



**VIA ELECTRONIC MAIL**

November 14, 2022

John Hopkins  
Remedial Project Manager  
U.S. Environmental Protection Agency, Region III  
1650 Arch Street  
Mail Code – 3LD10  
Philadelphia, PA 19103-2029

**Subject: Quarterly Progress Report No. 24  
Former Kop-Flex Facility Site, Hanover, Maryland  
USEPA ID No. MDD043373935  
Administrative Order on Consent, Docket No. RCRA-03-2016-0170 CA**

Dear John:

On behalf of EMERSUB 16, LLC, a subsidiary of Emerson Electric Co., WSP USA, Inc. (WSP) is submitting this quarterly progress report describing the activities conducted in the third quarter of calendar year 2022 (July 1<sup>st</sup> through September 30<sup>th</sup>) as part of the corrective measures implementation at the former Kop-Flex, Inc. facility property located at 7555 Harmans Road (Site) in Hanover, Maryland. The Site is identical to the area described as the “Facility” in the Administrative Order on Consent, Docket No. RCRA-03-2016-0170 CA (Consent Order). The report also describes the activities planned for the fourth quarter of calendar year 2022 (October 1<sup>st</sup> through December 31<sup>st</sup>).

This progress report is being submitted to the U.S. Environmental Protection Agency (EPA) pursuant to Section VI.C.3 of the Consent Order. Please note that, in addition to performing the work conducted under the Consent Order, EMERSUB 16 continues to perform the remedial activities specified in the October 2015 Response Action Plan (RAP) approved by the Maryland Department of the Environment (MDE) Voluntary Cleanup Program, and that EMERSUB 16 copies USEPA on all submittals required under that program.

If you have any questions, please do not hesitate to contact us at 703-709-6500.

Kind regards,

Robert E. Johnson  
Senior Technical Manager – Earth & Environment

SLB::REJ  
K:\Emerson\Kop-Flex\\_Reports\\_Progress Reports\EPA Progress Reports\CM Progress Report 24 Q3 2022\  
Encl.

cc: Mr. Stephen Clarke, EMERSUB 16 LLC  
Ms. Richelle Hanson, Maryland Department of the Environment

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13530 Dulles Technology Drive  
Herndon, VA 20171

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## CERTIFICATION

I certify that the information contained in or accompanying this quarterly progress report is true, accurate, and complete.

As to those portions of this quarterly progress report for which I cannot personally verify their accuracy, I certify under penalty of law that this quarterly report and all attachments were prepared in accordance with procedures designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, or the immediate supervisor of such person(s), the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations.

Signature:

A handwritten signature in blue ink, appearing to read 'Stephen L. Clarke', written over a horizontal line.

Name:

Stephen L. Clarke

Title:

President of EMERSUB 16, LLC

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## Quarterly Progress Report No. 24

Former Kop-Flex Facility Site

July 2022 through September 2022

**Site Name:** Former Kop-Flex Facility  
**Site Address:** 7555 Harmans Road  
Hanover, Maryland 21077

**Consultant:** WSP USA Inc.  
**Address:** 13530 Dulles Technology Drive, Suite 300  
Herndon, Virginia 20171  
**Phone No.:** (703) 709-6500

**Project Coordinator:** Eric Johnson  
**Alternate:** Lisa Kelly

## 1.0 ACTIVITIES COMPLETED DURING JULY 2022 – SEPTEMBER 2022 REPORTING PERIOD

### 1.1 HYDRAULIC CONTAINMENT SYSTEM OPERATION

- The hydraulic containment system (System) operated for 32 of the 92 days during the third quarter of 2022, which equates to a 35% run-time efficiency over this 3-month period. As discussed in Quarterly Progress Report #23, the System was manually shut down on April 29 based on the results of a boiler blowdown discharge pH study conducted at the request of the Anne Arundel County (County) Pre-treatment Program. The study findings showed the pH of the blowdown discharge consistently exceeded the upper limit of 10 standard units (SU) specified in the Wastewater Discharge Permit issued by the County. The System remained nonoperational until August 8<sup>th</sup>, when modifications were made to the System for interim management of the boiler blowdown water. These modifications involved rerouting the blowdown water to an onsite frac tank for subsequent pH adjustment and discharge to the sanitary sewer system in accordance with the County Wastewater Discharge Permit. There were a few short-term (1 to 5-day) shutdowns in August during the start-up of the System modifications for managing the boiler blowdown water.
- After resuming operation, there were a few very brief shutdowns in September that were associated with the replacement of malfunctioning System components. These shutdowns were linked to problems with a part for the compressed air system that controls the automated process valves and the operation of the pH probe for the pH adjustment system. The malfunctioning components were quickly replaced in October to allow for optimal System operation.
- As mentioned in the previous progress report, the long-term approach for management of the boiler blowdown discharge will be the addition of this water to the extracted groundwater flow. For implementation of this permanent solution, Addendum #2 for the renewal application for National Pollutant Discharge Elimination System (NPDES) Permit MD 0069094, which corresponds to Maryland State Discharge Permit Number 15-DP-3442 issued by the MDE (Discharge Permit), was submitted to MDE on August 5, 2022. This addendum provides information for the planned addition of the boiler blowdown to the process water flow and routing of the combined water through the treatment system with eventual discharge to Stony Run.
- A total of approximately 3.01 million gallons of impacted groundwater were extracted by the recovery wells and treated by the System during the third quarter of 2022, with the combined average monthly withdrawal rate during full-scale operation ranging from 68 gallons per minute (GPM) to 72 GPM. During System operation, effluent samples were collected for chemical analysis in accordance with the Discharge Permit. (No effluent sample was collected in July as the System did not operate, and there was no discharge of treated water to Outfall 001 during the month.) The analytical results for all monitoring parameters complied with the effluent limitations specified in the Discharge Permit.



- To monitor and evaluate concentrations of volatile organic compounds (VOCs) and 1,4-dioxane in the untreated (*i.e.*, extracted) and treated water, samples of both the System influent and effluent were collected and analyzed during the reporting period. An influent water sample was collected for analysis in September, while effluent samples were collected in August and September. The total concentration of chlorinated VOCs (CVOCs) and 1,4-dioxane in the influent sample was 480 micrograms per liter ( $\mu\text{g/L}$ ). This CVOC + 1,4-dioxane concentration is higher than levels detected in recent influent samples collected when the System was under normal (*i.e.*, continuous) operation. The increased contaminant level in the September sample may reflect the diffusion of constituents from low permeability zones/layers to groundwater moving through zones/layers of higher permeability when the System was shut down for approximately 3 months. Groundwater in these high permeability zones/layers serves as the primary source of water to the recovery wells during remedial pumping. As of the end of September 2022, an estimated total of 438 pounds of CVOCs and 184 pounds of 1,4-dioxane have been recovered from the affected portion of the Lower Patapsco aquifer. Analyses of the effluent samples indicated non-detect concentrations of CVOCs and 1,4-dioxane.

