



Safety Data Sheet

According to Canadian Hazardous Products Regulations and WHMIS 2015

Initial preparation date: 08.08.2019

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Revision date: 03.09.2023

Mako Orange

SECTION 1: Identification

Product identifier

Product name: Mako Orange

Product code: ST-300

Recommended use of the product and restriction on use

Relevant identified uses: Not determined or not applicable.

Uses advised against: Not determined or not applicable.

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 identification

GHS classification:

Skin corrosion, category 1B

Serious eye damage, category 1

Flammable liquids, category 4

Skin sensitization, category 1

Carcinogenicity, category 2

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

Specific target organ toxicity - repeated exposure, category 2

Label elements

Hazard pictograms:



Signal Word: Danger

Hazard statements:

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H227 Combustible liquid
H317 May cause an allergic skin reaction
H335 May cause respiratory irritation
H373 May cause damage to organs through prolonged or repeated exposure.
H314 Causes severe skin burns and eye damage
H318 Causes serious eye damage
H351 Suspected of causing cancer (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard)

Precautionary statements:

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking
P280 Wear protective gloves/protective clothing/eye protection/face protection
P272 Contaminated work clothing should not be allowed out of the workplace
P202 Do not handle until all safety precautions have been read and understood
P271 Use only outdoors or in a well-ventilated area
P260 Do not breathe dust/fume/gas/mist/vapours/spray
P264 Wash hands thoroughly after handling
P302+P352 IF ON SKIN: Wash with plenty of water
P333+P313 If skin irritation or rash occurs: Get medical advice/attention
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing
P314 Get medical advice/attention if you feel unwell
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 [or shower]
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+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

Reactivity with Water

In contact with water, releases gases which are if inhaled.

SECTION 3: Composition/information on ingredients

Identification	Name	Weight %
CAS number: 68515-73-1	D-Glucopyranose, oligomers, decyl octyl glycosides	<80
CAS number: 68439-46-3	Alcohols, C9-11, branched and linear, ethoxylated	<50
CAS number: 5064-31-3	Trisodium nitrilotriacetate	0.1-10
CAS number: 61789-40-0	1-Propanaminium, 3-amino-N-(carboxymethyl)-N,N-dimethyl-, N-coco acyl derivs., hydroxides, inner salts	<5

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CAS number: 6834-92-0	Disodium metasilicate	<20
CAS number: 8028-48-6	Orange, sweet, ext.	<20
CAS number: 1300-72-7	Sodium Xylenesulfonate	<20
CAS number: 79-43-6	Dichloroacetic acid	<0.063
CAS number: 75-21-8	Ethylene oxide	<0.05
CAS number: 123-91-1	1,4-dioxane	<0.05

Additional Information: None

SECTION 4: First-aid measures

Description of first-aid measures

General notes:

Do not breath mist

Show this Safety Data Sheet to the doctor in attendance.

After inhalation:

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

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

After skin contact:

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

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

After eye contact:

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

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

After ingestion:

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.

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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.

Inhalation may have adverse effects on the respiratory tract. Symptoms may include cough, breathing difficulties, sore throat and inflammation of the mucous membrane lining the respiratory tract.

Delayed symptoms and effects:

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

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

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

Immediate medical attention and special treatment

Specific treatment:

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 respiratory symptoms persist, seek medical attention.

Notes for the doctor:

Treat symptomatically.

SECTION 5: Fire-fighting 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

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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.

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

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and collect spillage and place in suitable container for future disposal. Dispose of in accordance with all applicable regulations (see Section 13).

Reference to other sections:

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

SECTION 7: Handling and storage

Precautions for safe handling:

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

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).

SECTION 8: Exposure controls/personal protection

Only those substances with limit values have been included below.

