



## Safety Data Sheet

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

**Initial Preparation Date:** 06.20.2019

Page 1 of 17

**Revision date:** 01.31.2023

**Mako Terge**

### SECTION 1: Identification

#### Product Identifier

**Product Name:** Mako Terge

**Product code:** DT-175

#### Recommended Use of the Product and Restriction on Use

**Relevant Identified Uses:** Foaming 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 irritation, category 2

Serious eye damage, category 1

Carcinogenicity, category 2

Reproductive toxicity, category 1B

Specific target organ toxicity - single exposure, category 3, respiratory tract irritation

Specific target organ toxicity - single exposure, category 3, narcotic effects

#### Label elements

##### Hazard Pictograms:



**Signal Word:** Danger

#### Hazard statements:

H351 Suspected of causing cancer.

H360 May damage fertility or the unborn child.

H315 Causes skin irritation

# Safety Data Sheet

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Initial Preparation Date: 06.20.2019

Page 2 of 17

Revision date: 01.31.2023

## Mako Terge

H318 Causes serious eye damage  
H335 May cause respiratory irritation  
H336 May cause drowsiness or dizziness

### Precautionary Statements:

P202 Do not handle until all safety precautions have been read and understood  
P280 Wear protective gloves/protective clothing/eye protection/face protection  
P264 Wash hands thoroughly after handling  
P261 Avoid breathing dust/fume/gas/mist/vapors/spray  
P271 Use only outdoors or in a well-ventilated area  
P302+P352 IF ON SKIN: Wash with plenty of water  
P332+P313 If skin irritation occurs: Get medical advice/attention  
P362 Take off contaminated clothing and wash it before reuse  
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing  
P405 Store locked up  
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 materials according to applicable regulatory entities.

**Hazards Not Otherwise Classified:** None

## SECTION 3: Composition/Information on Ingredients

Identification	Name	Weight %
CAS Number: 7758-29-4	Pentasodium triphosphate	<40
CAS Number: 68603-42-9	Amides, coco, N,N-bis(hydroxyethyl)	<20
CAS Number: 111-76-2	2-Butoxyethanol	<20
CAS Number: 9004-82-4	2-dodecoxyethyl hydrogen sulfate	<20
CAS Number: 1300-72-7	Sodium Xylenesulfonate	<10
CAS Number: 84133-50-6	Alcohols, C12-14-secondary, ethoxylated	<20
CAS Number: 68131-40-8	Alcohols, secondary C11-15, ethoxylated	<20
CAS Number: 68131-39-5	Alcohols, C12-15, ethoxylated	<15
CAS Number: 7722-88-5	Tetrasodium pyrophosphate	<1.2
CAS Number: 67-56-1	Methanol	<0.2

# Safety Data Sheet

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Initial Preparation Date: 06.20.2019

Page 3 of 17

Revision date: 01.31.2023

## Mako Terge

CAS Number: 75-21-8	Ethylene oxide	<0.036
CAS Number: 123-91-1	1,4-dioxane	<0.018

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.

#### 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:

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:

Long term exposure may affect fertility. Symptoms include, but are not limited to: menstrual problems, altered sexual behavior/fertility/ and pregnancy outcome. Long term exposure may also affect development of the unborn child. Symptoms include, but are not limited to: intrauterine growth retardation, pre-term birth, birth defects and postnatal death.

Suspected of causing 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.

If respiratory symptoms persist, seek medical attention.

#### Notes for the Doctor:

Not determined or not applicable.

# Safety Data Sheet

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Initial Preparation Date: 06.20.2019

Page 4 of 17

Revision date: 01.31.2023

**Mako Terge**

## 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:

Not determined or not applicable.

## 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). 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. 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). 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. 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.

## Safety Data Sheet

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Initial Preparation Date: 06.20.2019

