SECTION 27–WATER INTRUSION CLEAN UP

Date Accepted: September 2017
Reviewed: Feb. 2024

27.1 WATER INTRUSION CLEAN UP

A. Objective

The purpose of this water intrusion clean up procedure is to establish the minimum performance requirements for employees who respond to water intrusion events such as but not limited to: sewage backup, pipe breaks, toilet overflows, and rain flooding events.

This procedure is also to ensure that proper clean up procedures and personal protective equipment (PPE) is used throughout the clean up process to protect employees, the public, and the environment from the potentially harmful effects of chemical and/or pathogenic exposure associated with sewage.

B. Scope

The Water Intrusion Clean Up procedure applies to designated Facilities Management personnel that are involved in such events. A supervisor must be present at all times during clean up, unless a professional restoration company has taken over responsibility.

C. References

ANSI/IICRC S500 Standard and Reference Guide for Professional Water Damage Restoration – 4th Ed., 2015, Indiana University Water Damage Restoration Guideline, California State University, Sacramento Sewage Spill Response Procedure and California State University Channel Islands Sewage Overflow Emergency Response Plan

D. Definitions

- **Category 1:** Water originating from a source that does not pose substantial harm to humans also called “clean water”.
  - Examples include: broken domestic water supply lines, tub or sink overflows with no contaminates, appliance malfunctions with domestic water supply lines, melting ice or snow, falling rainwater, broken toilet tanks and toilet bowls that do not contain contaminants or additives.

- **Category 2:** Water containing a significant degree of chemical, biological and/or physical contamination and having the potential to cause discomfort or sickness if consumed by/ or exposed to humans also called “gray water”.
  - Examples include: discharge from dishwashers or washing machines, overflows from toilet bowls with some urine (no feces), sump pump failures, seepage due to hydrostatic pressure, chilled and condensate water, and fire protection water.

- **Category 3:** Grossly unsanitary water containing pathogenic agents, arising from sewage or other contaminated water sources, and having the likelihood of causing discomfort or sickness if consumed or exposed to humans, also called “black water”.
  - Examples include: sewage and toilet backflow that originated beyond the trap regardless of color or content; all forms of flooding from ground surface water and rivers or streams.

D. Health Hazards of Sewage

Numerous disease-causing agents are potentially present in raw sewage. These organisms include amoebas, protozoa, bacteria, viruses, mold spores, etc. In the U.S., most illnesses associated with

raw sewage exposure produce mild to severe flu-like or cold-like symptoms. However, more serious illnesses, such as Hepatitis A, can be contracted through human contact (mouth, eyes, nose, ears) with raw sewage. With respect to HIV (AIDS) and HBV (Hepatitis B), the Occupational Safety and Health Administration (OSHA) have stated, in their Frequently Asked Questions for Bloodborne Pathogen Standard, the following:

There is no evidence to suggest that sewage plant or wastewater workers are at increased risk for hepatitis B infection. HBV and HIV may be present in wastewater, but only in a non-viable state and in very dilute concentrations, which would not be expected to pose a risk to wastewater workers or sewage plant workers.

Since microorganisms can cause disease by entering the body through the mouth, eyes, ears, nose, or through cuts and abrasions to the skin, care should be taken, and appropriate personal protective equipment (PPE) utilized, when the potential for direct contact with raw sewage is possible.

Employees should consult their physician for vaccinations. Tetanus vaccinations should be up to date, with consideration also given to the need for polio, typhoid fever, Hepatitis A, and Hepatitis B vaccinations.

E. Basic Hygiene Practices

- Wash hands with soap and water immediately after all water intrusion clean up procedures.
- Avoid touching face, mouth, eyes, nose, or open sores and cuts while wearing gloves during clean up.
- After a water intrusion clean up, wash your hands with soap and water *before* eating and drinking.
- Wash hands both before and after using the toilet.
- Before eating, remove all PPE and eat in designated areas away from the clean up area.
- Keep open sores, cuts, and wounds covered with clean, dry bandages.
- Gently flush eyes with clean water if contaminated water was in contact with eyes.

