

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Initial Preparation Date: 06.20.2019

Revision date: 08.07.2023

Mako Orange Extreme

SECTION 1: Identification

Product Identifier

Product Name: Mako Orange Extreme Product code: ST-310

Recommended Use of the Product and Restriction on Use Relevant Identified Uses: Natural Solvent Based Alkaline Presoak Uses Advised Against: NA

Reasons Why Uses Advised Against: Not determined or not applicable.

Manufacturer or Supplier Details

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

Emergency Telephone Number:

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

SECTION 2: Hazard(s) Identification

GHS Classification:

Skin corrosion, category 1A Serious eye damage, category 1 Flammable liquids, category 4 Skin sensitization, category 1 Carcinogenicity, category 1A Reproductive toxicity, category 1B Specific target organ toxicity - repeated exposure, category 2

Label elements

Hazard Pictograms:



Signal Word: Danger

Hazard statements:

H227 Combustible liquid H314 Causes severe skin burns and eye damage Page 1 of 18

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Initial Preparation Date: 06.20.2019

Revision date: 08.07.2023

Mako Orange Extreme

Page 2 of 18

H318 Causes serious eye damage H317 May cause an allergic skin reaction H350 May cause cancer. H360 May damage fertility or the unborn child. H373 May cause damage to organs through prolong exposure. **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 P272 Contaminated work clothing must not be allowed out of the workplace 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 P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing P370+P378 In case of fire: Use Carbon Dioxide to extinguish. P302+P352 IF ON SKIN: Wash with plenty of water. P333+P313 If skin irritation or rash occurs: Get medical advice/attention P314 Get medical advice/attention if you feel unwell P405 Store locked up P403+P235 Store in a well-ventilated place. Keep cool 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: 1310-73-2	Sodium hydroxide	<20
CAS Number: 68584-22-5	Benzenesulfonic acid, C10-16-alkyl derivatives	<40
CAS Number: 8028-48-6	Orange, sweet, ext.	<20
CAS Number: 1344-09-8	Sodium Silicate	<15
CAS Number: N/A	Sodium alkylnaphthalenesulfonate	
CAS Number: 5064-31-3		
CAS Number: 68603-42-9	Amides, coco, N,N-bis(hydroxyethyl)	<5

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Initial Preparation Date: 06.20.2019

Revision date: 08.07.2023

Mako Orange Extreme

CAS Number: 84133-50-6	Alcohols, C12-14-secondary, ethoxylated	<5
CAS Number: 68648-87-3	Benzene, C10-16-alkyl derivs	<4
CAS Number: 56-81-5	Glycerol	<0.4
CAS Number: 7757-82-6	Sodium sulphate	<0.2
CAS Number: N/A	Anionic surfactant	<0.2
CAS Number: 25322-68-3	Poly (ethylene oxide)	<0.15
CAS Number: 91-20-3	Naphthalene	<0.0002

Additional Information: None

SECTION 4: First Aid Measures

Description of First Aid Measures

General Notes:

Show this Safety Data Sheet to attending Medical Professional.

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.

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200 Initial Preparation Date: 06.20.2019

Revision date: 08.07.2023

Mako Orange Extreme

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.

Dermal exposure may cause an allergic skin reaction. Symptoms may include irritation, redness, pain, rash, inflammation, itching, burning and dermatitis.

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).

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.

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

Immediate Medical Attention and Special Treatment

Specific Treatment:

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.

Notes for the Doctor:

Not determined or not applicable.

SECTION 5: Firefighting Measures

Extinguishing Media

Suitable Extinguishing Media:

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

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

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200 Initial Preparation Date: 06.20.2019

Revision date: 08.07.2023

Mako Orange Extreme

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 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.

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. 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).

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).

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Initial Preparation Date: 06.20.2019

Revision date: 08.07.2023

Mako Orange Extreme

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.

Conditions for Safe Storage, Including Any Incompatibilities:

Store in cool, dry, well-ventilated location out of direct sunlight and away from exit paths. Store in a corrosion-resistant container with a resistant inner liner. Inspect containers and storage area regularly for signs of leak and damage. Store containers at a convenient height for handling, below eye level if possible. High shelving increases the risk of dropping containers, personal injury and exposure. Ensure that appropriate fire fighting and spill-clean up equipment is readily available. Keep away from food and beverages. Protect from freezing and physical damage. Store away from heat, open flames and other sources of ignition. Store separately. Keep container tightly sealed. Store away from incompatible materials (See Section 10).

