ cell mutagenicity                                       | No  |
| Simple Asphyxiant                                            | No  |

Continued...

## Hercules® Glug® Bath Liquid Drain Opener

Hazards Not Otherwise Classified

No

## US. EPA CERCLA Hazardous Substances and Reportable Quantities (40 CFR 302.4)

| Name                | Reportable Quantity in Pounds (lb) | Reportable Quantity in kg |
|---------------------|------------------------------------|---------------------------|
| sodium hydroxide    | 1000                               | 454                       |
| potassium hydroxide | 1000                               | 454                       |
| sodium hypochlorite | 100                                | 45.4                      |

## State Regulations

## US. California Proposition 65

None Reported

## National Inventory Status

| National Inventory | Status                                                                                                                                                                                            |
|--------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| USA - TSCA         | Yes                                                                                                                                                                                               |
| <b>Legend:</b>     | Yes = All CAS declared ingredients are on the inventory<br>No = One or more of the CAS listed ingredients are not on the inventory. These ingredients may be exempt or will require registration. |

## SECTION 16 Other information

|                      |            |
|----------------------|------------|
| <b>Revision Date</b> | 02/03/2022 |
| <b>Initial Date</b>  | 12/13/2021 |

## Other information

The SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings. Risks may be determined by reference to Exposures Scenarios. Scale of use, frequency of use and current or available engineering controls must be considered.

## Definitions and abbreviations

PC—TWA: Permissible Concentration-Time Weighted Average  
 PC—STEL: Permissible Concentration-Short Term Exposure Limit  
 IARC: International Agency for Research on Cancer  
 ACGIH: American Conference of Governmental Industrial Hygienists  
 STEL: Short Term Exposure Limit  
 TEEL: Temporary Emergency Exposure Limit,  
 IDLH: Immediately Dangerous to Life or Health Concentrations  
 ES: Exposure Standard  
 OSF: Odour Safety Factor  
 NOAEL :No Observed Adverse Effect Level  
 LOAEL: Lowest Observed Adverse Effect Level  
 TLV: Threshold Limit Value  
 LOD: Limit Of Detection  
 OTV: Odour Threshold Value  
 BCF: BioConcentration Factors  
 BEI: Biological Exposure Index  
 AII: Australian Inventory of Industrial Chemicals  
 DSL: Domestic Substances List  
 NDSL: Non-Domestic Substances List  
 IECSC: Inventory of Existing Chemical Substance in China  
 EINECS: European INventory of Existing Commercial chemical Substances  
 ELINCS: European List of Notified Chemical Substances  
 NLP: No-Longer Polymers  
 ENCS: Existing and New Chemical Substances Inventory  
 KECl: Korea Existing Chemicals Inventory  
 NZIoC: New Zealand Inventory of Chemicals  
 PICCS: Philippine Inventory of Chemicals and Chemical Substances  
 TSCA: Toxic Substances Control Act  
 TCSI: Taiwan Chemical Substance Inventory  
 INSQ: Inventario Nacional de Sustancias Químicas  
 NCI: National Chemical Inventory

Continued...

**Hercules® Glug® Bath Liquid Drain Opener**

FBEPH: Russian Register of Potentially Hazardous Chemical and Biological Substances