Safety Data Sheet

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Sting Ray Kit (Juice)

SECTION 1: Identification

Product Identifier

Product Name: Sting Ray Kit (Juice)
Product code: PR-200-J-1

Recommended Use of the Product and Restriction on Use

Relevant Identified Uses: Presoak
Uses Advised Against: NA
Reasons Why Uses Advised Against: Not determined or not applicable.

Manufacturer or Supplier Details

Manufacturer:
United States
JBS Industries
2726 Henkle Drive
Lebanon, Ohio 45036
513-228-2800
SBAETEN@JBSINDUSTRIES.COM

Emergency Telephone Number:

North America
CHEMTREC
800-424-9300 (24 hours)

SECTION 2: Hazard(s) Identification

GHS Classification:

Skin corrosion, category 1B
Serious eye damage, category 1
Carcinogenicity, category 2
Specific target organ toxicity - single exposure, category 1
Specific target organ toxicity - repeated exposure, category 2

Label elements

Hazard Pictograms:

Signal Word: Danger

Hazard statements:

H314 Causes severe skin burns and eye damage
H318 Causes serious eye damage
H351 Suspected of causing cancer.
H370 Causes damage to organs.
H373 May cause damage to organs (state all organs affected or repeated exposure (state route of exposure

if it is conclusively proven that no other routes of exposure cause the hazard)

Precautionary Statements:

P260 Do not breathe dust/fume/gas/mist/vapors/spray
P280 Wear protective gloves/protective clothing/eye protection/face protection
P202 Do not handle until all safety precautions have been read and understood
P270 Do not eat, drink or smoke when using this product
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
P363 Wash contaminated clothing before reuse
P304+P340 IF INHALED: Remove victim 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
P314 Get medical advice/attention if you feel unwell
P307+P311 IF exposed: Call a POISON CENTER or doctor/physician
P405 Store locked up

Hazards Not Otherwise Classified: None

SECTION 3: Composition/Information on Ingredients

Identification	Name	Weight %
CAS Number: 1310-73-2	Sodium hydroxide	<100
CAS Number: 111-76-2	2-Butoxyethanol	<99.4999
CAS Number: 7758-29-4	Pentasodium triphosphate	<50
CAS Number: 6834-92-0	Disodium metasilicate	<50
CAS Number: 68439-46-3	Alcohols, C9-11, branched and linear, ethoxylated	<50
CAS Number: 9004-82-4	2-dodecoxyethyl hydrogen sulfate	<30
CAS Number: 5064-31-3	Trisodium nitrilotriacetate	<8
CAS Number: 7722-88-5	Tetrasodium pyrophosphate	<3
CAS Number: 68131-39-5	Alcohols, C12-15, ethoxylated	<10
CAS Number: 75-21-8	Ethylene oxide	<0.095
CAS Number: 123-91-1	1,4-dioxane	<0.095
CAS Number: 107-21-1	Ethane-1,2-diol	<0.09

Additional Information: None

SECTION 4: First Aid Measures

Description of First Aid Measures

General Notes:

Not determined or not applicable.

After Inhalation:

If inhaled, remove person to fresh air and place in a position comfortable for breathing. Keep person at rest. If breathing is difficult, administer oxygen. If breathing has stopped, provide artificial respiration. If experiencing respiratory symptoms, seek medical advice/attention.

If inhaled, remove person to fresh air and place in a position comfortable for breathing. Keep person at rest. If breathing is difficult, administer oxygen. If breathing has stopped, provide artificial respiration. If symptoms develop or persist, seek medical advice/attention.

After Skin Contact:

Treatment is urgent. Seek emergency medical treatment. Remove contaminated clothing and shoes. Rinse skin with copious amounts of water [shower] for several minutes. Launder contaminated clothing before reuse.

Remove contaminated clothing and shoes. Rinse skin with copious amounts of water [shower] for several minutes. Launder contaminated clothing before reuse. If symptoms develop or persist, seek medical advice/attention.

After Eye Contact:

Immediately rinse eyes with plenty of gently flowing lukewarm water for 15 minutes. Remove contact lenses if present and easy to do so. Protect unexposed eye. Seek immediate medical attention, preferably from an ophthalmologist.

Rinse eyes with plenty of water for several minutes. Remove contact lenses if present and easy to do so. Protect unexposed eye. If symptoms develop or persist, seek medical advice/attention.

After Swallowing:

If swallowed, DO NOT induce vomiting unless told to do so by a physician or poison control center. Rinse mouth with water. Never give anything by mouth to an unconscious person. If spontaneous vomiting occurs, place on the left side with head down to prevent aspiration of liquid into the lungs. Seek immediate medical attention.

If swallowed, DO NOT induce vomiting unless told to do so by a physician or poison control center. Rinse mouth with water. Never give anything by mouth to an unconscious person. If spontaneous vomiting occurs, place on the left side with head down to prevent aspiration of liquid into the lungs. If symptoms develop or persist, seek medical advice/attention.

Most Important Symptoms and Effects, Both Acute and Delayed

Acute Symptoms and Effects:

Exposure to skin may result in redness, pain, burning, inflammation and tissue damage. Exposure to eyes may result in irritation, redness, pain, inflammation, itching, burning, tearing, corneal damage and loss of vision. Exposure via inhalation may result in cough, sore throat, burning sensation and shortness of breath. Exposure via ingestion may result in burns of the mouth and throat, abdominal pain, burning sensation in the throat and chest, nausea, vomiting, shock or collapse.