Page 5 of 17

Revision date: 01.31.2023

**Mako Terge**

### Occupational Exposure Limit Values:

Country (Legal Basis)	Substance	Identifier	Permissible concentration
NIOSH	Tetrasodium pyrophosphate	7722-88-5	REL-TWA: 5 mg/m <sup>3</sup> (up to 10 hr)
	2-Butoxyethanol	111-76-2	IDLH: 700 ppm
	2-Butoxyethanol	111-76-2	REL-TWA: 24 mg/m <sup>3</sup> (5 ppm [up to 10 hr])
	Methanol	67-56-1	REL-TWA: 260 mg/m <sup>3</sup> (200 ppm [for up to a 10-hour workday during a 40-hour workweek])
	Methanol	67-56-1	15-Minute STEL: 325 mg/m <sup>3</sup> (250 ppm)
	Methanol	67-56-1	IDLH: 6000 ppm
	Ethylene oxide	75-21-8	IDLH: 800 ppm
	Ethylene oxide	75-21-8	Ceiling Limit: 9 mg/m <sup>3</sup> (5 ppm [10-min/day])
	Ethylene oxide	75-21-8	REL: 0.18 mg/m <sup>3</sup> (0.1 ppm)
	1,4-dioxane	123-91-1	Ceiling Limit: 3.6 mg/m <sup>3</sup> (1 ppm [30-min])
	1,4-dioxane	123-91-1	IDLH: 500 ppm
OSHA	2-Butoxyethanol	111-76-2	8-Hour TWA-PEL: 240 mg/m <sup>3</sup> (50 ppm)
	Methanol	67-56-1	8-Hour TWA-PEL: 260 mg/m <sup>3</sup> (200 ppm)
	Methanol	67-56-1	15-Minute STEL: 325 mg/m <sup>3</sup> (250 ppm)
	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/m <sup>3</sup> (100 ppm [Table Z-1])
	1,4-dioxane	123-91-1	TWA: 90 mg/m <sup>3</sup> (25 ppm [Table Z-1-A])
ACGIH	2-Butoxyethanol	111-76-2	8-Hour TWA: 20 ppm
	Methanol	67-56-1	8-Hour TWA: 200 ppm
	Methanol	67-56-1	15-Minute STEL: 250 ppm
	Ethylene oxide	75-21-8	TWA: 1 ppm
	1,4-dioxane	123-91-1	TLV-TWA: 20 ppm (8 hr)
United States(California)	Methanol	67-56-1	15-Minute STEL: 325 mg/m <sup>3</sup> (250 ppm)
	2-Butoxyethanol	111-76-2	8-Hour TWA-PEL: 97 mg/m <sup>3</sup> (20 ppm)
	Methanol	67-56-1	PEL Ceiling: 1000 ppm
	Methanol	67-56-1	8-Hour TWA: 260 mg/m <sup>3</sup> (200 ppm)
	Tetrasodium pyrophosphate	7722-88-5	8-Hour TWA-PEL: 5 mg/m <sup>3</sup>
	Ethylene oxide	75-21-8	STEL: 5 ppm
	Ethylene oxide	75-21-8	PEL: 2 mg/m <sup>3</sup> (1 ppm)
	Ethylene oxide	75-21-8	REL: 0.03 mg/m <sup>3</sup> (Chronic inhalation)

# Safety Data Sheet

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Initial Preparation Date: 06.20.2019

Page 6 of 17

Revision date: 01.31.2023

**Mako Terge**

Country (Legal Basis)	Substance	Identifier	Permissible concentration
	1,4-dioxane	123-91-1	8-Hour TWA-PEL: 1 mg/m <sup>3</sup> (0.28 ppm)
	1,4-dioxane	123-91-1	REL: 3000 ug/m <sup>3</sup> ([8 hr]; Acute inhalation)
	1,4-dioxane	123-91-1	REL: 3000 ug/m <sup>3</sup> ([8 hr]; 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
	Methanol	67-56-1	Methanol	Urine	End of Shift	15 mg/L
	Methanol	67-56-1	Methanol	Urine	End of shift.	15 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:**

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. 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.

# Safety Data Sheet

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Initial Preparation Date: 06.20.2019

Page 7 of 17

Revision date: 01.31.2023

Mako Terge

## 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	7
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:

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

### Incompatible Materials:

None known.

### Hazardous Decomposition Products:

None known.

## SECTION 11: Toxicological Information

### Acute Toxicity

## Safety Data Sheet

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

**Initial Preparation Date:** 06.20.2019

Page 8 of 17

**Revision date:** 01.31.2023

**Mako Terge**

**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])
Pentasodium triphosphate	oral	LD50 Rat: 3120 mg/kg
	dermal	LD50 Rabbit: > 4640 mg/kg
2-dodecoxyethyl hydrogen sulfate	oral	LD50 Rat: 1600 mg/kg
Alcohols, C12-15, ethoxylated	oral	LD50 Rat: > 5000 mg/kg
	dermal	LD50 Rat: > 2000 mg/kg
Amides, coco, N,N-bis(hydroxyethyl)	oral	LD50 Rat: > 5000 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)
Methanol	Oral ATE	LD50 Rat: 100 mg/kg
	Dermal ATE	LD50 Rabbit: 300 mg/kg
	Inhalation ATE	LC50 Rat: 3 mg/L (4 hr [vapor])
Alcohols, secondary C11-15, ethoxylated	oral	LD50 Rat: >= 2000 mg/kg
	dermal	LD50 Rat: >2000 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])

**Skin Corrosion/Irritation**

**Assessment:**

Causes skin irritation.

**Product Data:**

No data available.

**Substance Data:**

Name	Result
Pentasodium triphosphate	Causes skin irritation.
2-Butoxyethanol	Causes skin irritation.
2-dodecoxyethyl hydrogen sulfate	Causes skin irritation.