F. Clean Up Procedures

1. **Contact the appropriate Supervisor** for classification of water and plan of action. The Supervisor will determine if the clean up can be handled in house or needs to be done by a professional restoration company. This determination is based on the number of trained employees that are available and if there is the proper equipment on hand to handle the size and scope of the clean up. If a restoration company is required, contact the Manager of Environmental Health and Safety to reach out to vendor.

   Only designated trained staff will respond to emergency clean up situations. The Supervisor and the trained staff will review and discuss the clean up action plan. Supervisors shall review procedures to be used and have employees sign off they understand the procedures and the appropriate PPE to be used. Please reference the following Operational Procedures depending on the situation that is involved;
   - Custodial Emergency Procedure – Category 1 “Clean Water” Clean Up
   - Custodial Emergency Procedure – Category 2 “Gray Water” Clean Up
   - Custodial Emergency Procedure – Category 3 “Unsanitary Water” Clean Up
   - Buildings and Grounds Operational Guideline Procedure for “Plunging a Toilet”
   - Acknowledgement of KaiBosh Safety Data Sheet
   - Acknowledgement and Understanding Category 1-3 Water

Supervisors and appropriate Facilities Management Staff will;

2. **Secure the area against unauthorized entry.**

3. **Investigate the potential for electrical hazards and de-energize electrical circuits as necessary.**

4. **Isolate** the water source if possible. (ex. shut down supply lines).

Note: At this point, either Harper College Employees will manage the clean up, and follow the procedures below, or a Restoration Company will be contacted for service.

5. **Don PPE** (See appropriate JHA/PPE Assessment – Section 27.2)

6. **Gather Equipment** – There are 3 areas with a cabinet of clean up supplies: A226, Avante Dock (Z016) and Bldg. D Dock Cage (D181). Equipment includes: wet/dry vac, mop, bucket, wringer, KaiBosh disinfectant, paper towels, trash bags, gloves, tongs, plunger, wet floor signs, and washroom closed signage. After using the equipment, it shall be cleaned and disinfected, then returned to the area from which it was taken. Supervisors have keys to access the cabinets contents.

7. **Remove excess water** - Excess water removal is essential as the beginning point of restoration procedures. Removal of excess water may be achieved by physical means such as mopping or soaking up excess moisture from hard surfaces or furnishings. However, water removal usually involves the use of more sophisticated techniques and equipment such as pumps or wet/dry vacuuming equipment.

8. **Evaporation** - Once excess water is removed, the remaining water must be changed from a liquid to a vapor by promoting evaporation. Normally, this is accomplished efficiently with fans and air movers.

9. **Dehumidification**- Once moisture is evaporated from structural materials and contents into the air, the moisture must be removed from the air through dehumidification.

10. ***Temperature Control*** - Both evaporation and dehumidification are greatly enhanced by controlling the temperature in an environment. Additionally, microorganisms' growth is temperature related. Thus, temperature modification and control are important basic principles for safe, effective drying.

11. ***Monitoring -*** The damaged structure must be monitored starting with the initial assessment and evaluation and continuing throughout the restoration process. Monitoring procedures may include, but are not limited to the following:
    - Temperature and humidity readings
    - Checking moisture content of materials with a moisture meter
    - Using thermal imaging camera to find moisture

G. Inspection by Supervisor

Following the clean up of water, the Supervisor shall inspect the area for both cleanliness and dryness. Inspection shall include some of the following:

- Documenting event (include photos of before and after)
- Documenting procedures followed
- Documenting those employees involved in the clean up

- Ensure that equipment has been cleaned, disinfected, and returned to designated storage area (replace supplies as needed)
- Ensure all trash has been taken to compactor and that NOTHING is left in the area or the trash barrel(s)

