Safety Data Sheet

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Initial Preparation Date: 04.24.2023

Revision date: 04.24.2023

Aqua Matrix

SECTION 1: Identification

Product Identifier

Product Name: Aqua Matrix

Product code: PR-190

Recommended Use of the Product and Restriction on Use

Relevant Identified Uses: For use in Automatic Car Wash Equipment only

Uses Advised Against: Manual car or Equipment cleaning

Reasons Why Uses Advised Against: Corrosivity, Irritancy

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 1A
Serious eye damage, category 1
Flammable liquids, category 4
Specific target organ toxicity - single exposure, category 1
Specific target organ toxicity - single exposure, category 3, narcotic effects

Label elements

Hazard Pictograms:

Signal Word: Danger

Hazard statements:

H227 Combustible liquid
H314 Causes severe skin burns and eye damage
H318 Causes serious eye damage

H370 Causes damage to organs.
H336 May cause drowsiness or dizziness

Precautionary Statements:

P260 Do not breathe dust/fume/gas/mist/vapors/spray
P280 Wear protective gloves/protective clothing/eye protection/face protection
P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking
P270 Do not eat, drink or smoke when using this product
P261 Avoid breathing dust/fume/gas/mist/vapors/spray
P271 Use only outdoors or in a well-ventilated area
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
P405 Store locked up
P403+P235 Store in a well-ventilated place. Keep cool
P403+P233 Store in a well-ventilated place. Keep container tightly closed
P501 It is the responsibility of the waste generator to characterize all waste material according to regulatory entities.

Hazards Not Otherwise Classified: None

SECTION 3: Composition/Information on Ingredients

Identification	Name	Weight %
CAS Number: 527-07-1	Sodium gluconate	<45
CAS Number: 1310-58-3	Potassium hydroxide	<40
CAS Number: 5064-31-3	Trisodium nitrilotriacetate	<40
CAS Number: 7758-29-4	Pentasodium triphosphate	<30
CAS Number: 1310-73-2	Sodium hydroxide	<25
CAS Number: 68515-73-1	D-Glucopyranose, oligomers, decyl octyl glycosides	<20
CAS Number: 111-76-2	2-Butoxyethanol	<14.924985
CAS Number: 1300-72-7	Sodium Xylenesulfonate	<12.5
CAS Number: 68131-39-5	Alcohols, C12-15, ethoxylated	<15

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CAS Number: 7722-88-5	Tetrasodium pyrophosphate	<1.8
CAS Number: 7647-14-5	Sodium chloride	<0.5
CAS Number: 75-21-8	Ethylene oxide	<0.0855
CAS Number: 123-91-1	1,4-dioxane	<0.0855
CAS Number: 107-21-1	Ethane-1,2-diol	<0.0135

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.

After Skin Contact:

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.

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. 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.

Product is combustible. Exposure to sources of ignition may cause physical injury.

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

Inhalation may have adverse effects on the central nervous system. Symptoms may include drowsiness,

dizziness, headache, nausea and lowering of consciousness. Acute overexposure via inhalation may result in respiratory distress, confusion and unconsciousness.

Delayed Symptoms and Effects:

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.

Skin/eye burns require immediate treatment.

If exhibiting symptoms of exposure, seek prompt medical attention.

Overexposure via inhalation requires urgent medical treatment.

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.

Dry chemical, CO2, water spray 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.

Combustible liquid. Will be easily ignitable by heat, sparks or flames. Vapors may form explosive mixtures with air. Vapors may travel to source of ignition and flash back. Most vapors are heavier than air. They will spread along ground and collect in low or confined areas (sewers, basements, tanks). Vapor explosion hazard indoors, outdoors or in sewers. Runoff to sewer may create fire or explosion hazard. Containers may explode when heated. Inhalation or contact with material may irritate or burn skin and eyes. Fire may produce irritating, corrosive and/or toxic gases. Vapors may cause dizziness or suffocation.

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.