Eye contact may result in irritation, redness, pain, inflammation, itching, burning, tearing, corneal damage and loss of vision.

Causes damage to organs. Effects are dependent on exposure (dose, concentration, contact time).

Delayed Symptoms and Effects:

Effects are dependent on exposure (dose, concentration, contact time).

Suspected of causing cancer. Effects are dependent on exposure (dose, concentration, contact time).

May cause damage to organs through prolonged or repeated exposure. Effects are dependent on exposure (dose, concentration, contact time).

Immediate Medical Attention and Special Treatment

Specific Treatment:

If exhibiting symptoms of exposure, seek prompt medical attention.

In case of eye contact, seek prompt medical attention while rinsing is continued.

In case of skin contact, seek prompt medical attention while rinsing is continued.

In case of ingestion, seek prompt medical attention.

Notes for the Doctor:

Not determined or not applicable.

SECTION 5: Firefighting Measures

Extinguishing Media

Suitable Extinguishing Media:

Water mist/fog, carbon dioxide, dry chemical or alcohol resistant foam.

Unsuitable Extinguishing Media:

Do not use water jet.

Specific Hazards During Fire-Fighting:

Thermal decomposition may produce irritating/toxic fumes/gases.

Special Protective Equipment for Firefighters:

Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full-face piece operated in positive pressure mode.

Special precautions:

Avoid contact with skin, eyes, hair and clothing. Do not breathe fumes/gas/mists/aerosols/vapors/dusts. Move containers from fire area if safe to do so. Use water spray/fog for cooling fire exposed containers. Avoid unnecessary run-off of extinguishing media which may cause pollution.

SECTION 6: Accidental Release Measures

Personal Precautions, Protective Equipment, and Emergency Procedures:

Evacuate unnecessary personnel. Ventilate area. Extinguish any sources of ignition. Wear recommended personal protective equipment (see Section 8). Avoid contact with skin, eyes and clothing. Avoid breathing mist, vapor, dust, fume and spray. Do not walk through spilled material. Wash thoroughly after handling.

Evacuate unnecessary personnel. Ventilate area. Extinguish any sources of ignition. Wear recommended personal protective equipment (see Section 8). Do not get on skin, eyes or on clothing. Avoid breathing mist, vapor, dust, fume and spray. Do not walk through spilled material. Wash thoroughly after handling. Remove contaminated clothing and launder before reuse.

Environmental Precautions:

Prevent further leakage or spillage if safe to do so. Prevent from reaching drains, sewers and waterways. Discharge into the environment must be avoided.

Methods and Material for Containment and Cleaning Up:

Do not touch damaged containers or spilled material unless wearing appropriate personal protective clothing. Stop leak if you can do it without risk. Contain and collect spillage and place in suitable container for future disposal. Dispose of in accordance with all applicable regulations (see Section 13).

Do not touch damaged containers or spilled material unless wearing appropriate personal protective clothing. Avoid breathing dust, mist, fumes, vapors or spray. Stop leak if you can do it without risk. Contain and collect spillage and place in suitable container for future disposal. Dispose of in accordance with all applicable regulations (see Section 13).

Reference to Other Sections:

For personal protective equipment see Section 8. For disposal see Section 13.

SECTION 7: Handling and Storage

Precautions for Safe Handling:

Use appropriate personal protective equipment (see Section 8). Prevent skin contact. Do not get in eyes. Use only with adequate ventilation. Do not add water to the corrosive product. If it is necessary to mix a corrosive product with water, do so slowly adding the corrosive to cold water, in small amounts, and stir frequently. Avoid breathing mist/vapor/spray/dust. Do not eat, drink, smoke, or use personal products when handling chemical substances. Wash affected areas thoroughly after handling. Keep away from incompatible materials (See Section 10). Keep containers tightly closed when not in use. Keep only in original packaging.
Use appropriate personal protective equipment (see Section 8). Use only with adequate ventilation. Avoid breathing mist/vapor/spray/dust. Do not eat, drink, smoke, or use personal products when handling chemical substances. Do not get in eyes. Avoid contact with skin and clothing. Wash affected areas thoroughly after handling. Keep away from incompatible materials (See Section 10). Keep containers tightly closed when not in use.
Use appropriate personal protective equipment (see Section 8). Use only with adequate ventilation. Avoid breathing mist/vapor/spray/dust. Do not eat, drink, smoke, or use personal products when handling chemical substances. Avoid contact with skin, eyes and clothing. Wash affected areas thoroughly after handling. Keep away from incompatible materials (See Section 10). Keep containers tightly closed when not in use.

Conditions for Safe Storage, Including Any Incompatibilities:

Store in cool, dry, well-ventilated location out of direct sunlight and away from exit paths. Store in a corrosion-resistant container with a resistant inner liner. Inspect containers and storage area regularly for signs of leak and damage. Store containers at a convenient height for handling, below eye level if possible. High shelving increases the risk of dropping containers, personal injury and exposure. Ensure that appropriate fire fighting and spill-clean up equipment is readily available. Keep away from food and beverages. Protect from freezing and physical damage. Store away from heat, open flames and other sources of ignition. Store separately. Keep container tightly sealed. Store away from incompatible materials (See Section 10).
Store in cool, dry, well-ventilated location out of direct sunlight. Keep away from food and beverages. Protect from freezing and physical damage. Store away from heat, open flames and other sources of ignition. Keep container tightly sealed. Store away from incompatible materials (See Section 10).
Store in cool and dry location and out of direct sunlight. Store away from sources of heat or ignition. Store away from incompatible materials described in Section 10. Keep containers closed when not in use. Keep away from food and beverages. Protect from freezing and physical damage.