Occupational Exposure limit values:

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Country (Legal Basis)	Substance	Identifier	Permissible concentration
Alberta	Dichloroacetic acid	79-43-6	TWA: 2.6 mg/m ³ (0.5 ppm)
	Ethylene oxide	75-21-8	8-Hour TWA: 1 ppm (1.8 mg/m ³)
	1,4-dioxane	123-91-1	8-Hour TWA: 72 mg/m ³ (20 ppm)
British Columbia	Dichloroacetic acid	79-43-6	TWA: 0.5 ppm
	Ethylene oxide	75-21-8	8-Hour TWA: 0.1 ppm
	Ethylene oxide	75-21-8	15-Minute STEL: 1 ppm
	1,4-dioxane	123-91-1	8-Hour TWA: 20 ppm
Manitoba	Dichloroacetic acid	79-43-6	TWA: 0.5 ppm
	Ethylene oxide	75-21-8	8-Hour TWA: 1 ppm
	1,4-dioxane	123-91-1	8-Hour TWA: 20 ppm
Ontario	Dichloroacetic acid	79-43-6	TWA: 0.5 ppm
	Ethylene oxide	75-21-8	TWA Exposure Limit Value: 1 ppm
	Ethylene oxide	75-21-8	15-Minute STEL: 10 ppm
	1,4-dioxane	123-91-1	8-Hour TWA: 20 ppm
Saskatchewan	Dichloroacetic acid	79-43-6	15-Minute Contamination Limit: 1.5 ppm
	Dichloroacetic acid	79-43-6	8-Hour Contamination Limit: 0.5 ppm
	Ethylene oxide	75-21-8	Level Limit Value: 1 ppm
	Ethylene oxide	75-21-8	15-Minute STEL: 2 ppm
	1,4-dioxane	123-91-1	15-Minute Contamination Limit: 30 ppm
	1,4-dioxane	123-91-1	8-Hour Contamination Limit: 20 ppm
Quebec	Ethylene oxide	75-21-8	TWA Exposure Limit Value: 1 ppm
	1,4-dioxane	123-91-1	8-Hour TWA: 72 mg/m ³ (20 ppm)
New Brunswick	Ethylene oxide	75-21-8	8-Hour TWA: 1 ppm
	1,4-dioxane	123-91-1	8-Hour TWA: 90 mg/m ³ (25 ppm)

Biological limit values:

No biological exposure limits noted for the ingredient(s).

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:

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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 (physical state, color):	liquid
Odor:	std
Odor threshold:	Not determined or not available.
pH-value:	10
Melting/Freezing point:	Not determined or not available.
Boiling point/range:	Not determined or not available.
Flash point:	Not determined or not available.
Evaporation rate:	Not determined or not available.

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Flammability (solid, gaseous):	Not determined or not available.
Explosion limit upper:	Not determined or not available.
Explosion limit lower:	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:

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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)
D-Glucopyranose, oligomers, decyl octyl glycosides	oral	LD50 Rat: > 2000 mg/kg
	dermal	LD50 Rabbit: > 2000 mg/kg
1-Propanaminium, 3-amino-N-(carboxymethyl)-N,N-dimethyl-, N-coco acyl derivs., hydroxides, inner salts	oral	LD50 Rat: 4900 mg/kg
	dermal	LD50 Rat: > 2000 mg/kg
Dichloroacetic acid	dermal	LD50 Rabbit: 797 mg/kg
	oral	LD50 Rat: 2820 mg/kg
Ethylene oxide	inhalation	LC50 Rat: 1450 ppmV (4 Hours (Gas))
	oral	LD50 Rat: 72 mg/kg
	Inhalation ATE	LC50 Rat: 700 ppmV ((Gases))
	Oral ATE	LD50 Rat: 100 mg/kg
Disodium metasilicate	dermal	LD50 Rat: > 5000 mg/kg
	oral	LD50 Rat: 1152 mg/kg
	inhalation	LC50 Rat: > 2.06 mg/L (4 hr [vapor])
Orange, sweet, ext.	oral	LD50 Rat: >5000 mg/kg
	dermal	LD50 Rabbit: >5000 mg/kg
Sodium Xylenesulfonate	dermal	LD50 Rabbit: >= 2000 mg/kg
	oral	LD50 Rat: >= 3346 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)
Alcohols, C9-11, branched and linear, ethoxylated	oral	LD50 Rat: 1378 mg/kg
	dermal	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
Disodium metasilicate	Causes severe skin burns.
1-Propanaminium, 3-amino-N-(carboxymethyl)-N,N-dimethyl-, N-coco acyl derivs., hydroxides, inner salts	Causes skin irritation.
Orange, sweet, ext.	Causes skin irritation.
Dichloroacetic acid	Causes severe skin burns.
Ethylene oxide	Causes severe skin burns.