## 1.2 RECOVERY WELL ASSESSMENT AND REHABILITATION

- As mentioned in Quarterly Progress Report #23, WSP retained Parratt-Wolff, Inc. to assist with the assessment and rehabilitation of the System recovery wells based on observed iron fouling at recovery well RW-1S. Assessment of the recovery wells was completed during late June 2022. Short-term pumping tests indicated a significant reduction in yield, or well discharge per foot of drawdown, of each of the shallow recovery wells but no reduction in performance of the deep recovery wells. In order to identify the cause of the yield reduction, a down-well camera survey was conducted at each recovery well. This survey indicated the existence of significant biofouling deposits on the well screens and iron-containing solids at the bottom of each of the shallow recovery wells. Fouling of the deep recovery wells was much less significant, with some minor build-up on the screens. The camera surveys also revealed the presence in some wells of degraded remnants of the galvanized steel cable used to secure the submersible pump in each recovery well. Based on the assessments, rehabilitation activities were planned for all shallow and deep recovery wells. The submersible pumps and connected water conveyance hose and pressure transducers were removed from the recovery wells in anticipation of the rehabilitation work.
- Chemical rehabilitation of the shallow recovery wells to address the biofouling impacts and redevelopment of all recovery wells was completed during early July 2022. First, air lifting, which involves injecting compressed air to ‘lift’ water out of a well, was used to remove the solids-containing water from the well casing and sand pack at each recovery well. Following air lifting, chemical treatment to break down the biofouling deposits in the well and screen was applied at each of the three shallow recovery wells. The chemical products selected for the rehabilitation consisted of a bio-dispersant (Nu-Well 310 Dispersant) combined with a liquid acid (Nu-Well 120 Descale Safe), both of which are manufactured by Johnson Screens and suitable for use on potable water wells. (Copies of the Safety Data Sheets for these products are provided in Enclosure A.) Based on the length of the water column determined from the well construction information and water level measurements, approximately 2 gallons of the Nu-Well 120 Descale Safe and 1 gallon of the Nu-Well 310 Dispersant were carefully added to each shallow recovery well. The acid-based chemicals remained in each well overnight prior to conducting further rehabilitation activities. After the treatment period, each of the shallow wells was redeveloped by surging for a minimum of 1 hour using a suitably sized surge block attached to drill rig tooling. For the redeveloping of the deep recovery wells, the surging of the screen for RW-1D was completed using a wire brush attached to the drill rig tooling while a surge block was used instead of a wire brush for RW-2D because the brush was getting caught in the well casing. A second round of air lifting was completed at each recovery well following the surging and wire-brushing activities. During this round of air lifting, the pH of the shallow recovery well purge water was monitored to ensure the removal of all water containing the acid-based treatment chemical.

The surging and brushing activities allowed for the removal of the corroded security cable from recovery wells RW-3S and RW-1D. Removal of the security cable from RW-2D was not feasible due to the same down-well obstruction that



prevented use of the wire brush during the surging phase. (The corroded cables for shallow recovery wells RW-1S and RW-2S were removed prior to conducting the rehabilitation activities.)

- After completing the rehabilitation activities, another short-term pumping test was conducted at each shallow recovery well to determine the degree of improvement in the well yield. The test results indicated a significant increase in well yield at RW-1S and RW-2S, with values consistent with data from the baseline tests conducted following the installation of the wells in the fall of 2016. Yield testing at RW-3S did not show any noticeable improvement in the post-rehabilitation well performance.
- During the inspection and rehabilitation activities, the O&M contractor performed cleaning of the pumps and associated water conveyance lines and pressure transducers in all recovery wells to remove accumulated iron deposits and biofouling deposits. The cleaning procedure involved scrubbing the outside of the components with cleaning solution followed by a potable/tap water rinse prior to redeployment of the down-well components in the recovery wells.
- Water generated from the initial air lifting of the shallow and deep recovery wells was pumped through a bag filter and into the flow equalization tank for treatment through the System. Redevelopment water generated from air lifting the shallow wells after the chemical addition and surging was placed in 55-gallon steel drums for subsequent characterization and management at an offsite disposal facility. A representative sample of this wastewater was collected and submitted to the ALS Environmental laboratory in Middletown, Pennsylvania for analysis of Total Resource Conservation and Recovery Act (RCRA) metals using the U.S. Environmental Protection Agency SW-846 Test Method 6010D for arsenic, barium, cadmium, chromium, lead, selenium, and silver, and Method 7470A for mercury. In addition, WSP measured the pH of the wastewater using a calibrated field meter at the time of sample collection. The wastewater will be profiled and disposed offsite in accordance with applicable state and federal regulations.

### **1.3 REPLACEMENT OF MONITORING WELL MW-04**

- Based on the facility owner's – Catalent Harmans Road LLC (Catalent) – design for a multi-level parking garage to be constructed in the eastern portion of the Site, existing shallow monitoring well MW-04 would not be usable for future monitoring activities. Given MDE's desire to not remove any wells from the monitoring program at this time, an agreement was reached to install a new monitoring well to replace the MW-04 well. This replacement well, designated MW-04R, was to be installed approximately 70 feet northeast of existing well MW-04. The proposed location for the installation of replacement well MW-04R was approved by MDE via an August 26, 2022, email to Catalent's contractors and WSP.
- Replacement well MW-04R was installed at the proposed location east of the small storm water management area during the week of September 12, 2022 (Figure 1). The new well was completed at a depth of approximately 40 feet below ground surface, which is consistent with the depth of well MW-04 within the shallow zone of the Lower Patapsco aquifer.
- Well MW-04 was abandoned in-place in accordance with the Maryland well regulations.

## **2.0 PLANNED ONSITE ACTIVITIES FOR THE FOURTH QUARTER OF 2022**

- Continue with the full-scale System operation, including the implementation of the interim solution for managing the boiler blowdown discharge, and collection and assessment of System data to evaluate operational performance. Upon receipt of the new Discharge Permit, the blowdown water will be rerouted to enable combining it with the extracted groundwater in the flow equalization tank for treatment through the System.
- Conduct the required effluent monitoring and monthly reporting pursuant to the State Discharge/NPDES Permit.