Store in cool, dry, well-ventilated location out of direct sunlight. Keep away from food and beverages. Protect from freezing and physical damage. Store away from heat, open flames and other sources of ignition. Keep container tightly sealed. Store away from incompatible materials (See Section 10). Store in cool and dry location and out of direct sunlight. Store away from sources of heat or ignition. Store away from incompatible materials described in Section 10. Keep containers closed when not in use. Keep away from food and beverages. Protect from freezing and physical damage.

SECTION 8: Exposure Controls/Personal Protection

Only those substances with limit values have been included below.

Occupational Exposure Limit Values:

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Initial Preparation Date: 06.20.2019

Revision date: 08.07.2023

Mako Orange Extreme

Country (Legal Basis)	Substance	Identifier	Permissible concentration
ACGIH	Sodium hydroxide	1310-73-2	Ceiling Limit: 2 mg/m ³
	Glycerol	56-81-5	TLV-TWA: 10 mg/m ³ (8 hr, Particles, insoluble or poorly soluble, not otherwise specified, inhalable)
	Glycerol	56-81-5	TLV-TWA: 3 mg/m ³ (8 hr, Particles, insoluble or poorly soluble, not otherwise specified, respirable)
	Naphthalene	91-20-3	Threshold Limit Value (TLV): 10 ppm
OSHA	Sodium hydroxide	1310-73-2	8-Hour TWA-PEL: 2 mg/m ³
	Glycerol	56-81-5	8-Hour TWA-PEL: 15 mg/m³ (Mist, total)
	Glycerol	56-81-5	8-Hour TWA-PEL: 5 mg/m ³ (Mist, respirable fraction)
	Naphthalene	91-20-3	8-Hour TWA-PEL: 50 mg/m ³ (10 ppm)
NIOSH	Sodium hydroxide	1310-73-2	IDLH: 10 mg/m ³
	Sodium hydroxide	1310-73-2	Ceiling Limit: 2 mg/m ³
	Naphthalene	91-20-3	REL-TWA: 50 mg/m ³ ([10 ppm] 10-hour workday)
	Naphthalene	91-20-3	STEL: 75 mg/m ³ (15 ppm)
	Naphthalene	91-20-3	IDLH: 250 ppm
United States(California)	Sodium hydroxide	1310-73-2	Ceiling Limit: 2 mg/m ³
	Sodium hydroxide	1310-73-2	REL: 8 ug/m³ (Acute Inhalation)
	Glycerol	56-81-5	8-Hour TWA-PEL: 10 mg/m ³ (Particulates not otherwise regulated, total dust)
	Glycerol	56-81-5	8-Hour TWA-PEL: 5 mg/m ³ (Particulates not otherwise regulated, respirable fraction)
	Naphthalene	91-20-3	8-Hour TWA-PEL: 0.5 mg/m ³ (0.1 ppm)
	Naphthalene	91-20-3	REL: 9 ug/m ³ (Chronic Inhalation)
WEEL	Poly (ethylene oxide)	25322-68-3	8-Hour TWA: 10 mg/m ³

Biological Limit Values:

Country (Legal Basis)	Substance	ldentifie r	Determin ant	Specimen		Permissibl e limits
ACGIH	Naphthalene		1- Naphthol, with hydrolysis + 2- Naphthol, with hydrolysis	None	End of shift.	

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Initial Preparation Date: 06.20.2019 Revision date: 08.07.2023

Mako Orange Extreme

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

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200 Initial Preparation Date: 06.20.2019 Revision date: 08.07.2023

Mako Orange Extreme

	I
Odor	Std.
Odor threshold	Not determined or not available.
рН	11
Melting point/freezing point	Not determined or not available.
Initial boiling point/range	Not determined or not available.
Flash point (closed cup)	160 F
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.

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.

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Initial Preparation Date: 06.20.2019 Revision date: 08.07.2023

Mako Orange Extreme

Product Data: No data available.

Substance Data:

Name	Route	Result
Trisodium nitrilotriacetate	oral	LD50 Rat: 1100 mg/kg
	dermal	LD50 Rabbit: >2000 mg/kg
	inhalation	LC50 Rat: >5 mg/L (4 hr - Aerosol)
Benzenesulfonic acid, C10-16-	inhalation	LC50 Rat: >1.9 mg/L (4 h [aerosol])
alkyl derivatives	Dermal ATE	LD50 Rabbit: 1100 mg/kg
	Oral ATE	LD50 Rat: 500 mg/kg
Sodium hydroxide	oral	LD50 Rat: 140-340 mg/kg
	dermal	LD50 Rabbit: 1350 mg/kg
Glycerol	oral	LD50 Rat: 27,200 mg/kg
	dermal	LD50 Guinea Pig: 56,750 mg/kg
	inhalation	LC50 Rat: > 5850 mg/m ³ (4 hr [Aerosol])
Amides, coco, N,N-	oral	LD50 Rat: > 5000 mg/kg
bis(hydroxyethyl)	dermal	LD50 rabbit: > 2000 mg/kg
Orange, sweet, ext.	oral	LD50 Rat: >5000 mg/kg
	dermal	LD50 Rabbit: >5000 mg/kg
Naphthalene	oral	LD50 Mouse: 533 mg/kg
	dermal	LD50 Rat: >2500 mg/kg
	inhalation	LC50 Rat: >0.4 mg/L (4 hr [Vapor])
Sodium sulphate	oral	LD50 Rat: > 2000 mg/kg
	inhalation	LC50 Rat: > 2.4 mg/L (4 hr - Dust)
Sodium Silicate	dermal	LD50 Rabbit: 4640 mg/m ³
	oral	LD50 Rat: 1960 mg/kg
Poly (ethylene oxide)	dermal	LD50 Rat: >2000 mg/kg
	oral	LD50 Rat: >2000 mg/kg

Skin Corrosion/Irritation

Assessment:

Causes severe skin burns and eye damage.

Product Data:

No data available.

Substance Data:

Name	Result
Sodium hydroxide	Causes severe skin burns.
Amides, coco, N,N- bis(hydroxyethyl)	Causes skin irritation.
Benzenesulfonic acid, C10-16- alkyl derivatives	Causes severe skins burns.
Orange, sweet, ext.	Causes skin irritation.
Sodium Silicate	Causes skin irritation.
Alcohols, C12-14-secondary, ethoxylated	Causes skin irritation.

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Initial Preparation Date: 06.20.2019 Revision date: 08.07.2023

Mako Orange Extreme

Serious Eye Damage/Irritation

Assessment:

Causes serious eye damage.

Product Data:

No data available.

Substance Data:

Name	Result
Sodium hydroxide	Causes serious eye damage.
Trisodium nitrilotriacetate	Causes serious eye irritation.
Amides, coco, N,N- bis(hydroxyethyl)	Causes serious eye damage.
Benzenesulfonic acid, C10-16- alkyl derivatives	Causes serious eye damage.
Sodium Silicate	Causes serious eye damage
Alcohols, C12-14-secondary, ethoxylated	Causes serious eye damage.

Respiratory or Skin Sensitization

Assessment:

May cause an allergic skin reaction.

Product Data:

No data available.

Substance Data:

Name	Result
Orange, sweet, ext.	May cause an allergic skin reaction.

Carcinogenicity

Assessment:

May cause cancer.

Product Data: No data available.

Substance Data:

Name	Species	Result
Trisodium nitrilotriacetate		Suspected of causing cancer.
Naphthalene		Suspected of causing cancer. Animal studies indicate an increased rate of respiratory tumors via inhalation.

International Agency for Research on Cancer (IARC):

Name	Classification
Sodium hydroxide	Not Applicable
Trisodium nitrilotriacetate	Group 2B
Glycerol	Not Applicable
Amides, coco, N,N- bis(hydroxyethyl)	Group 2B
Benzenesulfonic acid, C10-16- alkyl derivatives	Not Applicable
Orange, sweet, ext.	Not Applicable
Naphthalene	Group 2B

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200 Initial Preparation Date: 06.20.2019 Revision date: 08.07.2023

Page 12 of 18

Mako Orange Extreme

Name	Classification
Sodium sulphate	Not Applicable
Sodium Silicate	Not Applicable
Poly (ethylene oxide)	Not Applicable
Alcohols, C12-14-secondary, ethoxylated	Not Applicable

National Toxicology Program (NTP):

Name	Classification
Sodium hydroxide	Not Applicable
Trisodium nitrilotriacetate	Not Applicable
Glycerol	Not Applicable
Amides, coco, N,N- bis(hydroxyethyl)	Not Applicable
Benzenesulfonic acid, C10-16- alkyl derivatives	Not Applicable
Orange, sweet, ext.	Not Applicable
Naphthalene	Reasonably anticipated to be human carcinogens
Sodium sulphate	Not Applicable
Sodium Silicate	Not Applicable
Poly (ethylene oxide)	Not Applicable
Alcohols, C12-14-secondary, ethoxylated	Not Applicable

OSHA Carcinogens: Not applicable

Germ Cell Mutagenicity

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

Product Data:

No data available.

Substance Data: No data available.

Reproductive Toxicity

Assessment:

May damage fertility or the unborn child.