H. Training

- Employees are to be trained in this procedure and the detailed Operational Procedures for the specific tasks;
- Training on Job Hazard Analysis (JHA)/ PPE Assessment (Section 27.2)
- Hazard Communication and review of KaiBosh disinfectant cleaner Safety Data Sheet (SDS);
- Personal Protection Equipment (PPE) general use

27.2 JHA/PPE HAZARD ASSESSMENT - CERTIFIED

Department (s):	Facilities Management	**Supervisor:**	Randy Toelke, Mgr. Operations Services
Task:	Water Intrusion Clean Up (also see EH&S Procedures)	**Analysis by:**	Manager of Environmental Health & Safety
Job Titles (s) Performing Task:	Custodial & Maintenance (designated personnel identified for this task)		

At ALL times employees are to be wearing long pants and safety shoes (as required by area).
Note: Defective and/or damaged Personal Protective Equipment shall not be used.

Job Task/Steps	Potential Hazards	Type of PPE	Hazard Control
Clean up of "clean water" (Category 1) *See Operational Guideline for Detailed Procedure* • Put on PPE listed • Depending on depth of water determine if there is the potential for electrical hazards	• Electrical Hazards depending on depth and location of water • Splashes – water and disinfectant • KaiBosh Disinfectant	• Goggles –to protect eyes from splashes • Gloves – waterproof/rubber	• PPE listed • De-energize energy sources
Clean up of "gray water" (Category 2) *See Operational Guideline for Detailed Procedure* • Put on PPE listed • Depending on depth of water determine if there is the potential for electrical hazards	• Electrical Hazards depending on depth and location of water • Splashes – water and disinfectant • KaiBosh Disinfectant	• Goggles –to protect eyes from splashes • Face Shield – to protect nose and mouth from splashes • Gloves – waterproof/rubber • Rubber Boots	• PPE listed • De-energize energy sources
Clean up of "blackwater" (Category 3) *See Operational Guideline for Detailed Procedure* • Put on PPE Listed • Depending on depth of water determine if there is the potential for electrical hazards	• Exposure to sewage (Class 3 water/black water) • Electrical Hazards depending on depth and location of water • Splashes – water and disinfectant • KaiBosh Disinfectant	• Goggles –to protect eyes from splashes • Face Shield – to protect nose and mouth from splashes • Gloves – waterproof/rubber • Tyvek coveralls	• PPE listed • De-energize energy sources

Job Task/Steps	Potential Hazards	Type of PPE	Hazard Control
		• Rubber Boots	
Plunging a toilet (Category 2 or 3 water) *See Operational Guideline for Detailed Procedure*	• Possible exposure to sewage (Class 3/ blackwater) • Splashes – water and disinfectant • KaiBosh Disinfectant	• Goggles –to protect eyes from splashes • Face Shield – to protect nose and mouth from splashes • Gloves – waterproof/rubber • Disposable apron • Rubber Boots	• PPE Listed
Using a toilet auger to clear drain trap (Category 2 or 3 water) *See Operational Guideline for Detailed Procedure* *Note: Only trained Maintenance or Utilities Employees will perform this task.	• Possible exposure to sewage (Class 3/ blackwater) • Splashes – water and disinfectant • KaiBosh Disinfectant	• Goggles –to protect eyes from splashes • Face Shield – to protect nose and mouth from splashes • Gloves – waterproof/rubber • Disposable apron • Rubber Boots	• PPE Listed

Reviewed by: Randy Toelke Date: 2-23-24

CERTIFICATION: I certify that the above Job Hazard Assessment (JHA) and Personal Protection Equipment (PPE) was conducted on the date indicated below. This document is a Certification of the Hazard Assessment required by 29 CFR 1910.132(d)(2).

