Safety Data Sheet

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Initial Preparation Date: 06.20.2019

Revision date: 03.06.2023

Low pH Pre-soak HPC

SECTION 1: Identification

Product Identifier

Product Name: Low pH Pre-soak HPC

Product code: CPS-100

Recommended Use of the Product and Restriction on Use

Relevant Identified Uses: Presoak, Liquid Detergent

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 1A

Label elements

Hazard Pictograms:

Signal Word: Danger

Hazard statements:

H314 Causes severe skin burns and eye damage
H318 Causes serious eye damage
H350 May cause cancer

Precautionary Statements:

P260 Do not breathe dust/fume/gas/mist/vapors/spray
P264 Wash contaminated area thoroughly after handling

P280 Wear protective gloves/protective clothing/eye protection/face protection
P202 Do not handle until all safety precautions have been read and understood
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
P310 Immediately call a POISON CENTER/doctor if difficulty in breathing occurs.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P405 Store locked up
P501 It is the responsibility of the waste generator to properly characterize all waste materials according to applicable regulatory entities.

Hazards Not Otherwise Classified: None

SECTION 3: Composition/Information on Ingredients

Identification	Name	Weight %
CAS Number: 7664-38-2	Orthophosphoric Acid	1-80
CAS Number: 68584-22-5	Benzenesulfonic acid, C10-16-alkyl derivatives	<60
CAS Number: 111-76-2	2-Butoxyethanol	1-10
CAS Number: 1341-49-7	Ammonium hydrogendifluoride	1-5
CAS Number: 1300-72-7	Sodium Xylenesulfonate	0.4-40
CAS Number: 84133-50-6	Alcohols, C12-14-secondary, ethoxylated	0.26-4
CAS Number: 68131-40-8	Alcohols, secondary C11-15, ethoxylated	0.26-3.8
CAS Number: 68131-39-5	Alcohols, C12-15, ethoxylated	0.1105-1.615
CAS Number: 68648-87-3	Benzene, C10-16-alkyl derivs	<2
CAS Number: 7757-82-6	Sodium sulphate	0.01-0.3
CAS Number: 75-21-8	Ethylene oxide	<0.009

Additional Information: None

SECTION 4: First Aid Measures

Description of First Aid Measures

General Notes:

Show this Safety Data Sheet to the doctor in attendance.

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.

Delayed Symptoms and Effects:

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

Exposure may cause cancer. Effects are dependent on exposure (dose, concentration, contact time).

Immediate Medical Attention and Special Treatment

Specific Treatment:

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:

Treat symptomatically.

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).

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
OSHA	2-Butoxyethanol	111-76-2	8-Hour TWA-PEL: 240 mg/m³ (50 ppm)
	Ammonium hydrogendifluoride	1341-49-7	8-Hour TWA-PEL: 2.5 mg/m³ (Fluorides, as F)
	Orthophosphoric Acid	7664-38-2	8-Hour TWA-PEL: 1 mg/m³
	Ethylene oxide	75-21-8	TWA: 1 ppm
	Ethylene oxide	75-21-8	STEL: 5 ppm
NIOSH	2-Butoxyethanol	111-76-2	IDLH: 700 ppm
	2-Butoxyethanol	111-76-2	REL-TWA: 24 mg/m³ (5 ppm [up to 10 hr])
	Ammonium hydrogendifluoride	1341-49-7	REL-TWA: 2.5 mg/m³ (Fluorides, solid inorganic, as F [up to 10 hr])
	Ammonium hydrogendifluoride	1341-49-7	IDLH: 250 mg/m³ (Fluorides, solid, inorganic, as F)
	Orthophosphoric Acid	7664-38-2	REL-TWA: 1 mg/m³ (up to 10 hr)

Country (Legal Basis)	Substance	Identifier	Permissible concentration
	Orthophosphoric Acid	7664-38-2	STEL: 3 mg/m³
	Orthophosphoric Acid	7664-38-2	IDLH: 1000 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)
ACGIH	2-Butoxyethanol	111-76-2	8-Hour TWA: 20 ppm
	Ammonium hydrogendifluoride	1341-49-7	8-Hour TWA: 2.5 mg/m³ (Fluorides, as F)
	Orthophosphoric Acid	7664-38-2	8-Hour TWA: 1 mg/m³
	Orthophosphoric Acid	7664-38-2	15-Minute STEL: 3 mg/m³
	Ethylene oxide	75-21-8	TWA: 1 ppm
United States(California)	Orthophosphoric Acid	7664-38-2	8-Hour TWA-PEL: 1 mg/m³
	Orthophosphoric Acid	7664-38-2	15-Minute STEL: 3 mg/m³
	2-Butoxyethanol	111-76-2	8-Hour TWA-PEL: 97 mg/m³ (20 ppm)
	Ammonium hydrogendifluoride	1341-49-7	8-Hour TWA-PEL: 2.5 mg/m³ (Fluorides, as F)
	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)