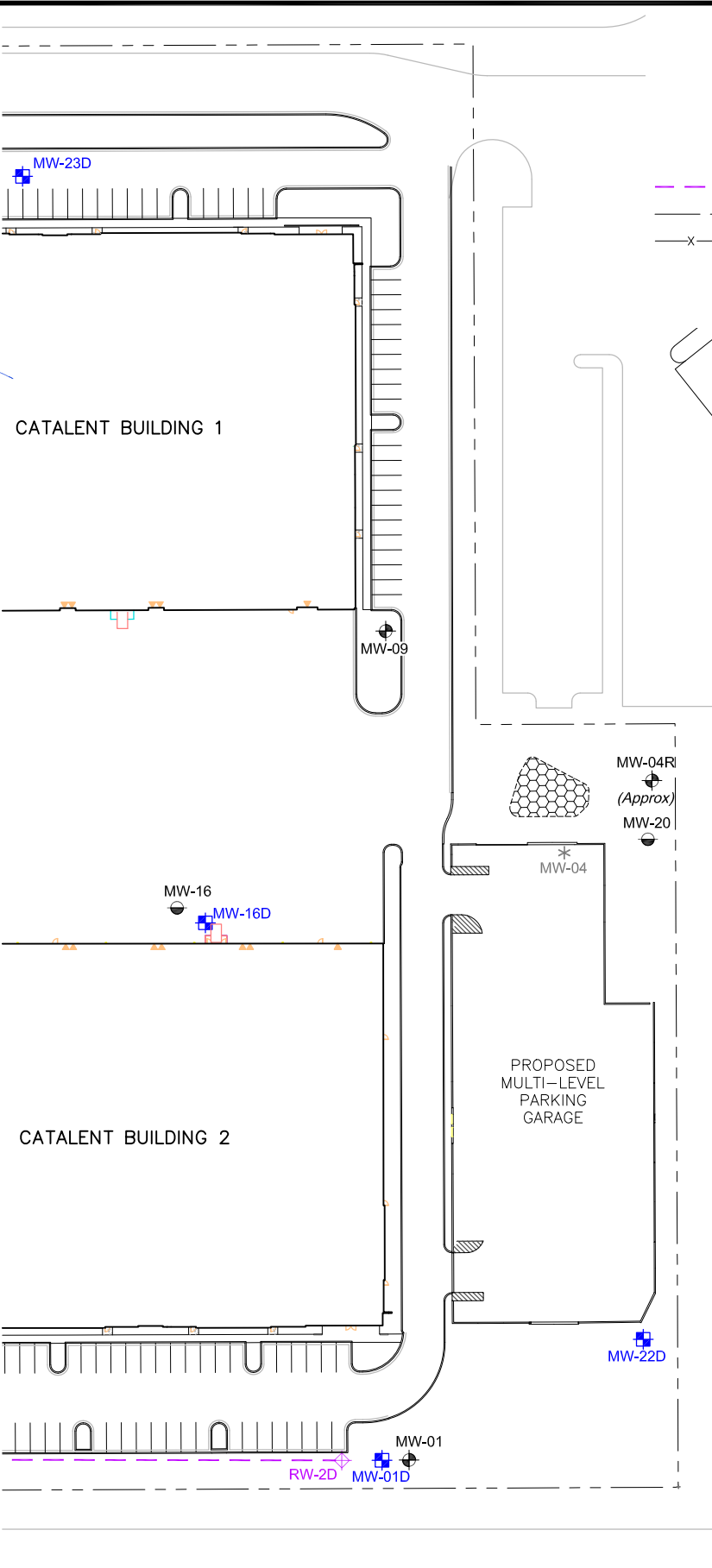
- Collect water level measurements from the monitoring and recovery wells and evaluate the data to assess the aquifer response to remedial pumping and capture of the VOC plumes in the shallow and deep zones of the Lower Patapsco aquifer at the Site.
- Conduct semi-annual sampling of the monitoring wells and recovery wells discharge in late November 2022 pursuant to the approved Groundwater Monitoring Plan.
- Submit the Five-Year (2017 through 2021) Corrective Measures Assessment Report for the hydraulic containment system to EPA and MDE.

### 3.0 KEY PERSONNEL/FACILITY CHANGES

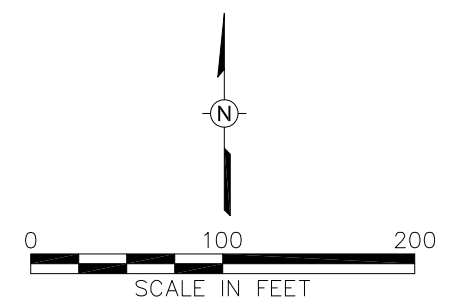
There were no changes to the key personnel for the corrective action or onsite conditions related to the activities conducted by the facility owner/operator.

FIGURE

DWG Name: 314V5608.010-001  
 Checked: Approved: 10/25/2022  
 Drawn By: EEC  
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- LEGEND**
- \* ABANDONED MONITORING WELL
  - MW-05 WATER TABLE MONITORING WELL
  - MW-18 LOWER UNCONFINED AQUIFER MONITORING WELL
  - MW-21D CONFINED AQUIFER MONITORING WELL
  - RW-2D DEEP EXTRACTION WELL
  - WATER DISCHARGE/POWER SUPPLY TRENCH
  - PROPERTY LINE
  - FENCE LINE
  - STORMWATER MANAGEMENT AREA



THE ORIGINAL VERSION OF THIS DRAWING IS IN COLOR. BLACK AND WHITE COPIES MAY NOT ACCURATELY DEPICT CERTAIN INFORMATION.

NOTICE: THIS DRAWING HAS BEEN PREPARED UNDER THE DIRECTION OF A PROFESSIONAL. DO NOT ALTER THIS DOCUMENT IN ANY WAY WITHOUT THE WRITTEN CONSENT OF WSP USA INC.



FIGURE 1  
 LOCATION OF  
 REPLACEMENT WELL MW-04R

FORMER KOP-FLEX FACILITY SITE  
 HANOVER, MARYLAND  
 PREPARED FOR  
 EMERSON  
 ST. LOUIS, MISSOURI



ENCLOSURE A – SAFETY DATA SHEETS FOR CHEMICALS USED IN SHALLOW  
RECOVERY WELL REHABILITATION

## Safety Data Sheet

According To Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Date of issue: 06/01/1997

Revision Date: 01/15/2022 Version: 9.3

(English US)

### SECTION 1: IDENTIFICATION

#### 1.1 Product Identifier

Product Name: Nu-Well Bio Dispersant  
Product Code: NW-310  
Synonyms: Bioacid dispersant, Biodispersant  
Product Form: Liquid, mixture  
Chemical Family: Polymeric acid solution.

#### 1.2 Intended Use of the Product

Use of the substance: Solution used to enhance acid cleaning activity; used at a rate of 0.5 to 5% of the cleaning solution

Use of the substance: For professional use only

#### 1.3 Contact Information of the Manufacturer

Johnson Screens / Aqseptence Group  
1950 Old Highway 8 NW  
New Brighton, MN 55112  
USA  
Telephone: +1-651-636-3900  
<http://www.johnsonscreens.com/>

#### 1.4 Emergency Telephone Number

Emergency Number: +1-800-262-8200 USA  
+1-703-741-5500 International  
CHEMTREC

### SECTION 2: HAZARDOUS IDENTIFICATION

#### 2.1. Classification of the Substance or Mixture

##### Classification (GHS-US)

Skin Irrit. 2 H315  
Eye Irrit. 2A H319  
Aquatic Chronic 3 H402

Full text of H-phrases: see Section 16

#### 2.2. Label Elements

GHS-US Labelling

Hazard Pictograms (GHS-US):



Signal Word (GHS-US): Warning

Hazard Statements:  
(GHS-US) H315 - Causes skin irritation.  
H319 - Causes serious eye irritation.

Precautionary Statements:  
(GHS-US) P234 - Keep in original container.  
P260 - Do not breathe vapors, mist, or spray.  
P264 - Wash hands, forearms, and exposed areas thoroughly after handling.

- P273 - Avoid release to the environment.  
 P280 - Wear eye protection, face protection, protective clothing, protective gloves.  
 P301+P330+P331 - If swallowed: rinse mouth. Do NOT induce vomiting.  
 P303+P361+P353 - If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.  
 P304+P340 - If inhaled: Remove person to fresh air and keep at rest in a position comfortable for breathing.  
 P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
 P310 - Immediately call a POISON CONTROL CENTER, or a doctor.  
 P321 - Specific treatment (see Section 4 on this SDS).  
 P363 - Wash contaminated clothing before reuse.  
 P390 - Absorb spillage to prevent material damage.  
 P501 - Dispose of contents/container in accordance with local, regional, national, and international regulations.

### 2.3. Other Hazards

Exposure may aggravate those with pre-existing eye, skin, or respiratory conditions. If involved in a fire and thermal decomposition occurs, potential toxic and acrid vapors may be released.