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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.
Disodium metasilicate	Causes serious eye damage.
Trisodium nitrilotriacetate	Causes serious eye irritation.
1-Propanaminium, 3-amino-N-(carboxymethyl)-N,N-dimethyl-, N-coco acyl derivs., hydroxides, inner salts	Causes serious eye irritation.
Sodium Xylenesulfonate	Causes serious eye irritation.
Dichloroacetic acid	Causes serious eye damage.
Ethylene oxide	Causes serious eye damage.
1,4-dioxane	Causes serious eye irritation.
Alcohols, C9-11, branched and linear, 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:

Suspected of causing cancer.

Product data: No data available.

Substance data:

Name	Species	Result
Ethylene oxide		May cause cancer.
Trisodium nitrilotriacetate		Suspected of causing cancer.

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Name	Species	Result
1,4-dioxane		May cause cancer. 1,4-dioxane 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 1,4- dioxane). U.S. Environmental Protection Agency's Integrated Risk Information System (IRIS).

International Agency for Research on Cancer (IARC):

Name	Classification
D-Glucopyranose, oligomers, decyl octyl glycosides	Not Applicable
1-Propanaminium, 3-amino-N-(carboxymethyl)-N,N-dimethyl-, N-coco acyl derivs., hydroxides, inner salts	Not Applicable
Dichloroacetic acid	Group 2B
Ethylene oxide	Group 1
Disodium metasilicate	Not Applicable
Orange, sweet, ext.	Not Applicable
Sodium Xylenesulfonate	Not Applicable
Trisodium nitrilotriacetate	Group 2B
1,4-dioxane	Group 2B
Alcohols, C9-11, branched and linear, ethoxylated	Not Applicable

National Toxicology Program (NTP):

Name	Classification
D-Glucopyranose, oligomers, decyl octyl glycosides	Not Applicable
1-Propanaminium, 3-amino-N-(carboxymethyl)-N,N-dimethyl-, N-coco acyl derivs., hydroxides, inner salts	Not Applicable
Dichloroacetic acid	Reasonably anticipated to be human carcinogens
Ethylene oxide	Known to be human carcinogens
Disodium metasilicate	Not Applicable
Orange, sweet, ext.	Not Applicable
Sodium Xylenesulfonate	Not Applicable
Trisodium nitrilotriacetate	Not Applicable
1,4-dioxane	Reasonably anticipated to be human carcinogens
Alcohols, C9-11, branched and linear, ethoxylated	Not Applicable

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Germ cell mutagenicity

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

Product data:

No data available.

Substance data:

Name	Result
Ethylene oxide	May cause genetic defects.

Reproductive toxicity

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

Product data:

No data available.

Substance data:

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

Specific target organ toxicity (single exposure)

Assessment:

May cause respiratory irritation.

Product data:

No data available.

Substance data:

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

Specific target organ toxicity (repeated exposure)

Assessment:

May cause damage to organs through prolonged or repeated exposure.

Product data:

No data available.

Substance data:

Name	Result
Ethylene oxide	Studies on the effects of Ethylene oxide have concluded not only neurotoxic symptoms in humans, but also measured effects on nerve conduction velocities indicative of sensorimotor neuropathy, and axonal degeneration observed in nerve biopsies of exposed workers.

Aspiration toxicity

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

Product data:

No data available.