# Safety Data Sheet

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Initial Preparation Date: 06.20.2019

Page 9 of 17

Revision date: 01.31.2023

## Mako Terge

Name	Result
Amides, coco, N,N-bis(hydroxyethyl)	Causes skin irritation.
Alcohols, C12-14-secondary, ethoxylated	Causes skin irritation.
Alcohols, C12-15, ethoxylated	Causes skin irritation.
Alcohols, secondary C11-15, 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
Pentasodium triphosphate	Causes serious eye irritation.
Tetrasodium pyrophosphate	Causes serious eye damage.
2-Butoxyethanol	Causes serious eye irritation.
2-dodecoxyethyl hydrogen sulfate	Causes serious eye irritation.
Amides, coco, N,N-bis(hydroxyethyl)	Causes serious eye damage.
Alcohols, C12-14-secondary, ethoxylated	Causes serious eye damage.
Sodium Xylenesulfonate	Causes serious eye irritation.
Alcohols, C12-15, ethoxylated	Causes serious eye damage.
Alcohols, secondary C11-15, ethoxylated	Causes serious eye damage.
Ethylene oxide	Causes serious eye damage.
1,4-dioxane	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:**

Suspected of causing cancer.

**Product Data:** No data available.

**Substance Data:**

## Safety Data Sheet

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Initial Preparation Date: 06.20.2019

Page 10 of 17

Revision date: 01.31.2023

### Mako Terge

Name	Species	Result
Amides, coco, N,N-bis(hydroxyethyl)		There is inadequate evidence in humans for the carcinogenicity of this substance. Cancer in experimental animals: There is sufficient evidence in experimental animals for the carcinogenicity of this substance.
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
Pentasodium triphosphate	Not Applicable
2-dodecoxyethyl hydrogen sulfate	Not Applicable
Alcohols, C12-15, ethoxylated	Not Applicable
Amides, coco, N,N-bis(hydroxyethyl)	Group 2B
Alcohols, C12-14-secondary, ethoxylated	Not Applicable
Tetrasodium pyrophosphate	Not Applicable
2-Butoxyethanol	Group 3
Methanol	Not Applicable
Alcohols, secondary C11-15, ethoxylated	Not Applicable
Sodium Xylenesulfonate	Not Applicable
Ethylene oxide	Group 1
1,4-dioxane	Group 2B

#### National Toxicology Program (NTP):

Name	Classification
Pentasodium triphosphate	Not Applicable
2-dodecoxyethyl hydrogen sulfate	Not Applicable
Alcohols, C12-15, ethoxylated	Not Applicable
Amides, coco, N,N-bis(hydroxyethyl)	Not Applicable
Alcohols, C12-14-secondary, ethoxylated	Not Applicable
Tetrasodium pyrophosphate	Not Applicable
2-Butoxyethanol	Not Applicable

# Safety Data Sheet

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Initial Preparation Date: 06.20.2019

Page 11 of 17

Revision date: 01.31.2023

## Mako Terge

Name	Classification
Methanol	Not Applicable
Alcohols, secondary C11-15, ethoxylated	Not Applicable
Sodium Xylenesulfonate	Not Applicable
Ethylene oxide	Known to be human carcinogens
1,4-dioxane	Reasonably anticipated 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:**

May damage fertility or the unborn child.

**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:**

May cause respiratory irritation.

May cause drowsiness or dizziness.

**Product Data:**

No data available.

**Substance Data:**

Name	Result
Pentasodium triphosphate	May cause respiratory irritation.
Methanol	Causes damage to Optic nerve (nervus opticus), central nervous system.
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:**

# Safety Data Sheet

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Initial Preparation Date: 06.20.2019

Page 12 of 17

Revision date: 01.31.2023

## Mako Terge

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.

### 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])
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)
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 Daphnia magna: >100 mg/L (48 hr [Immobilization])
Amides, coco, N,N-bis(hydroxyethyl)	Aquatic Plants EC50 Algae: 2.9 mg/L (72 hr [growth rate])
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)
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])

## Safety Data Sheet

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Initial Preparation Date: 06.20.2019

Page 13 of 17

Revision date: 01.31.2023

### Mako Terge

Name	Result
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)

#### 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])
Amides, coco, N,N-bis(hydroxyethyl)	Aquatic Plants NOEC Algae: 1.25 mg/L (72 hr [growth rate])
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])
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)

#### Persistence and Degradability

**Product Data:** No data available.

#### Substance Data:

Name	Result
Alcohols, C12-15, ethoxylated	Readily biodegradable (61% degradation after 28 days).
Methanol	Readily biodegradable (97% degradation after 20 days).
2-Butoxyethanol	Readily biodegradable (90.4% degradation after 28 days, measured by CO2 evolution).
Alcohols, secondary C11-15, ethoxylated	The substance is readily biodegradable. 65% degradation in water, measured by O2 consumption, after 28 days.
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).