SECTION 8: Exposure Controls/Personal Protection

Only those substances with limit values have been included below.

Occupational Exposure Limit Values:

Country (Legal Basis)	Substance	Identifier	Permissible concentration
ACGIH	Sodium hydroxide	1310-73-2	Ceiling Limit: 2 mg/m³
	Ethylene oxide	75-21-8	TWA: 1 ppm
	1,4-dioxane	123-91-1	TLV-TWA: 20 ppm (8 hr)
	Ethane-1,2-diol	107-21-1	8-Hour TWA: 25 ppm (vapor fraction)
	Ethane-1,2-diol	107-21-1	15-Minute STEL: 50 ppm (vapor fraction)

Country (Legal Basis)	Substance	Identifier	Permissible concentration
	Ethane-1,2-diol	107-21-1	15-Minute STEL: 10 mg/m³ (aerosol only, inhalable fraction)
	2-Butoxyethanol	111-76-2	8-Hour TWA: 20 ppm
OSHA	Sodium hydroxide	1310-73-2	8-Hour TWA-PEL: 2 mg/m³
	Ethylene oxide	75-21-8	TWA: 1 ppm
	Ethylene oxide	75-21-8	STEL: 5 ppm
	1,4-dioxane	123-91-1	8-Hour TWA-PEL: 360 mg/m³ (100 ppm [Table Z-1])
	Tetrasodium pyrophosphate	7722-88-5	8-Hour TWA-PEL: 5 mg/m³
	1,4-dioxane	123-91-1	TWA: 90 mg/m³ (25 ppm [Table Z-1-A])
	Ethane-1,2-diol	107-21-1	Ceiling Limit: 125 mg/m³ (50 ppm)
	2-Butoxyethanol	111-76-2	8-Hour TWA-PEL: 240 mg/m³ (50 ppm)
NIOSH	Sodium hydroxide	1310-73-2	IDLH: 10 mg/m³
	Ethylene oxide	75-21-8	IDLH: 800 ppm
	Ethylene oxide	75-21-8	Ceiling Limit: 9 mg/m³ (5 ppm [10-min/day])
	Ethylene oxide	75-21-8	REL: 0.18 mg/m³ (0.1 ppm)
	1,4-dioxane	123-91-1	Ceiling Limit: 3.6 mg/m³ (1 ppm [30-min])
	1,4-dioxane	123-91-1	IDLH: 500 ppm
	Tetrasodium pyrophosphate	7722-88-5	REL-TWA: 5 mg/m³ (up to 10 hr)
	Sodium hydroxide	1310-73-2	Ceiling Limit: 2 mg/m³
	2-Butoxyethanol	111-76-2	IDLH: 700 ppm
	2-Butoxyethanol	111-76-2	REL-TWA: 24 mg/m³ (5 ppm [up to 10 hr])
United States(California)	Sodium hydroxide	1310-73-2	Ceiling Limit: 2 mg/m³
	Ethylene oxide	75-21-8	STEL: 5 ppm
	Ethylene oxide	75-21-8	PEL: 2 mg/m³ (1 ppm)
	Ethylene oxide	75-21-8	REL: 0.03 mg/m³ (Chronic inhalation)
	1,4-dioxane	123-91-1	8-Hour TWA-PEL: 1 mg/m³ (0.28 ppm)
	Tetrasodium pyrophosphate	7722-88-5	8-Hour TWA-PEL: 5 mg/m³
	Sodium hydroxide	1310-73-2	REL: 8 ug/m³ (Acute Inhalation)
	1,4-dioxane	123-91-1	REL: 3000 ug/m³ ([8 hr]; Acute inhalation)
	1,4-dioxane	123-91-1	REL: 3000 ug/m³ ([8 hr]; Chronic inhalation)
	Ethane-1,2-diol	107-21-1	Ceiling Limit: 100 mg/m³ (40 ppm)
	2-Butoxyethanol	111-76-2	8-Hour TWA-PEL: 97 mg/m³ (20 ppm)

Biological Limit Values:

Country (Legal Basis)	Substance	Identifier	Determinant	Specimen	Sampling time	Permissible limits
ACGIH	Ethylene oxide	75-21-8	N-(2-hydroxyethyl)-valine (HEV) hemoglobin adducts	Hemoglobin adducts	Not critical	5000 pmol/g
	Ethylene oxide	75-21-8	S-(2-hydroxyethyl) mercapturic acid (HEMA)	Creatinine in urine	End of shift	5 µg/g
	2-Butoxyethanol	111-76-2	Butoxyacetic acid (with hydrolysis)	Creatinine in Urine	End of shift	200 mg/g

Information on Monitoring Procedures:

Not determined or not applicable.

Appropriate Engineering Controls:

Emergency eye wash stations and safety showers should be available in the immediate vicinity of use or handling. Provide adequate ventilation to maintain the airborne concentrations of vapor, mists, and/or dusts below the applicable workplace exposure limits, while observing recognized national standards (or equivalent).