Evacuate non-essential personnel. Ventilate closed spaces before entering. Consider initial evacuation for 300 meters in all directions. If tank/rail car is involved in the fire, ISOLATE for 800 meters in all directions. Fight fire from a maximum distance. Move containers from fire area if you can do it without risk. Use water spray/fog for cooling fire exposed containers. Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank. Always stay away from tanks engulfed in fire. For massive fire, use unmanned hose holders or monitor nozzles. If this is impossible, withdraw from area and let fire burn. Stand by, at a safe distance, with extinguisher ready for possible re-ignition. A vapor-suppressing foam may be used to reduce vapors. Avoid unnecessary run-off of extinguishing media which may cause pollution. Do not handle damaged containers unless specialized to do so.

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. All equipment used when handling the product must be grounded. 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.

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. Stop leak if you can do it without risk. A vapor-suppressing foam may be used to reduce vapors. Absorb or cover with dry earth, sand or other non-combustible material and transfer to containers 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.
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use explosion-proof electrical, ventilating and lighting equipment. Take action to prevent static discharges. Handle containers with caution. 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.
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.

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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
ACGIH	Potassium hydroxide	1310-58-3	Ceiling Limit: 2 mg/m³
	Sodium hydroxide	1310-73-2	Ceiling Limit: 2 mg/m³
	2-Butoxyethanol	111-76-2	8-Hour TWA: 20 ppm
	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)
	Ethane-1,2-diol	107-21-1	15-Minute STEL: 10 mg/m³ (aerosol only, inhalable fraction)
NIOSH	Potassium hydroxide	1310-58-3	Ceiling Limit: 2 mg/m³
	Sodium hydroxide	1310-73-2	IDLH: 10 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])
	Sodium hydroxide	1310-73-2	Ceiling Limit: 2 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)
OSHA	Sodium hydroxide	1310-73-2	8-Hour TWA-PEL: 2 mg/m³
	2-Butoxyethanol	111-76-2	8-Hour TWA-PEL: 240 mg/m³ (50 ppm)
	Ethylene oxide	75-21-8	TWA: 1 ppm

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Country (Legal Basis)	Substance	Identifier	Permissible concentration
	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])
	1,4-dioxane	123-91-1	TWA: 90 mg/m³ (25 ppm [Table Z-1-A])
	Tetrasodium pyrophosphate	7722-88-5	8-Hour TWA-PEL: 5 mg/m³
	Ethane-1,2-diol	107-21-1	Ceiling Limit: 125 mg/m³ (50 ppm)
United States(California)	Potassium hydroxide	1310-58-3	Ceiling Limit: 2 mg/m³
	Sodium hydroxide	1310-73-2	Ceiling Limit: 2 mg/m³
	Sodium hydroxide	1310-73-2	REL: 8 ug/m³ (Acute Inhalation)
	2-Butoxyethanol	111-76-2	8-Hour TWA-PEL: 97 mg/m³ (20 ppm)
	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)
	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)
	Tetrasodium pyrophosphate	7722-88-5	8-Hour TWA-PEL: 5 mg/m³
	Ethane-1,2-diol	107-21-1	Ceiling Limit: 100 mg/m³ (40 ppm)
	Ethane-1,2-diol	107-21-1	REL: 400 ug/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
	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.

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	12
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.

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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.

Extreme heat, open flames, hot surfaces, sparks, ignition sources, static electricity and incompatible materials. Vapor accumulation in low or confined areas.

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
Potassium hydroxide	oral	LD50 Rat: 333 mg/kg
Sodium chloride	oral	LD50 Rat: 3550 mg/kg
	inhalation	LC50 Rat: >10.5 mg/L (4 hr [aerosol])
	dermal	LD50 Rabbit: >10,000 mg/kg

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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])
D-Glucopyranose, oligomers, decyl octyl glycosides	oral	LD50 Rat: > 2000 mg/kg
	dermal	LD50 Rabbit: > 2000 mg/kg
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
Sodium hydroxide	oral	LD50 Rat: 140-340 mg/kg
	dermal	LD50 Rabbit: 1350 mg/kg
Sodium Xylenesulfonate	dermal	LD50 Rabbit: >= 2000 mg/kg
	oral	LD50 Rat: >= 3346 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])
Ethane-1,2-diol	dermal	LD50 Mouse: > 3500 mg/kg
	Oral ATE	LD50 Rat: 500 mg/kg (Converted acute toxicity point estimate)
Trisodium nitrilotriacetate	oral	LD50 Rat: 1100 mg/kg
	dermal	LD50 Rabbit: >2000 mg/kg
	inhalation	LC50 Rat: >5 mg/L (4 hr - Aerosol)
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])

Skin Corrosion/Irritation

Assessment:

Causes severe skin burns and eye damage.