#### Bioaccumulative Potential

**Product Data:** No data available.

#### Substance Data:

## Safety Data Sheet

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Initial Preparation Date: 06.20.2019

Page 14 of 17

Revision date: 01.31.2023

### Mako Terge

Name	Result
Methanol	This substance does not significantly bioaccumulate in fish. Experimental BCFs of < 10 in fish species.
2-Butoxyethanol	Not expected to bioaccumulate (log Kow = 0.83).
Amides, coco, N,N-bis(hydroxyethyl)	Substance is expected to have low potential for bioaccumulation.
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).
1,4-dioxane	Does not accumulate in aquatic organisms (mean BCF: 0.45).

### Mobility in Soil

**Product Data:** No data available.

#### Substance Data:

Name	Result
Pentasodium triphosphate	Moderately mobile (log Koc: 2.15).
Methanol	Highly mobile (Koc: 0.13 - 0.61 dimensionless).
Amides, coco, N,N-bis(hydroxyethyl)	Substance is expected to have low sorption to soil, and mobility in soil [estimated log Koc: 1.60].
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
1,4-dioxane	Significant adsorption to solid soil phase is not expected (calculated log Koc: 0.51 at 25 °C).

### 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:

Pentasodium triphosphate	This substance is not PBT.
Alcohols, C12-15, ethoxylated	The substance is not PBT.
Methanol	This substance is not PBT.
2-Butoxyethanol	The substance is not PBT.
Tetrasodium pyrophosphate	PBT Assessment does not apply to inorganic substances.
Alcohols, secondary C11-15, ethoxylated	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.

##### vPvB assessment:

Pentasodium triphosphate	This substance is not vPvB.
Alcohols, C12-15, ethoxylated	The substance is not vPvB.
Methanol	This substance is not vPvB.
2-Butoxyethanol	The substance is not vPvB.
Tetrasodium pyrophosphate	vPvB Assessment does not apply to inorganic substances.

# Safety Data Sheet

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Initial Preparation Date: 06.20.2019

Page 15 of 17

Revision date: 01.31.2023

## Mako Terge

Alcohols, secondary C11-15, ethoxylated	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.

**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	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 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.

# Safety Data Sheet

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Initial Preparation Date: 06.20.2019

Page 16 of 17

Revision date: 01.31.2023

Mako Terge

**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
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**SARA Section 313 Toxic Chemicals:**

111-76-2	2-Butoxyethanol	Listed
67-56-1	Methanol	Listed
75-21-8	Ethylene oxide	Listed
123-91-1	1,4-dioxane	Listed

**CERCLA:**

111-76-2	2-Butoxyethanol	Listed	N/A
67-56-1	Methanol	Listed	5000 lbs
75-21-8	Ethylene oxide	Listed	10 lbs
123-91-1	1,4-dioxane	Listed	100 lbs

**RCRA:**

67-56-1	Methanol	Listed	U154
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
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**Massachusetts Right to Know:**

7758-29-4	Pentasodium triphosphate	Listed
7722-88-5	Tetrasodium pyrophosphate	Listed
111-76-2	2-Butoxyethanol	Listed
67-56-1	Methanol	Listed
75-21-8	Ethylene oxide	Listed
123-91-1	1,4-dioxane	Listed

**New Jersey Right to Know:**

7722-88-5	Tetrasodium pyrophosphate	Listed
111-76-2	2-Butoxyethanol	Listed
67-56-1	Methanol	Listed
75-21-8	Ethylene oxide	Listed
123-91-1	1,4-dioxane	Listed

**New York Right to Know:**

7758-29-4	Pentasodium triphosphate	Listed
7722-88-5	Tetrasodium pyrophosphate	Listed
111-76-2	2-Butoxyethanol	Listed
67-56-1	Methanol	Listed
75-21-8	Ethylene oxide	Listed
123-91-1	1,4-dioxane	Listed

**Pennsylvania Right to Know:**

7758-29-4	Pentasodium triphosphate	Listed
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# Safety Data Sheet

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

**Initial Preparation Date:** 06.20.2019

Page 17 of 17

**Revision date:** 01.31.2023

## Mako Terge

7722-88-5	Tetrasodium pyrophosphate	Listed
111-76-2	2-Butoxyethanol	Listed
67-56-1	Methanol	Listed
75-21-8	Ethylene oxide	Listed
123-91-1	1,4-dioxane	Listed

### California Proposition 65:

**⚠️WARNING:** This product can expose you to chemicals including Amides, coco, N,N-bis(hydroxyethyl), Diethanolamine and 1,4-dioxane which are known to the State of California to cause cancer. For more information go to [www.P65Warnings.ca.gov](http://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](http://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:** 06.20.2019

**Revision date:** 01.31.2023

**End of Safety Data Sheet**