Melissa Gawron, Mgr. EH&S	*Melissa Gawron*	2-23-24
Printed Name/Title	*Signature*	*Date*

27.3 KaiBosh Disinfectant Safety Data Sheet (SDS)

KaiBosh SDS Website

SAFETY DATA SHEET

Section 1: Chemical Product and Company Information

1.1 Product Identifier
Product Name: KaiBosh

1.2 Relevant Identified Uses of the Substance or Mixture and Uses Advised Against
Product Use: Disinfectant Cleaner
EPA Registration Number: 10324-93-71665

1.3 Details of the Supplier of the Safety Data Sheet
Manufacturer: Kaivac Inc.
2680 Van Hook Ave.
Hamilton, OH 45015

1.4 Emergency Telephone Number: In the event of a medical emergency ONLY, please call: INFOTRAC at 1-800-535-5053 24/7/365

Telephone Number for Information: 800-287-1136

Email:
SDS Date of Preparation/Revision: April 13, 2023

Section 2: Hazards Identification

2.1 Classification of the Substance or Mixture

US OSHA Classification (29CFR1910.1200):
Appearance: Clear solution with characteristic odor
Precautionary statements: Causes skin irritation, Causes serious eye damage, Harmful if swallowed, Harmful in contact with skin

GHS classification

Health

Serious eye damage/eye irritation	Category 1
Skin irritation	Category 2
Acute toxicity (oral)	Category 4
Acute toxicity (dermal)	Category 4

2.2 Label Elements:

Signal Word: DANGER!
Tetrasodium Ethylene Diamine Tetraacetate, Quaternary ammonium compounds, benzyl-C12-18-alkyldimethyl, chlorides and Quaternary ammonium compounds, C12-14-alkyl[(ethylphenyl)methyl]dimethyl, chlorides.

Hazard Statements: H302: Harmful if swallowed
H312: Harmful in contact with skin
H315: Causes skin irritation
H318: Causes serious eye damage

Precautionary Statements: **Prevention**
P262: Do not get in eyes, on skin, or on clothing
P264: Wash affected areas thoroughly after handling

P270: Do not eat, drink or smoke when using this product
P280: Wear protective gloves and eye, face and foot protection
Response
P301+312+330+331: IF SWALLOWED: Rinse mouth. Call a POISON CENTER or doctor/physician if you feel unwell. Do NOT induce vomiting.
P302+P352: IF ON SKIN: wash with plenty of soap and water.
P332+P313: IF Skin irritation occurs, get medical advice/attention.
P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P312: Call a POISON CENTER or doctor/physician if you feel unwell.
P363: Wash contaminated clothing before reuse
Storage
P233: Keep container tightly closed
P234: Keep only in original container
P501: Dispose of contents and container to an approved waste disposal plant

2.3 Other Hazards: None identified

Section 3: Composition/Information on Ingredients

Chemical name	CAS number(s)	GHS Classification	Concentration, %
Alkyl (C_{12-16}) dimethylbenzyl ammonium chloride	68391-01-5	Serious eye damage/eye irritation: Category 1, Skin corrosion/irritation: Category 1B, Acute toxicity (oral): Category 3, Acute toxicity (dermal): Category 3; H301, H314, H318	>=4.5-<=4.7
Alkyl (C_{12-14}) dimethylethylbenzyl ammonium chloride	85409-23-0		
Tetrasodium EDTA	64-02-8	Serious eye damage/eye irritation: Category 2B, Acute toxicity (oral): Category 4; H302, H319	>=0.9-<=1.0
Sodium carbonate	497-19-8	Serious eye damage/eye irritation: Category 2: H319	>=2.8-<=3.1
Nonionic surfactant	34398-01-1	Serious eye damage/eye irritation: Category 1, Acute toxicity (oral): Category 4; H302, H318	>=4.3-<=4.7
Octyldimethyl amine oxide	2605-78-9	Serious eye damage/eye irritation: Category 2A, Skin corrosion/irritation: Category 2; H315, H319	>=1.3-<=1.4
Lauryldimethyl amine oxide	1643-20-5	Serious eye damage/eye irritation: Category 1, Skin corrosion/irritation: Category 2; H315, H318	
Other components		Not classified	Balance

Refer to Section 16 for Full Text of GHS Classes and H Statements
The exact percentages are a trade secret.