Personal Protection Equipment

Eye and Face Protection:

Use safety glasses with side shields or goggles. Consider the use of a face shield for splash protection. Use eye protection equipment that has been tested and approved by recognized national standards (or equivalent).

Safety glasses or goggles. Use eye protection equipment that has been tested and approved by recognized national standards (or equivalent).

Skin and Body Protection:

Chemical resistant, impervious gloves approved by the appropriate standards. Gloves must be inspected prior to use. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated. Avoid skin contact with used gloves. Appropriate techniques should be used to remove used gloves and contaminated clothing. Full body protection should be worn. Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. Ensure that all personal protective equipment is approved by recognized national standards (or equivalent).

Chemical resistant, impervious gloves approved by the appropriate standards. Gloves must be inspected prior to use. Avoid skin contact with used gloves. Appropriate techniques should be used to remove used gloves and contaminated clothing. Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. Ensure that all personal protective equipment is approved by recognized national standards (or equivalent).

Respiratory Protection:

If engineering controls do not maintain airborne concentrations below the applicable workplace exposure limits, or to an acceptable level (if exposure limits have not been established), a respirator approved by recognized national standards (or equivalent) must be worn.

If engineering controls do not maintain airborne concentrations below the applicable workplace exposure limits, or to an acceptable level (if exposure limits have not been established), a respirator approved by recognized national standards (or equivalent) must be worn. Use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any

other circumstances where air purifying respirators may not provide adequate protection.

General Hygienic Measures:

When handling chemical products, do not eat, drink or smoke. Wash hands after handling, before breaks, and at the end of the workday. Avoid contact with skin, eyes and clothing. Wash contaminated clothing before reuse. Perform routine housekeeping.

SECTION 9: Physical and Chemical Properties

Information on Basic Physical and Chemical Properties

Appearance	Kit Containing solids and Liquids separately.
Odor	Std.
Odor threshold	Not determined or not available.
pH	NA
Melting point/freezing point	Not determined or not available.
Initial boiling point/range	Not determined or not available.
Flash point (closed cup)	Not determined or not available.
Evaporation rate	Not determined or not available.
Flammability (solid, gas)	Not determined or not available.
Upper flammability/explosive limit	Not determined or not available.
Lower flammability/explosive limit	Not determined or not available.
Vapor pressure	Not determined or not available.
Vapor density	Not determined or not available.
Density	Not determined or not available.
Relative density	Not determined or not available.
Solubilities	Not determined or not available.
Partition coefficient (n-octanol/water)	Not determined or not available.
Auto/Self-ignition temperature	Not determined or not available.
Decomposition temperature	Not determined or not available.
Dynamic viscosity	Not determined or not available.
Kinematic viscosity	Not determined or not available.
Explosive properties	Not determined or not available.
Oxidizing properties	Not determined or not available.

SECTION 10: Stability and Reactivity

Reactivity:

Not reactive under recommended handling and storage conditions.

Chemical Stability:

Stable under recommended handling and storage conditions.

Possibility of Hazardous Reactions:

Hazardous reactions are not anticipated under recommended conditions of handling and storage.

Conditions to Avoid:

Avoid generation of aerosols and mists, extreme heat, open flames, hot surfaces, sparks, ignition sources and incompatible materials.

Extreme heat, open flames, hot surfaces, sparks, ignition sources and incompatible materials.

Incompatible Materials:

None known.

Hazardous Decomposition Products:

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological Information

Acute Toxicity

Assessment: Based on available data, the classification criteria are not met.

Product Data: No data available.

Substance Data:

Name	Route	Result
Trisodium nitrilotriacetate	oral	LD50 Rat: 1100 mg/kg
	dermal	LD50 Rabbit: >2000 mg/kg
	inhalation	LC50 Rat: >5 mg/L (4 hr - Aerosol)
Tetrasodium pyrophosphate	oral	LD50 Rat: 300 - 2000 mg/kg
	dermal	LD50 Rabbit: >2000 mg/kg
	inhalation	LC50 Rat: >0.58 mg/L (4 hr - Dust)
Alcohols, C12-15, ethoxylated	oral	LD50 Rat: > 5000 mg/kg
	dermal	LD50 Rat: > 2000 mg/kg
2-dodecoxyethyl hydrogen sulfate	oral	LD50 Rat: 1600 mg/kg
Ethylene oxide	Inhalation ATE	LC50 Rat: 700 ppmV ((Gases))
	Oral ATE	LD50 Rat: 100 mg/kg
1,4-dioxane	oral	LD50 Rat: 5150 mg/kg
	dermal	LD50 Rabbit: 7600 mg/kg
	inhalation	LC50 Rat: 9158 ppmV (4 hr [vapor])
Pentasodium triphosphate	oral	LD50 Rat: >2000 mg/kg
	dermal	LD50 Rabbit: > 4640 mg/kg
	inhalation	LC50 Rat: 0.39 mg/L (4 hr - Aerosol [highest achievable concentration])
Disodium metasilicate	dermal	LD50 Rat: > 5000 mg/kg
	oral	LD50 Rat: 1152 mg/kg
	inhalation	LC50 Rat: > 2.06 mg/L (4 hr [vapor])
Sodium hydroxide	oral	LD50 Rat: 140-340 mg/kg
	dermal	LD50 Rabbit: 1350 mg/kg
Ethane-1,2-diol	dermal	LD50 Mouse: > 3500 mg/kg
	Oral ATE	LD50 Rat: 500 mg/kg (Converted acute toxicity point estimate)
2-Butoxyethanol	dermal	LD50 Rabbit: 1060 mg/kg
	Oral ATE	LD50 Rat: 1200 mg/kg (Annex VI to the CLP)
	oral	LD50 Rat: 470 mg/kg
	Inhalation ATE	LC50 Rat: 11 mg/L (4 hr [Vapor])
Alcohols, C9-11, branched and linear, ethoxylated	oral	LD50 Rat: 1378 mg/kg
	dermal	LD50 Rabbit: > 2000 mg/kg
	inhalation	LC50 Rat: >100 mg/m³ (6 hr [Vapor; read-across])

Skin Corrosion/Irritation

Assessment:

Causes severe skin burns and eye damage.