Product Data:

No data available.

Substance Data:

Name	Result
Potassium hydroxide	Causes severe skin burns.
Pentasodium triphosphate	Causes skin irritation.
Sodium hydroxide	Causes severe skin burns.
2-Butoxyethanol	Causes skin irritation.
Alcohols, C12-15, ethoxylated	Causes skin irritation.

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Name	Result
Ethylene oxide	Causes severe skin burns.

Serious Eye Damage/Irritation

Assessment:

Causes serious eye damage.

Product Data:

No data available.

Substance Data:

Name	Result
D-Glucopyranose, oligomers, decyl octyl glycosides	Causes serious eye damage.
Potassium hydroxide	Causes serious eye damage.
Pentasodium triphosphate	Causes serious eye irritation.
Tetrasodium pyrophosphate	Causes serious eye damage.
Sodium hydroxide	Causes serious eye damage.
2-Butoxyethanol	Causes serious eye irritation.
Sodium Xylenesulfonate	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.
Trisodium nitrilotriacetate	Causes serious eye irritation.

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

Product Data: No data available.

Substance Data:

Name	Species	Result
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).
Trisodium nitrilotriacetate		Suspected of causing cancer.

International Agency for Research on Cancer (IARC):

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Name	Classification
Sodium gluconate	Not Applicable
D-Glucopyranose, oligomers, decyl octyl glycosides	Not Applicable
Potassium hydroxide	Not Applicable
Alcohols, C12-15, ethoxylated	Not Applicable
Sodium hydroxide	Not Applicable
Sodium Xylenesulfonate	Not Applicable
Ethylene oxide	Group 1
1,4-dioxane	Group 2B
Ethane-1,2-diol	Not Applicable
	Not Applicable
Trisodium nitrilotriacetate	Group 2B
Pentasodium triphosphate	Not Applicable
2-Butoxyethanol	Group 3
Tetrasodium pyrophosphate	Not Applicable
Sodium chloride	Not Applicable

National Toxicology Program (NTP):

Name	Classification
Sodium gluconate	Not Applicable
D-Glucopyranose, oligomers, decyl octyl glycosides	Not Applicable
Potassium hydroxide	Not Applicable
Alcohols, C12-15, ethoxylated	Not Applicable
Sodium hydroxide	Not Applicable
Sodium Xylenesulfonate	Not Applicable
Ethylene oxide	Known to be human carcinogens
1,4-dioxane	Reasonably anticipated to be human carcinogens
Ethane-1,2-diol	Not Applicable
	Not Applicable
Trisodium nitrilotriacetate	Not Applicable
Pentasodium triphosphate	Not Applicable
2-Butoxyethanol	Not Applicable
Tetrasodium pyrophosphate	Not Applicable
Sodium chloride	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:

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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.
May cause drowsiness or dizziness.

Product Data:

No data available.

Substance Data:

Name	Result
Pentasodium triphosphate	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: Based on available data, the classification criteria are not met.

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
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])
D-Glucopyranose, oligomers, decyl octyl glycosides	Fish LC50 Danio rerio: 100.81 mg/L (96 hr)
	Aquatic Invertebrates EC50 Acartia tonsa: 31.62 mg/L (48 hr)
	Aquatic Plants EC50 Desmodesmus subspicatus: 27.22 mg/L (72 hr)
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])
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)
Sodium hydroxide	Fish LC50 Gambusia affinis: 125 mg/L (96 hr)
	Aquatic Invertebrates EC50 Ceriodaphnia sp.: 40.4 mg/L (48 hr [immobilization])
Sodium chloride	Fish LC50 Lepomis macrochirus: 5840 mg/L (96 hr)
	Aquatic Invertebrates EC50 Daphnia magna: 1900 mg/L (48 hr [immobilization])
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])
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)
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 Raphidocelis subcapitata: 6500 - 13,000 mg/L (96 hr [growth rate])
	Aquatic Invertebrates EC50 Daphnia magna: > 100 mg/L (48 hr)
	Fish LC50 Pimephales promelas: 72,860 mg/L (96 hr)