Biological Limit Values:

Country (Legal Basis)	Substance	Identifier	Determinant	Specimen	Sampling time	Permissible limits
ACGIH	2-Butoxyethanol	111-76-2	Butoxyacetic acid (with hydrolysis)	Creatinine in Urine	End of shift	200 mg/g
	Ammonium hydrogendifluoride	1341-49-7	Fluoride	Urine	Prior to shift	2 mg/L
	Ammonium hydrogendifluoride	1341-49-7	Fluoride	Urine	End of shift	3 mg/L
	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

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	Liquid
Odor	Std.
Odor threshold	Not determined or not available.
pH	2
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
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])
Ammonium hydrogendifluoride	oral	LD50 Rat: 130 mg/kg

Name	Route	Result
Benzenesulfonic acid, C10-16-alkyl derivatives	inhalation	LC50 Rat: >1.9 mg/L (4 h [aerosol])
	Dermal ATE	LD50 Rabbit: 1100 mg/kg
	Oral ATE	LD50 Rat: 500 mg/kg
Orthophosphoric Acid	inhalation	LC50 Rat: 1.689 mg/L (1 hr)
	oral	LD50 Rat: 1530 mg/kg
	dermal	LD50 Rabbit: 2740 mg/kg
Sodium sulphate	oral	LD50 Rat: > 2000 mg/kg
	inhalation	LC50 Rat: > 2.4 mg/L (4 hr - Dust)
Sodium Xylenesulfonate	dermal	LD50 Rabbit: >= 2000 mg/kg
	oral	LD50 Rat: >= 3346 mg/kg
Alcohols, secondary C11-15, ethoxylated	oral	LD50 Rat: >= 2000 mg/kg
	dermal	LD50 Rat: >2000 mg/kg
Alcohols, C12-15, ethoxylated	oral	LD50 Rat: > 5000 mg/kg
	dermal	LD50 Rat: > 2000 mg/kg
Ethylene oxide	Inhalation ATE	LC50 Rat: 700 ppmV ((Gases))
	Oral ATE	LD50 Rat: 100 mg/kg

Skin Corrosion/Irritation

Assessment:

Causes severe skin burns and eye damage.

Product Data:

No data available.

Substance Data:

Name	Result
Orthophosphoric Acid	Causes severe skin burns.
2-Butoxyethanol	Causes skin irritation.
Ammonium hydrogendifluoride	Causes severe skin burns.
Benzenesulfonic acid, C10-16-alkyl derivatives	Causes severe skins burns.
Alcohols, C12-14-secondary, ethoxylated	Causes skin irritation.
Alcohols, secondary C11-15, ethoxylated	Causes skin irritation.
Alcohols, C12-15, ethoxylated	Causes skin irritation.
Ethylene oxide	Causes severe skin burns.

Serious Eye Damage/Irritation

Assessment:

Causes serious eye damage.

Product Data:

No data available.

Substance Data:

Name	Result
Orthophosphoric Acid	Causes serious eye damage.

Name	Result
2-Butoxyethanol	Causes serious eye irritation.
Ammonium hydrogendifluoride	Causes serious eye damage.
Benzenesulfonic acid, C10-16-alkyl derivatives	Causes serious eye damage.
Sodium Xylenesulfonate	Causes serious eye irritation.
Alcohols, C12-14-secondary, ethoxylated	Causes serious eye damage.
Alcohols, secondary C11-15, ethoxylated	Causes serious eye damage.
Alcohols, C12-15, ethoxylated	Causes serious eye damage.
Ethylene oxide	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:

May cause cancer.

Product Data: No data available.

Substance Data:

Name	Species	Result
Ethylene oxide		May cause cancer.