Product Data:

No data available.

Substance Data:

Name	Result
Pentasodium triphosphate	Causes skin irritation.
Disodium metasilicate	Causes severe skin burns.
Sodium hydroxide	Causes severe skin burns.
2-dodecoxyethyl hydrogen sulfate	Causes skin irritation.
Alcohols, C12-15, ethoxylated	Causes skin irritation.
Ethylene oxide	Causes severe skin burns.
2-Butoxyethanol	Causes skin irritation.

Serious Eye Damage/Irritation

Assessment:

Causes serious eye damage.

Product Data:

No data available.

Substance Data:

Name	Result
Pentasodium triphosphate	Causes serious eye irritation.
Tetrasodium pyrophosphate	Causes serious eye damage.
Disodium metasilicate	Causes serious eye damage.
Sodium hydroxide	Causes serious eye damage.
Trisodium nitrilotriacetate	Causes serious eye irritation.
2-dodecoxyethyl hydrogen sulfate	Causes serious eye irritation.
Alcohols, C12-15, ethoxylated	Causes serious eye damage.
Ethylene oxide	Causes serious eye damage.
1,4-dioxane	Causes serious eye irritation.
2-Butoxyethanol	Causes serious eye irritation.
Alcohols, C9-11, branched and linear, ethoxylated	Causes serious eye damage.

Respiratory or Skin Sensitization

Assessment: Based on available data, the classification criteria are not met.

Product Data:

No data available.

Substance Data: No data available.

Carcinogenicity

Assessment:

Suspected of causing cancer.

Product Data: No data available.

Substance Data:

Name	Species	Result
Trisodium nitrilotriacetate		Suspected of causing cancer.
Ethylene oxide		May cause cancer.
1,4-dioxane		May cause cancer. This substance is characterized as "likely to be carcinogenic to humans." This characterization is based on the following findings: (1) inadequate evidence of carcinogenicity in humans, and (2) sufficient evidence in animals (i.e., hepatic tumors in multiple species [three strains of rats, two strains of mouse, and in guinea pigs] mesotheliomas of the peritoneum, mammary, and nasal tumors have also been observed in rats following 2 years of oral exposure to this substance). U.S. Environmental Protection Agency's Integrated Risk Information System (IRIS).

International Agency for Research on Cancer (IARC):

Name	Classification
Alcohols, C12-15, ethoxylated	Not Applicable
2-dodecoxyethyl hydrogen sulfate	Not Applicable
Ethylene oxide	Group 1
1,4-dioxane	Group 2B
Pentasodium triphosphate	Not Applicable
Disodium metasilicate	Not Applicable
Tetrasodium pyrophosphate	Not Applicable
Sodium hydroxide	Not Applicable
Trisodium nitrilotriacetate	Group 2B
Ethane-1,2-diol	Not Applicable
2-Butoxyethanol	Group 3
Alcohols, C9-11, branched and linear, ethoxylated	Not Applicable

National Toxicology Program (NTP):

Name	Classification
Alcohols, C12-15, ethoxylated	Not Applicable
2-dodecoxyethyl hydrogen sulfate	Not Applicable
Ethylene oxide	Known to be human carcinogens
1,4-dioxane	Reasonably anticipated to be human carcinogens
Pentasodium triphosphate	Not Applicable
Disodium metasilicate	Not Applicable
Tetrasodium pyrophosphate	Not Applicable
Sodium hydroxide	Not Applicable
Trisodium nitrilotriacetate	Not Applicable
Ethane-1,2-diol	Not Applicable
2-Butoxyethanol	Not Applicable
Alcohols, C9-11, branched and linear, ethoxylated	Not Applicable

OSHA Carcinogens: Not applicable

Germ Cell Mutagenicity

Assessment: Based on available data, the classification criteria are not met.

Product Data:

No data available.

Substance Data:

Name	Result
Ethylene oxide	May cause genetic defects.

Reproductive Toxicity

Assessment: Based on available data, the classification criteria are not met.

Product Data:

No data available.

Substance Data:

Name	Result
Ethylene oxide	May damage fertility. Suspected of damaging the unborn child.

Specific Target Organ Toxicity (Single Exposure)

Assessment:

Causes damage to organs.

Product Data:

No data available.

Substance Data:

Name	Result
Pentasodium triphosphate	May cause respiratory irritation.
Disodium metasilicate	May cause respiratory irritation.
Ethylene oxide	May cause respiratory irritation.
	May cause drowsiness or dizziness.
1,4-dioxane	May cause respiratory irritation.

Specific Target Organ Toxicity (Repeated Exposure)

Assessment:

May cause damage to organs through prolonged or repeated exposure.