Aqua Matrix

Name	Result
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])
Pentasodium triphosphate	Fish LC50 Oryzias latipes: >1000 mg/L (48 hr)
	Aquatic Invertebrates EC50 Daphnia magna: >100 mg/L (48 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)
D-Glucopyranose, oligomers, decyl octyl glycosides	Fish NOEC Danio rerio: 1 mg/L (28 d [read-across])
	Aquatic Invertebrates NOEC Daphnia magna: 1 mg/L (21 d [read-across])
Sodium chloride	Fish NOEC Pimephales promelas: 252 mg/L (33 d)
	Aquatic Invertebrates NOEC Daphnia pulex: 314 mg/L (21 d [reproduction])
2-Butoxyethanol	Fish LC50 Poecilia reticulata: 983 mg/L (7 d)
	Aquatic Invertebrates EC50 Daphnia magna: 297 mg/L (21 d [reproduction])
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 Menidia peninsulae: > 40 mg/L (28 d [mortality])
	Aquatic Invertebrates NOEC Daphnia magna: > 15,000 mg/L mg/L (21 d [reproduction])
Trisodium nitrilotriacetate	Aquatic Invertebrates LC50 Pagurus longicarpus: 1875 mg/L (7 d)
Pentasodium triphosphate	Aquatic Plants EC50 Skeletonema costatum: >900 mg/L (7 d [growth rate])

Persistence and Degradability

Product Data: No data available.

Substance Data:

Name	Result
D-Glucopyranose, oligomers, decyl octyl glycosides	Readily biodegradable in water (100% degradation [DOC removal] after 28 days).
Alcohols, C12-15, ethoxylated	Readily biodegradable (61% degradation after 28 days).
Potassium hydroxide	The study on degradability does not need to be conducted as the substance is inorganic.
Sodium hydroxide	Persistence and degradability studies do not apply to inorganic substances.
Sodium chloride	Degradation/biodegradation testing is not relevant for inorganic substances such as this one.
2-Butoxyethanol	Readily biodegradable (90.4% degradation after 28 days, measured by CO2 evolution).

Aqua Matrix

Name	Result
Sodium Xylenesulfonate	The substance is readily biodegradable. 83 - 85% degradation, measured by CO2 evolution, 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).
Ethane-1,2-diol	Substance is readily biodegradable (90-100% degradation after 10 days in water by DOC removal).
Trisodium nitrilotriacetate	Substance is readily biodegradable. >95% degradation in water, measured by DOC removal, after 28 days.
Pentasodium triphosphate	Biodegradation studies are not applicable to inorganic substances.
Tetrasodium pyrophosphate	Biodegradation studies are not applicable to inorganic substances.

Bioaccumulative Potential

Product Data: No data available.

Substance Data:

Name	Result
Potassium hydroxide	Not expected to bioaccumulate, as it completely dissociates in water.
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.
2-Butoxyethanol	Not expected to bioaccumulate (log Kow = 0.83).
Ethylene oxide	Low potential for bioaccumulation (logKow = -0.3).
1,4-dioxane	Does not accumulate in aquatic organisms (mean BCF: 0.45).
Ethane-1,2-diol	Bioaccumulation in organisms is not to be expected (log Kow: -1.36).
Trisodium nitrilotriacetate	Bioaccumulation is not expected. BCF (aquatic species): 3 L/kg ww
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.
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.

Mobility in Soil

Product Data: No data available.

Substance Data:

Name	Result
D-Glucopyranose, oligomers, decyl octyl glycosides	Substance is expected to be mobile (log Koc: 1.7); therefore, adsorption to soil is not expected.
Potassium hydroxide	Low potential for adsorption. If emitted to surface water, sorption to sediment will be negligible.

Aqua Matrix

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).
Ethane-1,2-diol	Adsorption to the solid soil phase is not expected.
Trisodium nitrilotriacetate	The substance has a low potential for adsorption to soil and sediment. log Kp (sediment-water): 1.6 L/kg
Pentasodium triphosphate	The substance has a high potential for adsorption to soil and sediment.