Section 4: First Aid Measures

4.1 Description of First Aid Measures

First Aid

General advice: Show this material safety data sheet to medical personnel. Do not leave affected person unattended. Isolate exposed apparel for laundry before re-use.

Eye contact: Rinse eyes with water. Remove any contact lenses, and continue flushing eyes with running water for at least 15 minutes. Hold eyelids apart to ensure rinsing of the entire surface of the eyes and lids with water. Seek medical attention if irritation develops or persists.

Skin contact:	Take off contaminated clothing and shoes immediately. Wash affected areas with plenty of water. Seek medical attention if irritation develops or persists.
Ingestion:	Do NOT induce vomiting. Do not give anything by mouth to an unconscious or convulsing person. Rinse mouth with water. Seek medical attention.
If inhaled:	Remove from area to fresh air. Seek medical attention if respiratory irritation develops or if breathing becomes difficult.

See Section 11 for more detailed information on health effects.

4.2 Most Important symptoms and effects, both acute and delayed: The most important known symptoms and effects are described in the labeling (section 2.2) and/or in section 11. Corrosive effects. Symptoms may include stinging, tearing, redness, swelling and blurred vision. Permanent eye damage including blindness could result. Prolonged or repeated skin contact may aggravate existing skin conditions. Inhalation of mists may aggravate existing chronic respiratory conditions such as asthma, emphysema or bronchitis.

4.3 Indication of any immediate medical attention and special treatment needed: If eye contact or ingestion occurs, get immediate medical attention.

Section 5: Fire Fighting Measures

5.1 Extinguishing Media: Use any media that is suitable for the surrounding fire.

5.2 Special Hazards Arising from the Substance or Mixture: Thermal decomposition yields oxides of carbon and toxic chloride vapors.

5.3 Advice for Fire-Fighters: Firefighters should wear positive pressure self- contained breathing apparatus and full protective clothing for fires in areas where chemicals are used or stored.

Section 6: Accidental Release Measures

6.1 Personal Precautions, Protective Equipment and Emergency Procedures:
Wear appropriate protective clothing as needed to prevent eye and skin contact.

6.2 Environmental Precautions: Avoid contamination of water supplies and environmental releases. Report spills as required to authorities. Avoid contact of spilled material and runoff with soil and surface waterways

6.3 Methods and Material for Containment and Cleaning Up:

Recovery:	Stop leak if safe to do so. Absorb spills with vermiculite, fuller's earth, or sand. Shovel up and place in a non-metal waste container for disposal. Dike large spills with soil or sandbags to contain it and prevent its spread. Keep in suitable, properly labeled, closed containers for disposal.
Decontamination/cleaning:	Wash non-recoverable remainder with large amounts of water. Clean contaminated surfaces thoroughly. Recover the cleaning water for subsequent disposal.
Disposal:	Dispose of in accordance with local regulations
Additional advice:	Spill area may be slippery

6.4 Reference to Other Sections:
Refer to Section 13 for disposal information and Section 8 for protective equipment.

Section 7: Handling and Storage

7.1 Precautions for Safe Handling:
Prevent eye contact. Avoid prolonged skin contact. Remove and launder contaminated clothing before re-use. Wash thoroughly after handling and before eating, drinking, smoking or using toilet facilities. Refer to product label for directions for use to assure effectiveness.

7.2 Conditions for Safe Storage, Including any Incompatibilities: Store in a cool, well-ventilated area away from bases and other incompatible materials. Keep container closed. Do not contaminate water, food or feed by storage or disposal. Store in original container in areas inaccessible to small children. Do not store on side. Avoid creasing or impacting of side walls.