International Agency for Research on Cancer (IARC):

Name	Classification
Orthophosphoric Acid	Not Applicable
2-Butoxyethanol	Group 3
Ammonium hydrogendifluoride	Group 3
Benzenesulfonic acid, C10-16-alkyl derivatives	Not Applicable
Sodium sulphate	Not Applicable
Sodium Xylenesulfonate	Not Applicable
Alcohols, secondary C11-15, ethoxylated	Not Applicable
Alcohols, C12-14-secondary, ethoxylated	Not Applicable
Alcohols, C12-15, ethoxylated	Not Applicable
Ethylene oxide	Group 1

National Toxicology Program (NTP):

Name	Classification
Orthophosphoric Acid	Not Applicable
2-Butoxyethanol	Not Applicable

Name	Classification
Ammonium hydrogendifluoride	Not Applicable
Benzenesulfonic acid, C10-16-alkyl derivatives	Not Applicable
Sodium sulphate	Not Applicable
Sodium Xylenesulfonate	Not Applicable
Alcohols, secondary C11-15, ethoxylated	Not Applicable
Alcohols, C12-14-secondary, ethoxylated	Not Applicable
Alcohols, C12-15, ethoxylated	Not Applicable
Ethylene oxide	Known to be human carcinogens

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

Product Data:

No data available.

Substance Data:

Name	Result
Ethylene oxide	May cause respiratory irritation.
	May cause drowsiness or dizziness.

Specific Target Organ Toxicity (Repeated Exposure)

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

Product Data:

No data available.

Substance Data:

Name	Result
Orthophosphoric Acid	Repeated and/or prolonged exposure may have effects on the upper respiratory tract and lungs. This may result in chronic inflammation and reduced lung function.
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.

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
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])
Orthophosphoric Acid	Aquatic Invertebrates EC50 Daphnia magna: > 100 mg/L (48 hr [immobilization])
	Aquatic Plants EC50 Desmodesmus subspicatus: > 100 mg/L (72 hr [growth rate])
Ammonium hydrogendifluoride	Fish LC50 Pimephales promelas: 0.75 - 3.4 mg/L (96 hr)
	Aquatic Invertebrates LC50 Daphnia magna: 101 mg/L (48 hr [read-across substance])
Sodium sulphate	Fish LC50 Pimephales promelas: 7960 mg/L (96 hr)
	Aquatic Invertebrates LC50 Daphnia magna: 1766 mg/L (48 hr)
Sodium Xylenesulfonate	Aquatic Plants EC50 Selenastrum capricornutum: >=758 mg/L (96 hr [growth rate; read-across])
	Fish LC50 Oncorhynchus mykiss: >=1580 mg/L (96 hr [read-across])
	Aquatic Invertebrates EC50 Daphnia magna: >1020 mg/L (48 hr [mobility; read-across])

Name	Result
Alcohols, secondary C11-15, ethoxylated	Aquatic Plants EC50 Pseudokirchneriella subcapitata: 2.01 mg/L (72 hr [growth rate])
	Fish LC50 Lepomis macrochirus: 3.2 mg/L (96 hr)
	Aquatic Invertebrates EC50 Daphnia magna: 5.66 mg/L (48 hr)
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)

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)
2-Butoxyethanol	Fish LC50 Poecilia reticulata: 983 mg/L (7 d)
	Aquatic Invertebrates EC50 Daphnia magna: 297 mg/L (21 d [reproduction])
Sodium sulphate	Aquatic Invertebrates EC50 Ceriodaphnia dubia: 1698 mg/L (7 d [reproduction])
Alcohols, secondary C11-15, ethoxylated	Fish EC10 Pimephales promelas: 0.87 mg/L (32 d [egg survival; QSAR])
	Aquatic Invertebrates NOEC Daphnia: 0.2 mg/L (21 d [mortality])

Persistence and Degradability

Product Data: No data available.

Substance Data:

Name	Result
Benzenesulfonic acid, C10-16-alkyl derivatives	Under test conditions no biodegradation observed.
Alcohols, C12-15, ethoxylated	Readily biodegradable (61% degradation after 28 days).
Orthophosphoric Acid	Degradation studies are not applicable to inorganic substances.
2-Butoxyethanol	Readily biodegradable (90.4% degradation after 28 days, measured by CO2 evolution).
Sodium Xylenesulfonate	The substance is readily biodegradable. 83 - 85% degradation, measured by CO2 evolution, after 28 days.
Alcohols, secondary C11-15, ethoxylated	The substance is readily biodegradable. 65% degradation in water, measured by O2 consumption, after 28 days.
Ethylene oxide	Readily biodegradable (96% degradation after 28 days, measured by TOC removal).

Bioaccumulative Potential

Product Data: No data available.