### 2.4 Unknown Acute Toxicity (GHS-US)

No data available

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

### 3.1 Substance: Not Applicable

### 3.2 Mixture

Name	Product Identifier	Percentage	Classification (GHS-US)
Organic acid blend	CAS No. 26099-09-2	Proprietary	Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Inhalation: mist), H332 Skin Corr. 1B, H315 Eye Dam. 1, H319
Potassium hydroxide	CAS No. 1310-58-3	Proprietary	Acute Tox. 4 (Oral), H302 Skin Corr. 1A, H315 Eye Dam. 1, H319
Proprietary dispersant polymer	Proprietary	Proprietary	Not classified
Proprietary surfactant mixture	Proprietary	Proprietary	Not classified
Water	CAS No. 7732-18-5	Proprietary	Not classified

Note: If Chemical Name/CAS No. is "proprietary" and/or weight percentage is not listed, the specific chemical identity and/or percentage of composition has been withheld as a trade secret in accordance with CFR §1910.1200.

See Section 16 for the full text of H-phrases.

### 3.3 PFAS, PFOS, PFC Statement

There are no Perfluorooctanoic Acid (PFOA), Perfluorooctyl Sulfonate (PFOS) or Other Perfluorinated Chemicals (PFCs) in the NW-310 product.

## SECTION 4: FIRST AID MEASURES

### 4.1 Description of First Aid Measures

**First-aid Measures General:** Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label if possible).

**First-aid Measures after Inhalation:** Keep at rest and in a position comfortable for breathing. Seek medical attention. Symptoms may be delayed.

**First-aid Measures after Skin Contact:** Remove/Take off immediately all contaminated clothing. Immediately flush skin with plenty of water and mild soap for at least 30 minutes. Seek medical advice/attention. Wash contaminated clothing before reuse.

**First-aid Measures after Eye Contact:** Immediately rinse with water for a prolonged period while holding the eyelids wide open. Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing for at least 30 minutes. Immediately call a POISON CENTER or doctor/physician.

**First-aid Measures after Ingestion:** Rinse mouth thoroughly with water. Do NOT induce vomiting. Seek medical attention immediately.

### 4.2 Most Important symptoms and effects, both acute and delayed

**Symptoms/Injuries:** Causes mild skin irritation and possible severe eye irritation.

**Symptoms/Injuries after Inhalation:** Inhalation may cause immediate severe irritation progressing quickly to chemical burns. Corrosive to mucus membranes. Corrosive to the respiratory tract. Symptoms may be delayed.

**Symptoms/Injuries after Skin Contact:** Causes severe skin irritation.

**Symptoms/Injuries after Eye Contact:** Causes serious eye irritation.

**Symptoms/Injuries after Ingestion:** May cause irritation of the linings of the mouth, throat, and gastrointestinal tract. Ingestion of a large quantity of this material could result in serious health hazard.

**Chronic Symptoms:** None expected under normal conditions of use.

### 4.3 Indication of any Immediate Medical Attention and Special Treatment Needed

If you feel unwell, seek medical advice (show the label where possible).

## SECTION 5: FIRE FIGHTING MEASURES

### 5.1 Extinguishing Media

**Suitable Extinguishing Media:** Use extinguishing media appropriate for surrounding fire.

**Unsuitable Extinguishing Media:** Do not use a heavy water stream. Use of heavy stream of water may spread product.

### 5.2. Special Hazards Arising From the Substance or Mixture

**Fire Hazard:** Not flammable.

**Explosion Hazard:** Product is not explosive.

**Reactivity:** Reacts with (strong) oxidizers: (increased) risk of fire. Contact with metals may evolve flammable hydrogen gas.

### 5.3. Advice for Firefighters Precautionary Measures Fire:

Exercise caution when fighting any chemical fire. Under fire conditions, hazardous fumes will be present.

**Firefighting Instructions:** Keep upwind. Use water spray or fog for cooling exposed containers.

**Protection During Firefighting:** Firefighters must use full bunker gear including NIOSH-approved positive pressure self-contained breathing apparatus to protect against potential hazardous combustion or decomposition products and oxygen deficiencies. Evacuate area and fight the fire from a maximum distance or use unmanned hose holders or monitor nozzles. Cover pooling liquid with foam. Containers can build pressure if exposed to radiant heat; cool



adjacent containers with flooding quantities of water until well after the fire is out. Withdraw immediately from the area if there is a rising sound from a venting safety device or discoloration of vessels, tanks, or pipelines. Be aware that burning liquid will float on water. Notify appropriate authorities if liquid enter sewers or waterways.

**Other Information:** Do not allow the product to be released into the environment. Do not allow run-off from fire fighting to enter drains or water sources.

## **SECTION 6: Accidental Release Measures**

### **6.1 Personal Precautions, Protective Equipment and Emergency Procedures**

**General Measures:** Avoid all unnecessary exposure. Do not get in eyes, on skin, or on clothing. Do not breathe vapor, mist, or spray.

#### **6.1.1 For Non-emergency Personnel**

**Protective Equipment:** Use appropriate personal protection equipment (PPE).

**Emergency Procedures:** Evacuate unnecessary personnel. Keep upwind.

#### **6.1.2 For Emergency Responders**

**Protective Equipment:** Equip cleanup crew with proper protection.

**Emergency Procedures:** Upon arrival at the scene, a first responder is expected to recognize the presence of dangerous goods, protect oneself and the public, secure the area, and call for the assistance of trained personnel as soon as conditions permit.

### **6.2 Environmental Precautions**

Avoid unnecessary release into the environment. Notify authorities if undiluted product enters sewers or public waters.

### **6.3 Methods and Material for Containment and Cleaning Up For Containment:** Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.

**Methods for Cleaning Up:** Ventilate area. Clean up spills immediately and dispose of waste safely. Small quantities of liquid spill: take up in non-combustible absorbent material and shovel into container for disposal. Collect absorbed material and place into a sealed, labeled container for proper disposal. Practice good housekeeping - spillage can be slippery on smooth surface either wet or dry.

### **6.4 Reference to Other Sections**

See Section 8, Exposure Controls and Personal Protection. Concerning disposal elimination after cleaning, see Section 13.

## **SECTION 7: HANDLING AND STORAGE**

### **7.1 Precautions for Safe Handling**

**Additional Hazards When Processed:** Any proposed use of this product in an elevated temperature process should be thoroughly evaluated to assure that safe operating conditions are established and maintained.

**Hygiene Measures:** Handle in accordance with good industrial hygiene and safety procedures. Always wash your hands immediately after handling this product, and once again before leaving the workplace.

Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse. Do not eat, drink, or smoke in areas where product is used.

**Storage Conditions:** Store in a dry, cool, and well-ventilated area. Keep container closed when not in use. Store away from oxidizers and caustic products. Storage areas should be periodically checked for damage and integrity.

**Incompatible Products:** Strong oxidizers. Strong bases.

### **7.2 Conditions for Safe Storage, Including Any Incompatibilities**

**Technical Measures:** Observe all regulations and local requirements regarding storage of containers. Container remains hazardous when empty, unless properly cleaned. Continue to observe all precautions. Containers and equipment used to handle this product should be exclusively for this material.

### 7.3 Specific End Use(s)

Solution used to enhance acid cleaning activity; use at a rate of 0.5 to 5.0% of the cleaning solution; for professional use only.

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1 Control Parameters

For substances listed in Section 3 that are not listed here, there are no established exposure limits from the manufacturer, supplier, importer, or the appropriate advisory agency including: ACGIH (TLV), NIOSH (REL), or OSHA (PEL).