7.3 Specific end use(s):
Industrial uses: None identified
Professional uses: None identified

Section 8: Exposure Controls / Personal Protection

8.1 Control Parameters:

Chemical Name	US OEL	EU IOEL	UK OEL	DFG MK	Biological Limit Value
Water	None Established	None Established	None Established	None Established	None Established
Surfactant	None Established	None Established	None Established	None Established	None Established
Sodium Carbonate	None Established	None Established	None Established	None Established	None Established
Tetrasodium Ethylene Diamine Tetraacetate	None Established	None Established	None Established	None Established	None Established
Alkyl (C_{14} 60%, C_{12} 30%, C_{18} 5%, C 5%) dimethyl benzyl ammonium chloride	None Established	None Established	None Established	None Established	None Established
Alkyl (C_{12} 68%, C_{14} 32%) dimethyl ethylbenzyl ammonium chloride	None Established	None Established	None Established	None Established	None Established
Ethanol	1000 ppm STEL ACGIH TLV, 1000 ppm TWA OSHA PEL	None Established	1000 ppm TWA	500 ppm TWA, 1000 ppm STEL	None Established

8.2 Exposure Controls:

Appropriate Engineering Controls:

Engineering measures: Good general ventilation should be sufficient to control airborne levels. Respiratory protection is not required if good ventilation is maintained.

Personal protective equipment

Respiratory protection: In operations where mists are generated, wear a NIOSH/MSHA approved respirator that has been selected by a technically qualified person for the specific work conditions.

Hand protection: Wear long chemical resistant gloves. Observe instructions regarding permeability and breakthrough time provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion and contact time. Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough.

Eye protection: Wear chemical splash goggles.

Skin and body protection: Wear footwear protecting against chemicals, and impervious clothing. Choose body protection according to the amount and concentration of the substances in the workplace.

Hygiene measures: Personal hygiene is an important work practice exposure control measure and the following general measures should be taken when working with or handling this material:
1) Do not store, use, and/or consume foods, beverages, tobacco products, or cosmetics in areas where this material is stored.
2) Wash hands and face carefully before eating, drinking, using tobacco, applying cosmetics, or using the toilet.
3) Wash exposed skin promptly to remove accidental splashes or contact with material.

Protective measures:	Ensure that eyewash stations and safety showers are close to the workstation location, and that emergency equipment is immediately accessible with instructions for use. The protective equipment must be selected in accordance with current local standards and in following proper use instructions from the supplier of the protective equipment. Selection of appropriate personal protective equipment should be based on an evaluation of the performance characteristics of the protective equipment relative to the task(s) to be performed, conditions present, duration of use, and the potential hazards, and/or risks that may occur during use.

Section 9: Physical and Chemical Properties

9.1 Information on basic Physical and Chemical Properties:

Appearance and Odor: Clear yellow liquid with a citrus odor.

Solubility in Water:	Soluble	**Boiling Point:**	Not determined
Odor Threshold:	Not determined	**Partition Coefficient:**	Not determined
pH:	9-12	**Melting Point:**	Not determined
Specific Gravity:	1.04 (8.7 lbs/gal)	**Vapor Density:**	Not determined
Evaporation Rate:	Not determined	**Vapor Pressure:**	Not determined
Flammability(solid/gas):	Not applicable	**Flash Point:**	> 200°F (>100°C) – Pensky Martin Closed Cup
Explosive Limits:	Not determined	**Autoignition Temperature:**	Not determined
Decomposition Temperature:	Not determined	**Viscosity:**	Not determined
Explosive Properties:	None	**Oxidizing Properties:**	None