Substance data:

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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
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 Desmodemus subspicatus: 27.22 mg/L (72 hr)
1-Propanaminium, 3-amino-N-(carboxymethyl)-N,N-dimethyl-, N-coco acyl derivs., hydroxides, inner salts	Fish LC50 Danio rerio: 2 mg/L (96 hr)
	Aquatic Invertebrates EC50 Daphnia magna: 6.4 mg/L (48 hr)
Dichloroacetic acid	Aquatic Invertebrates EC50 Daphnia magna: 106 mg/L (24 hr)
	Fish LC50 Marine water fish: >2000 mg/L (96 hr)
	Aquatic Plants EC50 Marine water algae: 148.2 mg/L (72 hr)
Ethylene oxide	Aquatic Plants EC50 Pseudokirchneriella subcapitata: 240 mg/L (96 h, read-across substance data)
	Aquatic Invertebrates LC50 Daphnia magna: 212 mg/L (48 h)
	Fish LC50 Pimephales promelas: 84 mg/L (96 h)
Disodium metasilicate	Aquatic Plants EC50 Freshwater algae: 207 mg/L (72 hr [biomass; read-across])
	Fish LC50 Danio rerio: 210 mg/L (96 hr)
	Aquatic Invertebrates EC50 Daphnia magna: 1700 mg/L (48 hr [read-across])
Orange, sweet, ext.	Aquatic Plants EC50 Desmodemus subspicatus: 150 mg/L (72 hr [growth rate])
	Aquatic Invertebrates EC50 Daphnia magna: 8.5 mg/L (48 hr [mobility])
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])

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Name	Result
Trisodium nitrilotriacetate	Fish LC50 Pimephales promelas: 114 mg/L (96 hr)
	Aquatic Plants EC50 Desmodosmus subspicatus: >100 mg/L (72 hr [growth rate])
	Aquatic Invertebrates EC50 Daphnia magna: 560 mg/L (96 hr [mortality])
Alcohols, C9-11, branched and linear, ethoxylated	Fish LC50 Oncorhynchus mykiss: 5 mg/L (96 hr)
	Aquatic Invertebrates EC50 Daphnia magna: 2.5 mg/L (48 hr)
	Aquatic Plants ErC50 Selenastrum capricornutum: 1.4 mg/L (96 hr)

Chronic (long-term) toxicity

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

Product data: No data available.

Substance data:

Name	Result
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])
1-Propanaminium, 3-amino-N-(carboxymethyl)-N,N-dimethyl-, N-coco acyl derivs., hydroxides, inner salts	Aquatic Invertebrates NOEC Daphnia magna: 0.9 mg/L (21 d)
Trisodium nitrilotriacetate	Aquatic Invertebrates LC50 Pagurus longicarpus: 1875 mg/L (7 d)
Alcohols, C9-11, branched and linear, ethoxylated	Fish NOEC Lepomis macrochirus: >0.33 mg/L (30 d)
	Aquatic Invertebrates NOEC Daphnia magana: 0.77 mg/L (21 d)

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).
1-Propanaminium, 3-amino-N-(carboxymethyl)-N,N-dimethyl-, N-coco acyl derivs., hydroxides, inner salts	Readily biodegradable in water (50% degradation after 1 day; >90% degradation after 5 days).
Dichloroacetic acid	This substance is readily biodegradable.
Ethylene oxide	Readily biodegradable (96% degradation after 28 days).
Disodium metasilicate	Biodegradation studies are not applicable to inorganic substances.
Orange, sweet, ext.	The substance is readily biodegradable. 75% degradation, measured by O2 consumption, after 28 days.
Sodium Xylenesulfonate	The substance is readily biodegradable. 83 - 85% degradation, measured by CO2 evolution, after 28 days.
Trisodium nitrilotriacetate	Substance is readily biodegradable. >95% degradation in water, measured by DOC removal, after 28 days.
1,4-dioxane	Not readily biodegradable (< 10 % degradation after 29 days).
Alcohols, C9-11, branched and linear, ethoxylated	Readily biodegradable (72% degradation after 28 days).

Bioaccumulative potential

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Product data: No data available.

Substance data:

Name	Result
1-Propanaminium, 3-amino-N-(carboxymethyl)-N,N-dimethyl-, N-coco acyl derivs., hydroxides, inner salts	Substance is not expected to bioaccumulate significantly (estimated BCF: 70.79 L/kg).
Dichloroacetic acid	This substance has low potential for bioaccumulation.
Ethylene oxide	Low potential for bioaccumulation (logKow = -0.3).
Disodium metasilicate	Silicon is an essential trace element participating in the normal metabolism of higher animals.
Orange, sweet, ext.	The substance has a low potential for bioaccumulation. BCF [QSAR]: 32 L/kg - 395 L/kg
Trisodium nitrilotriacetate	Bioaccumulation is not expected. BCF (aquatic species): 3 L/kg ww
1,4-dioxane	Does not accumulate in aquatic organisms (mean BCF: 0.45)
Alcohols, C9-11, branched and linear, ethoxylated	Not expected to bioaccumulate (BCF: 237 L/kg).