**Potassium hydroxide (CAS No. 1310-58-3) (minor constituent, <3%)**

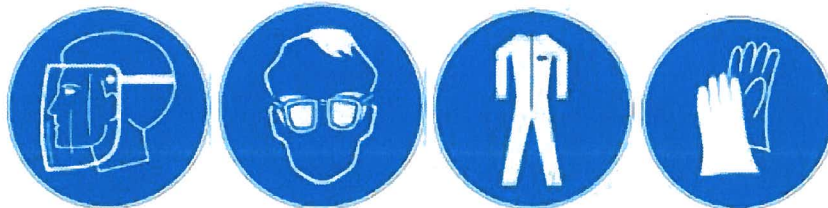
**USA ACGIH:** ACGIH Ceiling (mg/m<sup>3</sup>) 2 mg/m<sup>3</sup>

**USA NIOSH:** NIOSH REL (ceiling) (mg/m<sup>3</sup>) 2 mg/m<sup>3</sup>

### 8.2 Exposure Controls

**Appropriate Engineering Controls:** Emergency eye wash fountain should be available in the immediate vicinity of any potential exposure. Ensure adequate ventilations, especially in confined areas. Ensure all national/local regulations are observed.

**Personal Protective Equipment:** Face shield. Protective goggles. Protective clothing. Gloves. Insufficient ventilation: wear respiratory protection.



**Materials for Protective Clothing:** Corrosion proof materials and fabrics.  
**Hand Protection:** Impermeable protective gloves.  
**Eye Protection:** A full face shield is recommended. Chemical safety goggles.  
**Skin and Body Protection:** Wear suitable protective clothing.  
**Respiratory Protection:** Use a NIOSH approved respirator or self-contained-breathing-apparatus whenever exposure may exceed established Occupational Exposure Limits.  
**Environmental Exposure Controls:** Do not allow the product to be released into the environment.  
**Consumer Exposure Controls:** Do not eat, drink, or smoke during use.

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 Information on Basic Physical and Chemical Properties

Physical State:	Liquid	Odor:	Slight chemical odor
Appearance:	Amber	Auto Ignition Temp:	Non-detect (none)
pH:	2.3	Specific Gravity:	1.19
Boiling point:	121 °C (249.8 °F)	Freezing point:	0 °C (32 °F) – clouding will occur
Vapor Density:	1.0 (water)	Vapor pressure:	Vapor is water
Solubility:	Water (complete)		

**9.2 Other Information:** No additional information



**SECTION 10: STABILITY AND REACTIVITY**

**10.1 Reactivity:** Reacts with (strong) oxidizers: increased risk of fire. Undiluted products contact with metals may evolve release small quantities of hydrogen gas.

**10.2 Chemical Stability:** Stable under recommended handling and storage conditions (see Section 7).

**10.3 Possibility of Hazardous Reactions:** Hazardous polymerization will not occur.

**10.4 Conditions to Avoid:** Direct sunlight, extremely high or low temperatures, open flames, sources of ignition and incompatible materials.

**10.5 Incompatible Materials:** Strong oxidizers. Strong bases.

**10.6 Hazardous Decomposition Products:** Acrid smoke and irritating fumes.

**SECTION 11: TOXICOLOGICAL INFORMATION****11.1 Information on Toxicological Effects**

**Acute Toxicity:** Not Classified.

**LD50 Oral Rat:** 1950 mg/kg

**LC50 Inhalation Rat:** 3.6 mg/l/4h

**Skin Contact – Acute:** Dermal LD<sub>50</sub> Rabbits > 3000 mg/kg

**Skin Contact – Chronic:** Skin irritation Rabbits (Draize Score 1.6 /8)

**Eye Contact – Acute:** Minimal Rabbits (Draize score 2.7 / 110)

**Skin Corrosion/Irritation:** May cause irritation to skin and serious eye irritation or damage. pH: 2.3

**Serious Eye Damage/Irritation:** May cause serious eye irritation or damage. pH: 2.3

**Respiratory or Skin Sensitization:** Not Classified.

**Germ Cell Mutagenicity:** Not Classified.

**Carcinogenicity:** Not Classified.

**Reproductive Toxicity:** Not Classified.

**Specific Target Organ Toxicity (single exposure):** Not Classified.

**Specific Target Organ Toxicity (repeated exposure):** Not Classified.

**Aspiration Hazard:** Not Classified.

**Symptoms/Injuries after Inhalation:** Inhalation of mist may cause severe irritation to lungs and nasal passages progressing to chemical burns with prolonged exposure. Mildly corrosive to mucus membranes and respiratory tract. Symptoms may be delayed.

**Symptoms/Injuries after Skin Contact:** May cause skin irritation. Prolonged exposure could result in more severe irritation or chemical burns.

**Symptoms/Injuries after Eye Contact:** May cause serious eye damage if not rinsed immediately.

**Symptoms/Injuries after Ingestion:** May cause burns or irritation of the linings of the mouth, throat, and gastrointestinal tract. Swallowing a large quantity of this material may pose a serious health hazard.

**Chronic Symptoms:** None expected under normal conditions of use.

**SECTION 12: ECOLOGICAL INFORMATION****12.1 Toxicity**

**Ecology – General:** This material is hazardous to the aquatic environment in large quantities. Keep out of sewers and waterways unless neutralized and/or diluted.

**Ecology – Water:** This material is hazardous to the aquatic environment in large quantities. Keep out of sewers and waterways unless neutralized and/or diluted.

**LC50 Bluegill:** 186 mg/l

**EC50 Daphnia 1:** 44 mg/l

**12.2 Persistence and Degradability**

**BOD (5) 1.0% solution:** 7950 mg O<sub>2</sub>/L

**BOD (5) 0.1% solution:** 725 mg O<sub>2</sub>/L

<b>Total Organic Carbon:</b>	2.2%
<b>12.3 Bioaccumulation Potential:</b>	Non-bioaccumulating
<b>12.4 Mobility in Soil:</b>	Product is slightly viscous and has limited mobility in soils.
<b>12.5 Other Adverse Effects:</b>	No additional information available

## SECTION 13: DISPOSAL CONSIDERATIONS

### 13.1 Waste Treatment Methods

**Sewage Disposal Recommendations:** Diluted product will not disrupt waste water treatment. Do not empty into drains; dispose of this material and its container in a safe way.

**Waste Disposal Recommendations:** Dispose of waste material in accordance with all local, regional, national, and international regulations.

## SECTION 14: TRANSPORTATION INFORMATION

### 14.1 In Accordance with DOT

Not regulated as a hazardous material by the US Dept. of Transportation (DOT) 49CFR 172.101  
Hazardous Materials Table

**Proper Shipping Name:** COMPOUND, LIQUID, CLEANING, CORROSIVE, POLYMALAEIC ACID BLEND

**Hazard Class:** Non-Hazardous

**Identification Number:** UN/NA1760

**Label Codes:** None Required

**Packing Group:** II

**ERG Number:** 154

### 14.2 In Accordance with IMDG

**Proper Shipping Name:** COMPOUND, LIQUID, CLEANING, CORROSIVE, POLYMALAEIC ACID BLEND

**Hazard Class:** Non-Hazardous

**Identification Number:** UN/NA1760

**Packing Group:** II

**Label Codes:** None Required

**EmS-No. (Fire):** F-A

**EmS-No. (Spillage):** S-B

### 14.3 In Accordance with IATA

**Proper Shipping Name:** COMPOUND, LIQUID, CLEANING, CORROSIVE, POLYMALAEIC ACID BLEND

**Packing Group:** II

**Identification Number:** UN/NA1760

**Hazard Class:** Non-Hazardous

**Label Codes:** None Required

**ERG Code (IATA):** 8L

### 14.4 In Accordance Canadian TDG

**Proper Shipping Name:** COMPOUND, LIQUID, CLEANING, CORROSIVE, POLYMALAEIC ACID BLEND

**Hazard Class:** Non-Hazardous

**Label Codes:** None Required

**Reportable Quantity:** None

## SECTION 15: REGULATORY INFORMATION

**15.1 RCRA Status:** Not a hazardous waste under RCRA 40 CFR 261. No reportable quantities.

**15.2 SARA/TITLE III-CERCLA List:** This product does not contain a "CERCLA" listed hazardous substance for emergency release notification under Sec. 304 (40CFR 302).