Product Data:

No data available.

Substance Data: No data available.

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
Sodium Silicate	May cause respiratory irritation.

Specific Target Organ Toxicity (Repeated Exposure)

Assessment:

May cause damage to organs through prolonged or repeated exposure.

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Initial Preparation Date: 06.20.2019

Revision date: 08.07.2023

Mako Orange Extreme

Product Data:

No data available.

Substance Data: No data available.

Aspiration toxicity

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

Product Data:

No data available.

Substance Data:

Name	Result
Orange, sweet, ext.	Maybe fatal if swallowed and enters airways.

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
Sodium hydroxide	Fish LC50 Gambusia affinis: 125 mg/L (96 hr)
	Aquatic Invertebrates EC50 Ceriodaphnia sp.: 40.4 mg/L (48 hr [immobilization])
Trisodium nitrilotriacetate	Fish LC50 Pimephales promelas: 114 mg/L (96 hr)
	Aquatic Plants EC50 Desmodesmus subspicatus: >100 mg/L (72 hr [growth rate])
	Aquatic Invertebrates EC50 Daphnia magna: 560 mg/L (96 hr [mortality])
Glycerol	Fish LC50 Oncorhynchus mykiss: 54,000 mg/L (96 hr)
	Aquatic Invertebrates LC50 Daphnia magna: 1955 mg/L (48 hr)
Orange, sweet, ext.	Aquatic Plants EC50 Desmodesmus subspicatus: 150 mg/L (72 hr [growth rate])
	Aquatic Invertebrates EC50 Daphnia magna: 8.5 mg/L (48 hr [mobility])
Naphthalene	Fish LC50 Oncorhynchus mykiss: 1.6 mg/L (96 hr)
	Aquatic Invertebrates EC50 Daphnia magna: 2.16 mg/L (48 hr [mobility])
Sodium sulphate	Fish LC50 Pimephales promelas: 7960 mg/L (96 hr)
	Aquatic Invertebrates LC50 Daphnia magna: 1766 mg/L (48 hr)
Sodium Silicate	Fish LC50 Danio rerio: 1108 mg/L (96 h [mortality])
	Aquatic Invertebrates EC50 Daphnia magna: 1700 mg/L (48 h [immobilisation])

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Initial Preparation Date: 06.20.2019

Revision date: 08.07.2023 Mako Orange Extreme

Name	Result
Poly (ethylene oxide)	Fish LC50 Poecilia reticulata: > 100 mg/L (96 hr)
	Aquatic Invertebrates EC50 Daphnia magna: > 100 mg/L (48 hr [mobility])
	Aquatic Plants EC50 Desmodesmus subspicatus: >100 mg/L (96 hr [growth rate])

Chronic (Long-Term) Toxicity

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

Product Data: No data available.

Substance Data:

Name	Result
Trisodium nitrilotriacetate	Aquatic Invertebrates LC50 Pagurus longicarpus: 1875 mg/L (7 d)
Glycerol	Aquatic Plants EC50 freshwater algae: 2900 mg/L (8 d)
Naphthalene	Fish NOEC Oncorhynchus mykiss: 0.11 mg/L (4 d)
	Aquatic Invertebrates NOEC Daphnia pulex: 0.59 mg/L (125 d)
Sodium sulphate	Aquatic Invertebrates EC50 Ceriodaphnia dubia: 1698 mg/L (7 d [reproduction])
Poly (ethylene oxide)	Aquatic Invertebrates NOEC Daphnia magna: 17,475 mg/L (21 d [QSAR])
	Fish NOEC guppy fish: 13,671 mg/L (28 d (read-across substance))

Persistence and Degradability

Product Data: No data available.

Substance Data:

Name	Result
Benzenesulfonic acid, C10-16- alkyl derivatives	Under test conditions no biodegradation observed.
Sodium hydroxide	Persistence and degradability studies do not apply to inorganic substances.
Trisodium nitrilotriacetate	Substance is readily biodegradable. >95% degradation in water, measured by DOC removal, after 28 days.
Glycerol	The substance is readily biodegradable. 94% degradation, measured by TOC removal, after 24 hr.
Orange, sweet, ext.	The substance is readily biodegradable. 75% degradation, measured by O2 consumption, after 28 days.
Naphthalene	Substance is readily biodegradable (> 74 % degradation by O2 consumption after 28 days)
Poly (ethylene oxide)	Readily biodegradable (74.85% degradation [O2 consumption] after 28 days).

Bioaccumulative Potential

Product Data: No data available.