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:

D-Glucopyranose, oligomers, decyl octyl glycosides	Substance is not PBT.
Potassium hydroxide	The substance is not PBT.
Alcohols, C12-15, ethoxylated	The substance is not PBT.
Sodium chloride	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.
2-Butoxyethanol	The substance is not PBT.
Sodium Xylenesulfonate	The substance is not PBT.
Ethylene oxide	This substance is not PBT.
1,4-dioxane	This substance is not PBT.
Ethane-1,2-diol	The substance is not PBT.
Trisodium nitrilotriacetate	The substance is not PBT.
Pentasodium triphosphate	PBT assessment does not apply to inorganic substances.

vPvB assessment:

D-Glucopyranose, oligomers, decyl octyl glycosides	Substance is not vPvB.
Potassium hydroxide	The substance is not vPvB.
Alcohols, C12-15, ethoxylated	The substance is not vPvB.
Tetrasodium pyrophosphate	vPvB Assessment does not apply to inorganic substances.
Sodium hydroxide	vPvB assessment does not apply to inorganic substances.
2-Butoxyethanol	The substance is not vPvB.
Sodium Xylenesulfonate	The substance is not vPvB.
Ethylene oxide	This substance is not vPvB.
1,4-dioxane	This substance is not vPvB.
Ethane-1,2-diol	The substance is not vPvB.
Trisodium nitrilotriacetate	The substance is not vPvB.
Pentasodium triphosphate	vPvB assessment does not apply to inorganic substances.

Aqua Matrix

Sodium chloride	vPvB assessment does not apply to inorganic substances.

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	1760
UN Proper Shipping Name	Corrosive Liquids, N.O.S. (Potassium Hydroxide, Sodium Hydroxide)
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.

Aqua Matrix

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
123-91-1	1,4-dioxane	Listed
107-21-1	Ethane-1,2-diol	Listed
5064-31-3	Trisodium nitrilotriacetate	Listed

CERCLA:

1310-58-3	Potassium hydroxide	Listed	1000 lb
1310-73-2	Sodium hydroxide	Listed	1000 lb
111-76-2	2-Butoxyethanol	Listed	N/A
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

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:

1310-58-3	Potassium hydroxide	Listed
1310-73-2	Sodium hydroxide	Listed
75-21-8	Ethylene oxide	Listed
123-91-1	1,4-dioxane	Listed
107-21-1	Ethane-1,2-diol	Listed
5064-31-3	Trisodium nitrilotriacetate	Listed
7758-29-4	Pentasodium triphosphate	Listed
111-76-2	2-Butoxyethanol	Listed
7722-88-5	Tetrasodium pyrophosphate	Listed

New Jersey Right to Know:

1310-58-3	Potassium hydroxide	Listed
1310-73-2	Sodium hydroxide	Listed
75-21-8	Ethylene oxide	Listed
123-91-1	1,4-dioxane	Listed
107-21-1	Ethane-1,2-diol	Listed
111-76-2	2-Butoxyethanol	Listed
7722-88-5	Tetrasodium pyrophosphate	Listed

New York Right to Know:

1310-58-3	Potassium hydroxide	Listed
1310-73-2	Sodium hydroxide	Listed
75-21-8	Ethylene oxide	Listed

Aqua Matrix

123-91-1	1,4-dioxane	Listed
107-21-1	Ethane-1,2-diol	Listed
7758-29-4	Pentasodium triphosphate	Listed
111-76-2	2-Butoxyethanol	Listed
7722-88-5	Tetrasodium pyrophosphate	Listed

Pennsylvania Right to Know:

1310-58-3	Potassium hydroxide	Listed
1310-73-2	Sodium hydroxide	Listed
75-21-8	Ethylene oxide	Listed
123-91-1	1,4-dioxane	Listed
107-21-1	Ethane-1,2-diol	Listed
7758-29-4	Pentasodium triphosphate	Listed
111-76-2	2-Butoxyethanol	Listed
7722-88-5	Tetrasodium pyrophosphate	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

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End of Safety Data Sheet