**15.3 SARA/TITLE III-Toxic Chemicals List:** This product does not contain a toxic chemical for routine annual



"Toxic Chemical Release Reporting" under Sec. 313 (40CFR 372).

**15.4 TSCA Inventory Status: Chemical components listed on TSCA Inventory.**

**15.5 California Proposition 65:** This product does not contain any chemicals currently on the California list of known carcinogens and reproductive toxins.

**15.6 Canadian WHMIS Classification:** This product does not contain any hazardous materials under CPR and this MSDS discloses all information elements required by the CPR.

**15.7 NSF Standard 60:** Certified for use in potable water well cleaning, pipe line cleaning, and filter cleaning

## SECTION 16: OTHER INFORMATION, INCLUDING DATE OF PREPARATION OR LAST REVISION

**Date of Issue:** 06/01/1997

**Revision Date:** 01/15/2022 Version: 9.3 (English US)

**HS Tariff Classification Number:** 3402.90.5030 preference criterion B

**Other Information:** This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200.

### GHS Full Text Phrases:

Acute Tox. 4 (Inhalation: mist)	Acute toxicity (inhalation: mist) Category 4
Acute Tox. 4 (Oral)	Acute toxicity (oral) Category 4
Aquatic Acute 3	Hazardous to the aquatic environment - Acute Hazard Category 3
Eye Dam. 1	Serious eye damage/eye irritation Category 1
Skin Corr. 1A	Skin corrosion/irritation Category 1A
Skin Corr. 1B	Skin corrosion/irritation Category 1B
H302	Harmful if swallowed
H315	Causes skin irritation
H319	Causes serious eye irritation
H332	Harmful if inhaled

**Disclaimer** The information contained in this SDS was compiled using the latest and most reliable information available at the time of printing. The information contained herein is based on data considered accurate and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed or relied upon as guaranteeing any **specific** property of the product, and, no warranty is expressed or implied regarding the accuracy of this data or the results to be obtained from the user thereof.

22-WW-0004-v9.3-13-Eng

## Safety Data Sheet

According To Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Date of issue: 06/01/1997

Revision Date: 01/15/2022 Version 10.3

(English US)

### SECTION 1: IDENTIFICATION

#### 1.1 Product Identifier

Product Name: Nu-Well Descale Safe  
Product Code: NW-120  
Synonyms: Phosphoric Acid, 75%, Food Grade, KOSHER  
Product Form: Liquid  
Chemical Family: Mineral acid

#### 1.2 Intended Use of the Product

Use of the substance: Liquid mineral acid used to clean waterborne deposits.  
Use of the substance: For professional use only.

#### 1.3 Contact Information of the Manufacturer

Johnson Screens / Aqseptence Group  
1950 Old Highway 8 NW  
New Brighton, MN 55112  
USA  
Telephone: +1-651-636-3900  
<http://www.johnsonscreens.com/>

#### 1.4 Emergency Telephone Number

Emergency Number: +1-800-262-8200 USA  
+1-703-741-5500 International  
CHEMTREC

### SECTION 2: HAZARDOUS IDENTIFICATION

#### 2.1. Physical Hazards

Corrosive to metals

Category 1

#### Acute toxicity

##### Classification (GHS-US)

Skin Irrit. 2 H315  
Eye Irrit. 2A H319  
Aquatic Chronic 3 H402

Full text of H-phrases: see Section 16

#### 2.2. Label Elements

GHS-US Labelling  
Hazard Pictograms (GHS-US):



Signal Word (GHS-US): Danger

Hazard Statements:  
(GHS-US) H315 - Causes skin irritation.  
H319 - Causes serious eye irritation.

Precautionary Statements: (GHS-US)

P234 - Keep in original container.  
 P260 - Do not breathe vapors, mist, or spray.  
 P264 - Wash hands, forearms, and exposed areas thoroughly after handling.  
 P273 - Avoid release to the environment.  
 P280 - Wear eye protection, face protection, protective clothing, protective gloves.  
 P301+P330+P331 - If swallowed: rinse mouth. Do NOT induce vomiting.  
 P303+P361+P353 - If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.  
 P304+P340 - If inhaled: Remove person to fresh air and keep at rest in a position comfortable for breathing.  
 P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
 P310 - Immediately call a POISON CONTROL CENTER, or a doctor.  
 P321 - Specific treatment (see Section 4 on this SDS).  
 P363 - Wash contaminated clothing before reuse.  
 P390 - Absorb spillage to prevent material damage.  
 P501 - Dispose of contents/container in accordance with local, regional, national, and international regulations.

### 2.3. Other Hazards

Exposure may aggravate those with pre-existing eye, skin, or respiratory conditions. If involved in a fire and thermal decomposition occurs, potential toxic and acrid vapors may be released.

### 2.4 Unknown Acute Toxicity (GHS-US)

No data available

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substance: Not Applicable

3.2 Mixture

Name	Product Identifier	Percentage	Classification (GHS-US)
Phosphoric Acid	CAS No. 7664-38-2	70 - 80	Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Inhalation: mist), H332 Skin Corr. 1B, H315 Eye Dam. 1, H319
Sulfuric Acid	CAS No. 7664-93-9	1 - < 3	Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Inhalation: mist), H332 Skin Corr. 1B, H315 Eye Dam. 1, H319
Water	CAS No. 7732-18-5	Proprietary	Not classified
Other components below reportable limits	N/A	1.0 < 20	Not classified

See Section 16 for the full text of H-phrases.

### 3.1 PFAS, PFOS, PFC Statement

There are no Perfluorooctanoic Acid (PFOA), Perfluorooctyl Sulfonate (PFOS) or Other Perfluorinated Chemicals (PFCs) in the NW-120 product.

## SECTION 4: FIRST AID MEASURES

### 4.1 Description of First Aid Measures

**First-aid Measures General:** Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label if possible).

**First-aid Measures after Inhalation:** Keep at rest and in a position comfortable for breathing. Seek medical attention. Symptoms may be delayed.

**First-aid Measures after Skin Contact:** Remove/Take off immediately all contaminated clothing. Immediately flush skin with plenty of water and mild soap for at least 30 minutes. Seek medical advice/attention. Wash contaminated clothing before reuse.

**First-aid Measures after Eye Contact:** Immediately rinse with water for a prolonged period while holding the eyelids wide open. Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing for at least 30 minutes. Immediately call a POISON CENTER or doctor/physician.

**First-aid Measures after Ingestion:** Rinse mouth thoroughly with water. Do NOT induce vomiting. Seek medical attention immediately.

#### 4.2 Most Important symptoms and effects, both acute and delayed

**Symptoms/Injuries:** Causes mild skin irritation and possible severe eye irritation.

**Symptoms/Injuries after Inhalation:** Inhalation may cause immediate severe irritation progressing quickly to chemical

burns. Corrosive to mucus membranes. Corrosive to the respiratory tract. Symptoms may be delayed.