9.2 Other Information: None

Section 10: Stability and Reactivity

10.1 Reactivity: Not reactive under normal conditions of use and storage.

10.2 Chemical Stability: Stable.

10.3 Possibility of Hazardous Reactions: Reactions with strong oxidizing agents and acids will generate heat.

10.4 Conditions to Avoid: None known.

10.5 Incompatible Materials: Avoid strong oxidizing agents and acids.

10.6 Hazardous Decomposition Products: Thermal decomposition yields oxides of carbon and toxic chloride vapors.

Section 11: Toxicological Information

Product Summary:
Causes moderate skin irritation and serious eye damage. Harmful if swallowed. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. Ingestion may produce burns to the lips, oral cavity, upper airway, esophagus and possibly digestive tract. Vapors and spray mist may irritate throat and respiratory system and cause coughing.
No data available for the teratogenicity, mutagenicity, or reproductive toxicity of this product. No data available to designate the product as causing specific target organ toxicity through repeated exposure. No data available to designate product as an aspiration hazard.

Information on likely routes of exposure:
Eye contact: Corrosive. Causes serious eye damage. Symptoms may include pain, burning sensation, redness,

watering, blurred vision or loss of vision.
Skin contact: Moderate skin irritant. Symptoms may include blisters, redness and pain (which may be delayed).
Ingestion: Harmful is swallowed. Causes burns/serious damage to mouth, throat and stomach. Symptoms may include vomiting, nausea, and/or feeling of general unwellness.
Inhalation: May cause irritation and corrosive effects to nose, throat and respiratory tract. Symptoms may include coughing and difficulty breathing.
Sensitization: No known effects

11.1 Information on Toxicological Effects:

Potential Health Hazards

Inhalation: Mists may cause mucous membrane and upper respiratory tract irritation with coughing, sore throat and difficulty in breathing.

Skin Contact: Causes irritation.

Eye Contact: Causes severe irritation or burns with redness, pain and tearing. Permanent eye damage may occur.

Ingestion: Swallowing may cause gastrointestinal irritation.

Acute toxicity
Acute oral: LD_{50} >1890 mg/kg
Acute dermal: LD_{50} >2000 mg/kg
Acute inhalation: No information available
Acute toxicity (other): No information available

Skin corrosion/irritation
Skin irritation: Causes moderate skin irritation.

Serious eye damage/eye irritation
Eye irritation: Corrosive. Causes serious eye damage.

Respiratory or skin sensitization
Sensitization: Not classified as sensitizing by skin contact

Mutagenicity
Genotoxicity in vitro: No information available
Genotoxicity in vivo: No information available

Carcinogenicity
Carcinogenicity: This product does not contain any ingredient designated as probable or suspected human carcinogens by IARC, ACGIH

Toxicity for reproduction and development
Toxicity to reproduction/fertility: No information available
Developmental toxicity/teratogenicity: No information available

Specific Target Organ Toxicity (STOT)
STOT-single exposure: No information available
STOT-repeated exposure: No information available

Aspiration toxicity
Aspiration toxicity: No information available

Section 12: Ecological Information

12.1 Toxicity:
Sodium Carbonate: Lepomis macrochirus LC50: 300 mg/L/96hr
Tetrasodium Ethylene Diamine Tetraacetate: Lepomis macrochirus LC50: 121 mg/L/96hr

Surfactant: Pimephales promelas LC50 : 3.2-3.6mg/L/96hr, Daphnia magna EC50: 7.3 mg/L/48hr, bacteria EC50 > 1000 mg/L/16hr
Ethanol: Oral rat LD50: Pimephales promelas LC50: 14200 mg/L/96hr

12.2 Persistence and degradability: Surfactant: >60% in 28 days.

12.3 Bioaccumulative Potential: Surfactant is not bioaccumulative.

12.4 Mobility in Soil: No data available.

12.5 Results of PBT and vPvB assessment: None required.

12.6 Other Adverse Effects: No data available.

Section 13: Disposal Considerations

13.1 Waste Treatment Methods:
Dispose in accordance with all local, state and national regulations. Local regulations may be more stringent than regional and national requirements. It is the responsibility of the waste generator to determine the toxicity and physical characteristics of the material to determine the proper waste identification and disposal in compliance with applicable regulations.