Product Data:

No data available.

Substance Data:

Name	Result
Ethylene oxide	Studies on the effects of Ethylene oxide have concluded not only neurotoxic symptoms in humans, but also measured effects on nerve conduction velocities indicative of sensorimotor neuropathy, and axonal degeneration observed in nerve biopsies of exposed workers.
Ethane-1,2-diol	May cause damage to Kidneys through prolonged or repeated Oral exposure.

Aspiration toxicity

Assessment: Based on available data, the classification criteria are not met.

Product Data:

No data available.

Substance Data: No data available.

Information on Likely Routes of Exposure:
No data available.
Symptoms Related to the Physical, Chemical, and Toxicological Characteristics:
No data available.
Other Information:
No data available.

SECTION 12: Ecological Information

Acute (Short-Term) Toxicity

Assessment: Based on available data, the classification criteria are not met.
Product Data: No data available.
Substance Data:

Name	Result
Alcohols, C12-15, ethoxylated	Aquatic Invertebrates EC50 Daphnia magna: 0.14 mg/L (48 hr)
	Aquatic Plants EC50 Pseudokirchneriella subcapitata: 0.75 mg/L (72 hr)
Ethylene oxide	Aquatic Plants EC50 Pseudokirchneriella subcapitata: 240 mg/L (96 h, read-across substance data)
	Aquatic Invertebrates LC50 Daphnia magna: 212 mg/L (48 h)
	Fish LC50 Pimephales promelas: 84 mg/L (96 h)
Pentasodium triphosphate	Fish LC50 Oryzias latipes: >1000 mg/L (48 hr)
	Aquatic Invertebrates EC50 Daphnia magna: >100 mg/L (48 hr)
Disodium metasilicate	Aquatic Plants EC50 Freshwater algae: 207 mg/L (72 hr [biomass; read-across])
	Fish LC50 Danio rerio: 210 mg/L (96 hr)
	Aquatic Invertebrates EC50 Daphnia magna: 1700 mg/L (48 hr [read-across])
Tetrasodium pyrophosphate	Aquatic Plants EC50 Desmodesmus subspicatus: >100 mg/L (72 hr [growth rate])
	Fish LC50 Oncorhynchus mykiss: >100 mg/L (96 hr)
	Aquatic Invertebrates EC50 Daphnla magna: >100 mg/L (48 hr [Immobilization])
Sodium hydroxide	Fish LC50 Gambusia affinis: 125 mg/L (96 hr)
	Aquatic Invertebrates EC50 Ceriodaphnia sp.: 40.4 mg/L (48 hr [immobilization])
Trisodium nitrilotriacetate	Fish LC50 Pimephales promelas: 114 mg/L (96 hr)
	Aquatic Plants EC50 Desmodesmus subspicatus: >100 mg/L (72 hr [growth rate])
	Aquatic Invertebrates EC50 Daphnia magna: 560 mg/L (96 hr [mortality])
1,4-dioxane	Fish LC50 Pimephales promelas: 9850 mg/L (96 hr)
	Aquatic Invertebrates EC50 Daphnia magna: >1000 mg/L (48 hr)
	Aquatic Plants EC50 Pseudokirchneriella subcapitata: >1000 mg/L (72 hr)
Ethane-1,2-diol	Aquatic Plants EC50 Green Algae: 479 mg/L (72 h)
	Aquatic Invertebrates EC50 Daphnia magna: 13,900 mg/L (48 h)
	Fish LC50 Pimephales promelas: 72,860 mg/L (96 h)

Name	Result
2-Butoxyethanol	Aquatic Invertebrates EC50 Daphnia magna: 1550 mg/L (48 hr [mobility])
	Fish LC50 Oncorhynchus mykiss: 1474 mg/L (96 hr)
	Aquatic Plants EC50 Freshwater algae: 1840 mg/L (72 hr [growth rate])
Alcohols, C9-11, branched and linear, ethoxylated	Fish LC50 Oncorhynchus mykiss: 5 mg/L (96 hr)
	Aquatic Invertebrates EC50 Daphnia magna: 2.5 mg/L (48 hr)
	Aquatic Plants ErC50 Selenastrum capricornutum: 1.4 mg/L (96 hr)

Chronic (Long-Term) Toxicity

Assessment: Based on available data, the classification criteria are not met.

Product Data: No data available.

Substance Data:

Name	Result
Alcohols, C12-15, ethoxylated	Fish NOEC Fathead minnow: 0.16 mg/L (10 days)
	Aquatic Invertebrates NOEC Daphnia magna: 0.77 mg/L (21 days)
Pentasodium triphosphate	Aquatic Plants EC50 Skeletonema costatum: >900 mg/L (7 d [growth rate])
Trisodium nitrilotriacetate	Aquatic Invertebrates LC50 Pagurus longicarpus: 1875 mg/L (7 d)
1,4-dioxane	Aquatic Plants NOEC Pseudokirchneriella subcapitata: 580 mg/L (72 hr)
	Fish NOEC Pimephales promelas: 145 mg/L (32 d)
	Aquatic Invertebrates NOEC Daphnia magna: 1000 mg/L (21 d)
Ethane-1,2-diol	Fish NOEC Pimephales promelas: 2629 mg/L (7 d)
	Aquatic Invertebrates EC50 Daphnia magna: 690 mg/L (16 d)
2-Butoxyethanol	Fish LC50 Poecilia reticulata: 983 mg/L (7 d)
	Aquatic Invertebrates EC50 Daphnia magna: 297 mg/L (21 d [reproduction])
Alcohols, C9-11, branched and linear, ethoxylated	Fish NOEC Lepomis macrochirus: > 0.33 mg/L (30 d)
	Aquatic Invertebrates NOEC Daphnia magna: 0.77 mg/L (21 d)

Persistence and Degradability

Product Data: No data available.