**Symptoms/Injuries after Skin Contact:** Causes severe skin irritation.

**Symptoms/Injuries after Eye Contact:** Causes serious eye irritation.

**Symptoms/Injuries after Ingestion:** May cause irritation of the linings of the mouth, throat, and gastrointestinal tract. Ingestion of a large quantity of this material could result in serious health hazard.

**Chronic Symptoms:** None expected under normal conditions of use.

#### 4.3 Indication of any Immediate Medical Attention and Special Treatment Needed

If you feel unwell, seek medical advice (show the label where possible).

### SECTION 5: FIRE FIGHTING MEASURES

#### 5.1 Extinguishing Media

**Suitable Extinguishing Media:** Use extinguishing media appropriate for surrounding fire.

**Unsuitable Extinguishing Media:** Do not use a heavy water stream. Use of heavy stream of water may spread product.

#### 5.2. Special Hazards Arising From the Substance or Mixture

**Fire Hazard:** Not flammable.

**Explosion Hazard:** Product is not explosive.

**Reactivity:** Reacts with (strong) oxidizers: (increased) risk of fire. Contact with metals may evolve flammable hydrogen gas.

#### 5.3. Advice for Firefighters Precautionary Measures Fire:

Exercise caution when fighting any chemical fire. Under fire conditions, hazardous fumes will be present.

**Firefighting Instructions:** Keep upwind. Use water spray or fog for cooling exposed containers.

**Protection During Firefighting:** Firefighters must use full bunker gear including NIOSH-approved positive pressure self-

contained breathing apparatus to protect against potential hazardous combustion or decomposition products and oxygen deficiencies. Evacuate area and fight the fire from a maximum distance or use unmanned hose holders or monitor nozzles. Cover pooling liquid with foam. Containers can build pressure if exposed to radiant heat; cool adjacent containers with flooding quantities of water until well after the fire is out. Withdraw immediately from the area if there is a rising sound from a venting safety device or discoloration of vessels, tanks, or pipelines. Be aware that

burning liquid will float on water. Notify appropriate authorities if liquid enter sewers or waterways.

**Other Information:** Do not allow the product to be released into the environment. Do not allow run-off from fire fighting to enter drains or water sources.



## **SECTION 6: Accidental Release Measures**

### **6.1 Personal Precautions, Protective Equipment and Emergency Procedures**

**General Measures:** Avoid all unnecessary exposure. Do not get in eyes, on skin, or on clothing. Do not breathe vapor, mist, or spray.

#### **6.1.1 For Non-emergency Personnel**

**Protective Equipment:** Use appropriate personal protection equipment (PPE).

**Emergency Procedures:** Evacuate unnecessary personnel. Keep upwind.

#### **6.1.2 For Emergency Responders**

**Protective Equipment:** Equip cleanup crew with proper protection.

**Emergency Procedures:** Upon arrival at the scene, a first responder is expected to recognize the presence of dangerous goods, protect oneself and the public, secure the area, and call for the assistance of trained personnel as soon as conditions permit.

### **6.2 Environmental Precautions**

Avoid unnecessary release into the environment. Notify authorities if undiluted product enters sewers or public waters.

### **6.3 Methods and Material for Containment and Cleaning Up For Containment:** Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.

**Methods for Cleaning Up:** Ventilate area. Clean up spills immediately and dispose of waste safely. Small quantities of liquid spill: take up in non-combustible absorbent material and shovel into container for disposal. Collect absorbed material and place into a sealed, labeled container for proper disposal. Practice good housekeeping - spillage can be slippery on smooth surface either wet or dry.

### **6.4 Reference to Other Sections**

See Section 8, Exposure Controls and Personal Protection. Concerning disposal elimination after cleaning,

see

Section 13.

## **SECTION 7: HANDLING AND STORAGE**

### **7.1 Precautions for Safe Handling**

**Additional Hazards When Processed:** Any proposed use of this product in an elevated temperature process should be thoroughly evaluated to assure that safe operating conditions are established and maintained.

**Hygiene Measures:** Handle in accordance with good industrial hygiene and safety procedures. Always wash

your hands immediately after handling this product, and once again before leaving the workplace.

Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before

reuse. Do not eat, drink, or smoke in areas where product is used.

**Storage Conditions:** Store in a dry, cool, and well-ventilated area. Keep container closed when not in use.

Store away from oxidizers and caustic products. Storage areas should be periodically checked for damage and integrity.

**Incompatible Products:** Strong oxidizers. Strong bases.

### **7.2 Conditions for Safe Storage, Including Any Incompatibilities**

**Technical Measures:** Observe all regulations and local requirements regarding storage of containers. Container remains hazardous when empty, unless properly cleaned. Continue to observe all precautions. Containers and equipment used to handle this product should be exclusively for this material.

### **7.3 Specific End Use(s)**

Solution used to enhance acid cleaning activity; use at a rate of 0.5 to 5.0% of the cleaning solution; for professional use only.



## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1 Control Parameters

For substances listed in Section 3 that are not listed here, there are no established exposure limits from the manufacturer, supplier, importer, or the appropriate advisory agency including: ACGIH (TLV), NIOSH (REL), or OSHA (PEL).

**Potassium hydroxide (CAS No. 1310-58-3) (minor constituent, <3%)**

**USA ACGIH:** ACGIH Ceiling (mg/m<sup>3</sup>) 2 mg/m<sup>3</sup>

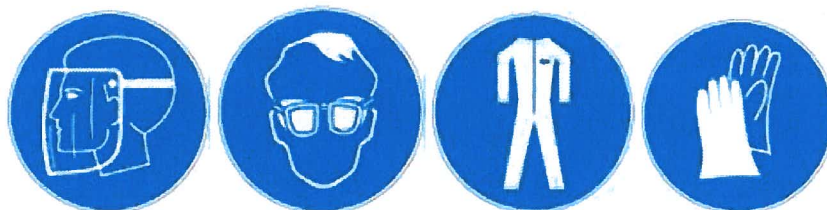
**USA NIOSH:** NIOSH REL (ceiling) (mg/m<sup>3</sup>) 2 mg/m<sup>3</sup>

### 8.2 Exposure Controls

**Appropriate Engineering Controls:** Emergency eye wash fountain should be available in the immediate vicinity of any potential exposure. Ensure adequate ventilations, especially in confined areas. Ensure all national/local regulations are

observed.

**Personal Protective Equipment:** Face shield. Protective goggles. Protective clothing. Gloves. Insufficient ventilation: wear respiratory protection.



**Materials for Protective Clothing:**

Corrosion proof materials and fabrics.

**Hand Protection:**

Impermeable protective gloves.

**Eye Protection:**

A full face shield is recommended. Chemical safety goggles.

**Skin and Body Protection:**

Wear suitable protective clothing.

**Respiratory Protection:**

Use a NIOSH approved respirator or self-contained-breathing-apparatus whenever exposure may exceed established Occupational Exposure Limits.

**Environmental Exposure Controls:**

Do not allow the product to be released into the environment.

**Consumer Exposure Controls:**

Do not eat, drink, or smoke during use.

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 Information on Basic Physical and Chemical Properties

Physical State:	Liquid	Odor:	Slight chemical odor
Appearance:	Amber	Auto Ignition Temp:	Non-detect (none)
pH:	2.3	Specific Gravity:	1.19
Boiling point:	121 °C (249.8 °F)	Freezing point:	0 °C (32 °F) – clouding will occur
Vapor Density:	1.0 (water)	Vapor pressure:	Vapor is water
Solubility:	Water (complete)		

9.2 **Other Information:** No additional information

## SECTION 10: STABILITY AND REACTIVITY

**10.1 Reactivity:** Reacts with (strong) oxidizers: increased risk of fire. Undiluted products contact with metals may evolve release small quantities of hydrogen gas.