Do not reuse empty container. Wrap and discard in trash (or recycle).

Section 14: Transport Information

	14.1 UN Number	14.2 UN Proper Shipping Name	14.3 Hazard Class(s)	14.4 Packing Group	14.5 Environmental Hazards
US DOT	None	Not Regulated	None	None	No
Canadian TDG	None	Not Regulated	Not Regulated	None	No
EU ADR/RID	None	Not Regulated	Not Regulated	None	No
IMDG	None	Not Regulated	Not Regulated	None	No
IATA/ICAO	None	Not Regulated	Not Regulated	None	No

14.6 Special Precautions for User: None identified

14.7 Transport in Bulk According to Annex III MARPOL 73/78 and the IBC Code: Not applicable.

Section 15: Regulatory Information

15.1 Safety, Health and Environmental Regulations/Legislation Specific for the Substance or Mixture

This chemical is a pesticide product registered by the United States Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets (SDS), and for workplace labels of non-pesticide chemicals. The hazard information required on the pesticide label is reproduced below. The pesticide label also includes other important information, including directions for use.

FIFRA Labeling:

PRECAUTIONARY STATEMENTS
Hazards to Humans & Domestic Animals

DANGER. Keep Out of Reach of Children

Corrosive. Causes irreversible eye damage and skin burns. Harmful if swallowed or absorbed through the skin. Do not get in eyes, on skin, or on clothing. Wear goggles or face shield, rubber gloves, and protective clothing when handling. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash clothing before reuse.

PHYSICAL OR CHEMICAL HAZARDS Do not mix with oxidizers, anionic soaps and detergents.

UNITED STATES REGULATIONS:

U.S. Sara Reporting Requirements: The components of this product are not subject to the reporting requirements of Sections 302, 304, and 313 Of Title III Of The Superfund Amendments And Reauthorization Act.

U.S. SARA Threshold Planning Quantity: There are no specific Threshold Planning Quantities for the components of this product. The default Federal MSDS submission and inventory requirement filing threshold of 10,000 lbs (4,540 kg) therefore applies, per 40 CFR 370.20.

U.S. CERCLA Reportable Quantity (RQ): This product is not subject to reporting requirements under CERCLA. Many states have more stringent release reporting requirements. Report spills required under federal, state and local regulations.

U.S. TSCA Inventory Status: The components of this product are listed on the TSCA Inventory or are exempted from listing.

Other U.S. Federal Regulations: None

California Safe Drinking Water And Toxic Enforcement Act (Proposition 65): The following ingredients are listed on the Proposition 65 Lists:

Name	CAS	Amount
Benzyl Chloride	100-44-7	<10 ppm

Section 16: Other Information

NFPA RATING (NFPA 704)	FIRE: 0	HEALTH: 3	INSTABILITY: 0
HMIS RATING	FIRE: 0	HEALTH: 3	PHYSICAL HAZARD: 0

GHS Classes Hazard Statements for Reference (See Sections 2 and 3):
H318 Causes serious eye damage.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H314 Causes severe skin burns and eye damage.
H225 Highly flammable liquid vapor
H302 Harmful if swallowed
H312 Harmful in contact with skin
H332 Harmful if inhaled

Revision Date: 4/13/23
Supersedes Date: 2/26/21
Revision Summary: Reformulation of Maquat-64-PD as a result of DCI (data call in). CSF sub registration changed.

The information contained herein is believed to be accurate but is not warranted to be so. Data and calculations are based on information furnished by the manufacturer of the product and manufacturers of the components of the product. Users are advised to confirm in advance of the need that information is current, applicable and suited to the circumstances of use. Kaivac assumes no responsibility for injury to vendee or third party person proximately caused by the material if reasonable safety procedures are no adhered to as stipulated in the data sheet. Furthermore, Kaivac assumes no responsibility for injury caused by abnormal use of this material even if reasonable safety procedures are followed.