Substance Data:

Name	Result
2-Butoxyethanol	Not expected to bioaccumulate (log Kow = 0.83).
Ammonium hydrogendifluoride	The limited data indicate that fluoride biomagnification in the aquatic environment is of little significance. Fluoride accumulates in aquatic organisms predominantly in the exoskeleton of crustacea and in the skeleton of fish; no accumulation was reported for edible tissue.
Sodium sulphate	This substance is not expected to bioaccumulate. It dissociates in water and the sulfate ion is easily reduced in the sulfur cycle.
Alcohols, secondary C11-15, ethoxylated	The substance is bioaccumulative (B) but not very bioaccumulative (vB). Calculated (QSAR) BCF: >= 181 - <= 3 010 dimensionless
Ethylene oxide	Low potential for bioaccumulation (logKow = -0.3).

Mobility in Soil

Product Data: No data available.

Substance Data:

Name	Result
Ammonium hydrogendifluoride	The behaviour of fluoride in water is dependent on pH and mineral content. Fluoride is deposited to sediment as insoluble complexes and is essentially immobile in soil due to its incorporation into insoluble complexes.
Sodium sulphate	This substance is not expected to adsorb onto soil or sediment. It dissociates in water and the sulfate ion is easily reduced in the sulfur cycle.
Alcohols, secondary C11-15, ethoxylated	The substance is hardly mobile to immobile in soil with a high potential for adsorption to soil and sediment. Koc: >= 14 000 - <= 420 000 dimensionless

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:

Ammonium hydrogendifluoride	The substance is not PBT.
Sodium sulphate	PBT assessment does not apply to inorganic substances.
Alcohols, C12-15, ethoxylated	The substance is not PBT.
Orthophosphoric Acid	The PBT assessment does not apply to inorganic substances.
2-Butoxyethanol	The substance is not PBT.
Sodium Xylenesulfonate	The substance is not PBT.
Alcohols, secondary C11-15, ethoxylated	The substance is not PBT.
Ethylene oxide	This substance is not PBT.

vPvB assessment:

Ammonium hydrogendifluoride	The substance is not vPvB.
Sodium sulphate	vPvB assessment does not apply to inorganic substances.
Alcohols, C12-15, ethoxylated	The substance is not vPvB.
Orthophosphoric Acid	The vPvB assessment does not apply to inorganic substances.

2-Butoxyethanol	The substance is not vPvB.
Sodium Xylenesulfonate	The substance is not vPvB.
Alcohols, secondary C11-15, ethoxylated	The substance is not vPvB.
Ethylene oxide	This 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 properly characterize all waste materials according to applicable regulatory entities.

Contaminated packages:

Not determined or not applicable.

SECTION 14: Transport Information

United States Transportation of Dangerous Goods (49 CFR DOT)

UN Number	UN1760
UN Proper Shipping Name	Corrosive Liquid N.O.S. (Phosphoric Acid, Sulfonic Acid)
UN Transport Hazard Class(es)	8 
Packing Group	III
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:

111-76-2	2-Butoxyethanol	Listed
75-21-8	Ethylene oxide	Listed

CERCLA:

7664-38-2	Orthophosphoric Acid	Listed	5000 Lbs.
111-76-2	2-Butoxyethanol	Listed	N/A
1341-49-7	Ammonium hydrogendifluoride	Listed	100 lbs
75-21-8	Ethylene oxide	Listed	10 lbs

RCRA:

1341-49-7	Ammonium hydrogendifluoride	Listed	F039
75-21-8	Ethylene oxide	Listed	U115

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

75-21-8	Ethylene oxide	Listed

Massachusetts Right to Know:

7664-38-2	Orthophosphoric Acid	Listed
1341-49-7	Ammonium hydrogendifluoride	Listed
7757-82-6	Sodium sulphate	Listed
111-76-2	2-Butoxyethanol	Listed
75-21-8	Ethylene oxide	Listed

New Jersey Right to Know:

7664-38-2	Orthophosphoric Acid	Listed
1341-49-7	Ammonium hydrogendifluoride	Listed
111-76-2	2-Butoxyethanol	Listed
75-21-8	Ethylene oxide	Listed

New York Right to Know:

7664-38-2	Orthophosphoric Acid	Listed
1341-49-7	Ammonium hydrogendifluoride	Listed
7757-82-6	Sodium sulphate	Listed
111-76-2	2-Butoxyethanol	Listed
75-21-8	Ethylene oxide	Listed

Pennsylvania Right to Know:

7664-38-2	Orthophosphoric Acid	Listed
1341-49-7	Ammonium hydrogendifluoride	Listed
7757-82-6	Sodium sulphate	Listed
111-76-2	2-Butoxyethanol	Listed
75-21-8	Ethylene oxide	Listed

California Proposition 65:

⚠**WARNING:** This product can expose you to Strong inorganic acid mists containing sulfuric acid; which is known to the State of California to cause cancer. 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

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End of Safety Data Sheet