**10.2 Chemical Stability:** Stable under recommended handling and storage conditions (see Section 7).

**10.3 Possibility of Hazardous Reactions:** Hazardous polymerization will not occur.

**10.4 Conditions to Avoid:** Direct sunlight, extremely high or low temperatures, open flames, sources of ignition and incompatible materials.

**10.5 Incompatible Materials:** Strong oxidizers. Strong bases.

**10.6 Hazardous Decomposition Products:** Acrid smoke and irritating fumes.

## SECTION 11: TOXICOLOGICAL INFORMATION

### 11.1 Information on Toxicological Effects

**Acute Toxicity:** Not Classified.

**LD50 Oral Rat:** 1950 mg/kg

**LC50 Inhalation Rat:** 3.6 mg/l/4h

**Skin Contact – Acute:** Dermal LD<sub>50</sub> Rabbits > 3000 mg/kg

**Skin Contact – Chronic:** Skin irritation Rabbits (Draize Score 1.6 / 8)

**Eye Contact – Acute:** Minimal Rabbits (Draize score 2.7 / 110)

**Skin Corrosion/Irritation:** May cause irritation to skin and serious eye irritation or damage. pH: 2.3

**Serious Eye Damage/Irritation:** May cause serious eye irritation or damage. pH: 2.3

**Respiratory or Skin Sensitization:** Not Classified.

**Germ Cell Mutagenicity:** Not Classified.

**Carcinogenicity:** Not Classified.

**Reproductive Toxicity:** Not Classified.

**Specific Target Organ Toxicity (single exposure):** Not Classified.

**Specific Target Organ Toxicity (repeated exposure):** Not Classified.

**Aspiration Hazard:** Not Classified.

**Symptoms/Injuries after Inhalation:** Inhalation of mist may cause severe irritation to lungs and nasal passages progressing to chemical burns with prolonged exposure. Mildly corrosive to mucus membranes and respiratory tract. Symptoms may be delayed.

**Symptoms/Injuries after Skin Contact:** May cause skin irritation. Prolonged exposure could result in more severe irritation or chemical burns.

**Symptoms/Injuries after Eye Contact:** May cause serious eye damage if not rinsed immediately.

**Symptoms/Injuries after Ingestion:** May cause burns or irritation of the linings of the mouth, throat, and gastrointestinal tract. Swallowing a large quantity of this material may pose a serious health hazard.

**Chronic Symptoms:** None expected under normal conditions of use.

## SECTION 12: ECOLOGICAL INFORMATION

### 12.1 Toxicity

**Ecology – General:** This material is hazardous to the aquatic environment in large quantities. Keep out of sewers and waterways unless neutralized and/or diluted.

**Ecology – Water:** This material is hazardous to the aquatic environment in large quantities. Keep out of sewers and waterways unless neutralized and/or diluted.

**LC50 Bluegill:** 186 mg/l

**EC50 Daphnia 1:** 44 mg/l

### 12.2 Persistence and Degradability

**BOD (5) 1.0% solution:** 7950 mg O<sub>2</sub>/L

**BOD (5) 0.1% solution:** 725 mg O<sub>2</sub>/L

**Total Organic Carbon:** 2.2%

**12.3 Bioaccumulation Potential:** Non-bioaccumulating

**12.4 Mobility in Soil:** Product is slightly viscous and has limited mobility in soils.

**12.5 Other Adverse Effects:** No additional information available

**SECTION 13: DISPOSAL CONSIDERATIONS****13.1 Waste Treatment Methods**

**Sewage Disposal Recommendations:** Diluted product will not disrupt waste water treatment. Do not empty into drains;

dispose of this material and its container in a safe way.

**Waste Disposal Recommendations:** Dispose of waste material in accordance with all local, regional, national, and international regulations.

**SECTION 14: TRANSPORTATION INFORMATION****14.1 In Accordance with DOT**

Not regulated as a hazardous material by the US Dept. of Transportation (DOT) 49CFR 172.101  
Hazardous

Materials Table

**Proper Shipping Name:** COMPOUND, LIQUID, CLEANING, CORROSIVE, POLYMALAEIC ACID BLEND

**Hazard Class:** Non-Hazardous

**Identification Number:** UN/NA1760

**Label Codes:** None Required

**Packing Group:** II

**ERG Number:** 154

**14.2 In Accordance with IMDG**

**Proper Shipping Name:** COMPOUND, LIQUID, CLEANING, CORROSIVE, POLYMALAEIC ACID BLEND

**Hazard Class:** Non-Hazardous

**Identification Number:** UN/NA1760

**Packing Group:** II

**Label Codes:** None Required

**EmS-No. (Fire):** F-A

**EmS-No. (Spillage):** S-B

**14.3 In Accordance with IATA**

**Proper Shipping Name:** COMPOUND, LIQUID, CLEANING, CORROSIVE, POLYMALAEIC ACID BLEND

**Packing Group:** II

**Identification Number:** UN/NA1760

**Hazard Class:** Non-Hazardous

**Label Codes:** None Required

**ERG Code (IATA):** 8L

**14.4 In Accordance Canadian TDG**

**Proper Shipping Name:** COMPOUND, LIQUID, CLEANING, CORROSIVE, POLYMALAEIC ACID BLEND

**Hazard Class:** Non-Hazardous

**Label Codes:** None Required

**Reportable Quantity:** None

**SECTION 15: REGULATORY INFORMATION**

**15.1 RCRA Status:** Not a hazardous waste under RCRA 40 CFR 261. No reportable quantities.

**15.2 SARA/TITLE III-CERCLA List:** This product does not contain a "CERCLA" listed hazardous substance for emergency release notification under Sec. 304 (40CFR 302).

**15.3 SARA/TITLE III-Toxic Chemicals List:** This product does not contain a toxic chemical for routine annual "Toxic Chemical Release Reporting" under Sec. 313 (40CFR 372).

**15.4 TSCA Inventory Status:** Chemical components listed on TSCA Inventory.

**15.5 California Proposition 65:** This product does not contain any chemicals currently on the California list of



known carcinogens and reproductive toxins.

**15.6 Canadian WHMIS Classification:** This product does not contain any hazardous materials under CPR and this MSDS discloses all information elements required by the CPR.

## SECTION 16: OTHER INFORMATION, INCLUDING DATE OF PREPARATION OR LAST REVISION

**Date of Issue:** 06/01/1997

**Revision Date:** 01/15/2022 Version: 10.3 (English US)

**HS Tariff Classification Number:** 3402.90.5030 preference criterion B

**Other Information:** This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200.

### GHS Full Text Phrases:

Acute Tox. 4 (Inhalation: mist)	Acute toxicity (inhalation: mist) Category 4
Acute Tox. 4 (Oral)	Acute toxicity (oral) Category 4
Aquatic Acute 3	Hazardous to the aquatic environment - Acute Hazard Category 3
Eye Dam. 1	Serious eye damage/eye irritation Category 1
Skin Corr. 1A	Skin corrosion/irritation Category 1A
Skin Corr. 1B	Skin corrosion/irritation Category 1B
H302	Harmful if swallowed
H315	Causes skin irritation
H319	Causes serious eye irritation
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