Substance Data:

Name	Result
Alcohols, C12-15, ethoxylated	Readily biodegradable (61% degradation after 28 days).
Ethylene oxide	Readily biodegradable (96% degradation after 28 days, measured by TOC removal).
1,4-dioxane	Not readily biodegradable (< 10 % degradation after 29 days).
Pentasodium triphosphate	Biodegradation studies are not applicable to inorganic substances.
Disodium metasilicate	Biodegradation studies are not applicable to inorganic substances.
Tetrasodium pyrophosphate	Biodegradation studies are not applicable to inorganic substances.
Sodium hydroxide	Persistence and degradability studies do not apply to inorganic substances.
Trisodium nitrilotriacetate	Substance is readily biodegradable. >95% degradation in water, measured by DOC removal, after 28 days.
Ethane-1,2-diol	Readily biodegradable (90-100% degradation after 10 days).
2-Butoxyethanol	Readily biodegradable (90.4% degradation after 28 days, measured by CO2 evolution).

Name	Result
Alcohols, C9-11, branched and linear, ethoxylated	The substance is readily biodegradable. 70 - 100% degradation in water, measured by CO2 evolution, after 28 days.

Bioaccumulative Potential

Product Data: No data available.

Substance Data:

Name	Result
Ethylene oxide	Low potential for bioaccumulation (logKow = -0.3).
1,4-dioxane	Does not accumulate in aquatic organisms (mean BCF: 0.45).
Pentasodium triphosphate	This substance hydrolysed to orthophosphate in aqueous and biological systems. The degradation products of sodium tripolyphosphate are essential nutrients (food element) for plants, and stimulate the growth of water plants (macrophytes) and/or algae (phytoplankton). The potential for bioaccumulation is therefore considered to be minimal.
Disodium metasilicate	Silicon is an essential trace element participating in the normal metabolism of higher animals.
Tetrasodium pyrophosphate	Tetrasodium pyrophosphate is hydrolysed to orthophosphate and sodium ions in aqueous and biological systems. The degradation products of tetrasodium pyrophosphate are essential nutrients (food elements) for plants, and stimulate the growth of water plants (macrophytes) and/or algae (phytoplankton) and are ubiquitous in the environment. The potential for bioaccumulation is therefore considered to be minimal.
Sodium hydroxide	Bioaccumulation is not expected based on the substance's high water solubility. In addition, sodium is a naturally-occurring element that is prevalent in the environment and to which organisms are exposed regularly, for which they have some capacity to regulate the concentration in the organism.
Trisodium nitrilotriacetate	Bioaccumulation is not expected. BCF (aquatic species): 3 L/kg ww
Ethane-1,2-diol	Bioaccumulation in organisms is not to be expected (log Kow: -1.36).
2-Butoxyethanol	Not expected to bioaccumulate (log Kow = 0.83).
Alcohols, C9-11, branched and linear, ethoxylated	The substance has low potential for bioaccumulation. Bioaccumulation in organisms is negligible, due to biotransformation and excretion of alcohol ethoxylates. BCF: 237 L/kg

Mobility in Soil

Product Data: No data available.

Substance Data:

Name	Result
Sodium hydroxide	The substance has a high water solubility. As the dilution of the substance increases, its speed of movement through soil increases. During movement through soil, some ion exchange will occur.
1,4-dioxane	Significant adsorption to solid soil phase is not expected (calculated log Koc: 0.51 at 25 °C).
Pentasodium triphosphate	The substance has a high potential for adsorption to soil and sediment.
Trisodium nitrilotriacetate	The substance has a low potential for adsorption to soil and sediment. log Kp (sediment-water): 1.6 L/kg
Ethane-1,2-diol	Highly mobile (Koc: 1 L/kg).
Alcohols, C9-11, branched and linear, ethoxylated	Moderately mobile (log Koc: 1.575 - 2.365).

Results of PBT and vPvB assessment

Product Data:

PBT assessment: This product does not contain any substances that are assessed to be a PBT.

vPvB assessment: This product does not contain any substances that are assessed to be a vPvB.

Substance Data:

PBT assessment:

Disodium metasilicate	PBT assessment does not apply to inorganic substances.
Trisodium nitrilotriacetate	The substance is not PBT.
Alcohols, C12-15, ethoxylated	The substance is not PBT.
Ethylene oxide	This substance is not PBT.
1,4-dioxane	This substance is not PBT.
Pentasodium triphosphate	PBT assessment does not apply to inorganic substances.
Tetrasodium pyrophosphate	PBT Assessment does not apply to inorganic substances.
Sodium hydroxide	PBT assessment does not apply to inorganic substances.
Ethane-1,2-diol	The substance is not PBT.
2-Butoxyethanol	The substance is not PBT.
Alcohols, C9-11, branched and linear, ethoxylated	The substance is not PBT.

vPvB assessment:

Trisodium nitrilotriacetate	The substance is not vPvB.
Alcohols, C12-15, ethoxylated	The substance is not vPvB.
Ethylene oxide	This substance is not vPvB.
1,4-dioxane	This substance is not vPvB.
Pentasodium triphosphate	vPvB assessment does not apply to inorganic substances.
Disodium metasilicate	vPvB assessment does not apply to this substance as it is inorganic.
Tetrasodium pyrophosphate	vPvB Assessment does not apply to inorganic substances.
Sodium hydroxide	vPvB assessment does not apply to inorganic substances.
Ethane-1,2-diol	The substance is not vPvB.
2-Butoxyethanol	The substance is not vPvB.
Alcohols, C9-11, branched and linear, ethoxylated	The substance is not vPvB.