Substance Data:

Name	Result
Sodium hydroxide	Bioaccumulation is not expected based on the substance's high water solubility. In addition, sodium is a naturally-occurring element that is prevalent in the environment and to which organisms are exposed regularly, for which they have some capacity to regulate the concentration in the organism.
Trisodium nitrilotriacetate	Bioaccumulation is not expected. BCF (aquatic species): 3 L/kg ww

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Initial Preparation Date: 06.20.2019

Revision date: 08.07.2023 Mako Orange Extreme

Name	Result
Glycerol	The substance has a low potential for bioaccumulation based on log Kow $<=3$.
Orange, sweet, ext.	The substance has a low potential for bioaccumulation. BCF [QSAR]: 32 L/kg - 395 L/kg
Naphthalene	The substance has a low potential for bioaccumulation. BCF (aquatic species): 168 dimensionless
Sodium sulphate	This substance is not expected to bioaccumulate. It dissociates in water and the sulfate ion is easily reduced in the sulfur cycle.
Poly (ethylene oxide)	Not bioaccumulative in aquatic organisms (calculated BCF: 3.162 L/Kg ww).

Mobility in Soil

Product Data: No data available.

Substa	nce Data:

Name	Result
Sodium hydroxide	The substance has a high water solubility. As the dilution of the substance increases, its speed of movement through soil increases. During movement through soil, some ion exchange will occur.
Trisodium nitrilotriacetate	The substance has a low potential for adsorption to soil and sediment. log Kp (sediment-water): 1.6 L/kg
Amides, coco, N,N- bis(hydroxyethyl)	The substance is mobile, therefore adsorption to soil is not expected (log Koc = 1.60).
Naphthalene	The substance is moderately mobile in soil with a moderate potential for adsorption to soil and sediment. [Koc at 20 °C: 378].
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.
Poly (ethylene oxide)	Substance is mobile in soil with a low potential for adsorption to soil and sediment. (at 25 °C log Koc: 1.857 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:

Trisodium nitrilotriacetate	The substance is not PBT.
Orange, sweet, ext.	The substance is not PBT.
Sodium hydroxide	PBT assessment does not apply to inorganic substances.
Glycerol	The substance is not PBT.
Naphthalene	The substance is not PBT.
Sodium sulphate	PBT assessment does not apply to inorganic substances.
Poly (ethylene oxide)	The substance is not PBT.
vPvB assessment:	
Trisodium nitrilotriacetate	The substance is not vPvB.
Orange, sweet, ext.	The substance is not vPvB.
Sodium hydroxide	vPvB assessment does not apply to inorganic substances.

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Initial Preparation Date: 06.20.2019

Revision date: 08.07.2023

Mako Orange Extreme

Glycerol	The substance is not vPvB.
Naphthalene	The substance is not vPvB.
Sodium sulphate	vPvB assessment does not apply to inorganic substances.
Poly (ethylene oxide)	The substance is not vPvB.

Other Adverse Effects: No data available.

SECTION 13: Disposal Considerations

Disposal Methods:

It is the responsibility of the waste generator to characterize all waste 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	Not Registered
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. Significant New Use Rule (TSCA Section 5): None of the ingredients are listed.

Revision date: 08.07.2023 Mako Orange Extreme

5064-31-3	Trisodium nitrilotriacetate		Listed
91-20-3	Naphthalene		Listed
RCLA:	· ·		
1310-73-2	Sodium hydroxide	Listed	1000
91-20-3	Naphthalene	Listed	100 lb
RA:			
91-20-3	Naphthalene	Listed	U165
ction 112(r) of	the Clean Air Act (CAA): None of the ingredient	s are listed.	
ssachusetts R			
1310-73-2	Sodium hydroxide		Listed
5064-31-3	Trisodium nitrilotriacetate		Listed
56-81-5	Glycerol		Listed
91-20-3	Naphthalene		Listed
7757-82-6	Sodium sulphate		Listed
w Jersey Right	to Know:		
1310-73-2	Sodium hydroxide		Listed
56-81-5	Glycerol		Listed
91-20-3	Naphthalene		Listed
w York Right t	o Know:		
1310-73-2	Sodium hydroxide		Listed
91-20-3	Naphthalene		Listed
7757-82-6	Sodium sulphate		Listed
nnsylvania Rig			
1310-73-2	Sodium hydroxide		Listed
56-81-5	Glycerol		Listed
91-20-3	Naphthalene		Listed
7757-82-6	Sodium sulphate		Listed

is known to the State of California to cause 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

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200 Initial Preparation Date: 06.20.2019 Revision date: 08.07.2023

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: 08.07.2023

End of Safety Data Sheet