Mobility in soil

Product data: No data available.

Substance data:

Name	Result
1-Propanaminium, 3-amino-N-(carboxymethyl)-N,N-dimethyl-, N-coco acyl derivs., hydroxides, inner salts	Substance is mobile to moderately mobile (experimental log Koc: 1.812 dimensionless; calculated Koc: 648 L/kg); therefore, moderate adsorption to soil can be expected.
D-Glucopyranose, oligomers, decyl octyl glycosides	Substance is expected to be mobile (log Koc: 1.7); therefore, adsorption to soil is not expected.
Dichloroacetic acid	This substance will not adsorb at all to soils or sediments should these environmental compartments be exposed to it.
Trisodium nitrilotriacetate	The substance has a low potential for adsorption to soil and sediment. log Kp (sediment-water): 1.6 L/kg
1,4-dioxane	Significant adsorption to solid soil phase is not expected (calculated log Koc: 0.51 at 25 °C).
Alcohols, C9-11, branched and linear, ethoxylated	Moderately mobile (log Koc: 1.575 - 2.365).

Results of PBT and vPvB assessment

Product data:

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

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

Substance data:

PBT assessment:

D-Glucopyranose, oligomers, decyl octyl glycosides	Substance is not PBT.
Disodium metasilicate	PBT assessment does not apply to inorganic substances.
Trisodium nitrilotriacetate	The substance is not PBT.

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1-Propanaminium, 3-amino-N-(carboxymethyl)-N,N-dimethyl-, N-coco acyl derivs., hydroxides, inner salts	Substance is not PBT.
Orange, sweet, ext.	The substance is not PBT.
Dichloroacetic acid	This substance is not PBT.
Ethylene oxide	This substance is not PBT.
Sodium Xylenesulfonate	The substance is not PBT.
1,4-dioxane	This substance is not PBT.
Alcohols, C9-11, branched and linear, ethoxylated	The substance is not PBT.

vPvB assessment:

D-Glucopyranose, oligomers, decyl octyl glycosides	Substance is not vPvB.
Trisodium nitrilotriacetate	The substance is not vPvB.
1-Propanaminium, 3-amino-N-(carboxymethyl)-N,N-dimethyl-, N-coco acyl derivs., hydroxides, inner salts	Substance is not vPvB.
Orange, sweet, ext.	The substance is not vPvB.
Dichloroacetic acid	This substance is not vPvB.
Ethylene oxide	This substance is not vPvB.
Disodium metasilicate	vPvB assessment does not apply to this substance as it is inorganic.
Sodium Xylenesulfonate	The substance is not vPvB.
1,4-dioxane	This substance is not vPvB.
Alcohols, C9-11, branched and linear, ethoxylated	The substance is not vPvB.

Other adverse effects: No data available.

SECTION 13: Disposal considerations

Disposal methods:

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

Contaminated packages:

Not determined or not applicable.

SECTION 14: Transport information

Canadian Transportation of Dangerous Goods (TDG)

UN number	Not Regulated
UN proper shipping name	Not regulated
UN transport hazard class(es)	None
Packing group	None
Environmental hazards	None

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Special precautions for user	None
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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

Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Bulk Name	None
Ship type	None
Pollution category	None

SECTION 15: Regulatory information

Canada regulations

Domestic substances list (DSL): All ingredients are listed or exempt.

Non-domestic substances list (NDSL): None of the ingredients are listed.

Additional information: Not determined.

SECTION 16: Other information

Abbreviations and Acronyms: None

Disclaimer:

This product has been classified in accordance with the Canadian Hazardous Products Regulations and WHMIS 2015. 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.

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End of Safety Data Sheet