Other Adverse Effects: No data available.

SECTION 13: Disposal Considerations

Disposal Methods:

It is the responsibility of the waste generator to characterize all waste material according to regulatory entities.

Contaminated packages:

Not determined or not applicable.

SECTION 14: Transport Information

United States Transportation of Dangerous Goods (49 CFR DOT)

UN Number	1823
UN Proper Shipping Name	Sodium Hydroxide, Solid

UN Transport Hazard Class(es)	8 
Packing Group	II
Environmental Hazards	None
Special Precautions for User	None

International Maritime Dangerous Goods (IMDG)

UN Number	Not regulated
UN Proper Shipping Name	Not regulated
UN Transport Hazard Class(es)	None
Packing Group	None
Environmental Hazards	None
Special Precautions for User	None

International Air Transport Association Dangerous Goods Regulations (IATA-DGR)

UN Number	Not regulated
UN Proper Shipping Name	Not regulated
UN Transport Hazard Class(es)	None
Packing Group	None
Environmental Hazards	None
Special Precautions for User	None

SECTION 15: Regulatory Information

United States Regulations

Inventory Listing (TSCA): All ingredients are listed-active or exempt.

Significant New Use Rule (TSCA Section 5): None of the ingredients are listed.

Export Notification under TSCA Section 12(b): None of the ingredients are listed.

SARA Section 302 Extremely Hazardous Substances:

75-21-8	Ethylene oxide	Listed

SARA Section 313 Toxic Chemicals:

75-21-8	Ethylene oxide	Listed
123-91-1	1,4-dioxane	Listed
5064-31-3	Trisodium nitrilotriacetate	Listed
107-21-1	Ethane-1,2-diol	Listed
111-76-2	2-Butoxyethanol	Listed

CERCLA:

1310-73-2	Sodium hydroxide	Listed	1000 lb
75-21-8	Ethylene oxide	Listed	10 lbs
123-91-1	1,4-dioxane	Listed	100 lbs
107-21-1	Ethane-1,2-diol	Listed	5000 lb
111-76-2	2-Butoxyethanol	Listed	N/A

RCRA:

75-21-8	Ethylene oxide	Listed	U115
123-91-1	1,4-dioxane	Listed	U108

Section 112(r) of the Clean Air Act (CAA):

75-21-8	Ethylene oxide	Listed

Massachusetts Right to Know:

75-21-8	Ethylene oxide	Listed
123-91-1	1,4-dioxane	Listed
7758-29-4	Pentasodium triphosphate	Listed
7722-88-5	Tetrasodium pyrophosphate	Listed
1310-73-2	Sodium hydroxide	Listed
5064-31-3	Trisodium nitrilotriacetate	Listed
107-21-1	Ethane-1,2-diol	Listed
111-76-2	2-Butoxyethanol	Listed

New Jersey Right to Know:

75-21-8	Ethylene oxide	Listed
123-91-1	1,4-dioxane	Listed
7722-88-5	Tetrasodium pyrophosphate	Listed
1310-73-2	Sodium hydroxide	Listed
107-21-1	Ethane-1,2-diol	Listed
111-76-2	2-Butoxyethanol	Listed

New York Right to Know:

75-21-8	Ethylene oxide	Listed
123-91-1	1,4-dioxane	Listed
7758-29-4	Pentasodium triphosphate	Listed
7722-88-5	Tetrasodium pyrophosphate	Listed
1310-73-2	Sodium hydroxide	Listed
107-21-1	Ethane-1,2-diol	Listed
111-76-2	2-Butoxyethanol	Listed

Pennsylvania Right to Know:

75-21-8	Ethylene oxide	Listed
123-91-1	1,4-dioxane	Listed
7758-29-4	Pentasodium triphosphate	Listed
7722-88-5	Tetrasodium pyrophosphate	Listed
1310-73-2	Sodium hydroxide	Listed
107-21-1	Ethane-1,2-diol	Listed
111-76-2	2-Butoxyethanol	Listed

California Proposition 65:

⚠**WARNING:** This product can expose you to 1,4-dioxane; which is known to the State of California to cause cancer; and Ethane-1,2-diol, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

⚠**WARNING:** This product can expose you to Ethylene oxide; which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

Additional information: Not determined.

SECTION 16: Other Information

Abbreviations and Acronyms: None

Disclaimer:

This product has been classified in accordance with OSHA HCS 2012 guidelines. The information provided in this SDS is correct, to the best of our knowledge, based on information available. The information given is designed only as a guidance for safe handling, use, storage, transportation and disposal and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials, unless specified in the text. The responsibility to provide a safe workplace remains with the user.

NFPA: 0-0-0

HMIS: 0-0-0

Initial Preparation Date: 02.08.2023

End of Safety Data Sheet