

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Initial Preparation Date: 06.19.2019

Revision date: 01.25.2023

Carnauba HPC

SECTION 1: Identification

Product Identifier Product Name: Carnauba HPC Product code: CPS-603

Recommended Use of the Product and Restriction on Use

Relevant Identified Uses: Wax and Sealer for Automated Car Wash 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 Specific target organ toxicity - single exposure, category 3, narcotic effects

Label elements

Hazard Pictograms:



Signal Word: Danger

Hazard statements:

H315 Causes skin irritation

H318 Causes serious eye damage

H336 May cause drowsiness or dizziness

Precautionary Statements:

P264 Wash contaminated area thoroughly after handling. P280 Wear protective gloves/protective clothing/eye protection/face protection Page 1 of 21

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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 and soap.
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
P403+P233 Store in a well-ventilated place. Keep container tightly closed
P405 Store locked up
P501 Dispose of contents/container to...

Hazards Not Otherwise Classified: None

SECTION 3: Composition/Information on Ingredients

Identification	Name	Weight %
CAS Number: 61789-77-3		
CAS Number: 61789-40-0	1-Propanaminium, 3-amino-N-(carboxymethyl)-N,N-dimethyl-, N-coco acyl derivs., hydroxides, inner salts	<16
CAS Number: N/A	OFS	1-15
CAS Number: 111-76-2	2-Butoxyethanol	<15
CAS Number: 67-63-0	Propan-2-ol	0.6-12
CAS Number: 127087-87-0	4-Nonylphenol, branched, ethoxylated	1-11
CAS Number: N/A	Proprietary ingredient 1 (PF2)	<10
CAS Number: N/A	Proprietary ingredient 2 (PF2)	<10
CAS Number: N/A	Proprietary ingredient 3 (PF2)	<10
CAS Number: 56-81-5	Glycerol	<1.5
CAS Number: 50-00-0	Formaldehyde	<0.045
CAS Number: 79-43-6	Dichloroacetic acid	
CAS Number: 107-21-1	Ethane-1,2-diol	<0.0234

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CAS Number: 74-87-3	Methyl chloride	<0.018
CAS Number: 75-21-8	Ethylene oxide	<0.0099
CAS Number: 123-91-1	1,4-dioxane	<0.0099
CAS Number: 75-07-0	Acetaldehyde	<0.0099

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. Keep person at rest. If symptoms persist, seek medical advice.

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:

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. If symptoms develop or persist, seek medical advice/attention.

Most Important Symptoms and Effects, Both Acute and Delayed

Acute Symptoms and Effects:

Skin contact may result in redness, pain, burning and inflammation.

Eye contact may result in irritation, redness, pain, inflammation, itching, burning, tearing, corneal damage and loss of vision.

Inhalation may have adverse effects on the central nervous system. Symptoms may include drowsiness, dizziness, headache, nausea and lowering of consciousness. Acute overexposure via inhalation may result in respiratory distress, confusion and unconsciousness.

Delayed Symptoms and Effects:

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

Immediate Medical Attention and Special Treatment

Specific Treatment:

In case of eye contact, seek prompt medical attention while rinsing is continued.

Overexposure via inhalation requires urgent medical treatment.

Notes for the Doctor:

Not determined or not applicable.

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SECTION 5: Firefighting Measures

Extinguishing Media

Suitable Extinguishing Media:

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

Unsuitable Extinguishing Media:

Do not use water jet.

Specific Hazards During Fire-Fighting:

Thermal decomposition may produce irritating/toxic fumes/gases.

Special Protective Equipment for Firefighters:

Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full-face piece operated in positive pressure mode.

Special precautions:

Avoid contact with skin, eyes, hair and clothing. Do not breathe fumes/gas/mists/aerosols/vapors/dusts. Move containers from fire area if safe to do so. Use water spray/fog for cooling fire exposed containers. Avoid unnecessary run-off of extinguishing media which may cause pollution.

SECTION 6: Accidental Release Measures

Personal Precautions, Protective Equipment, and Emergency Procedures:

Respiratory protection may be necessary for spills greater than 5 gallons. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. For personal protection see section 8.

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).

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.

Occupational Exposure Limit Values:

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Country (Legal Basis)	Substance	Identifier	Permissible concentration
ACGIH	Propan-2-ol	67-63-0	15-Minute STEL: 400 ppm
	Propan-2-ol	67-63-0	8-Hour TWA: 200 ppm
	2-Butoxyethanol	111-76-2	8-Hour TWA: 20 ppm
	Proprietary ingredient 2 (PF2)	N/A	Ceiling Limit: 25 ppm
	Proprietary ingredient 3 (PF2)	N/A	TWA: 10 mg/m ³
	Ethane-1,2-diol	107-21-1	8-Hour TWA: 25 ppm (vapor fraction)
	Ethane-1,2-diol	107-21-1	15-Minute STEL: 50 ppm (vapor fraction)
	Ethane-1,2-diol	107-21-1	15-Minute STEL: 10 mg/m ³ (aerosol only, inhalable fraction)
	Methyl chloride	74-87-3	8-Hour TWA: 50 ppm
	Methyl chloride	74-87-3	15-Minute STEL: 100 ppm
	Glycerol	56-81-5	8-Hour TWA: 10 mg/m ³ (Particles, insoluble or poorly soluble, not otherwise specified, inhalable)
	Glycerol	56-81-5	8-Hour TWA: 5 mg/m ³ (Particles, insoluble or poorly soluble, not otherwise specified, respirable)
	Ethylene oxide	75-21-8	TWA: 1 ppm
	1,4-dioxane	123-91-1	TLV-TWA: 20 ppm (8 hr)
	Acetaldehyde	75-07-0	Ceiling Limit: 25 ppm
	Formaldehyde	50-00-0	15-Minute STEL: 0.3 ppm
	Formaldehyde	50-00-0	8-Hour TWA: 0.1 ppm
	Dichloroacetic acid	79-43-6	8-Hour TWA: 0.5 ppm
NIOSH	Propan-2-ol	67-63-0	IDLH: 2000 ppm
	Propan-2-ol	67-63-0	15-Minute STEL: 500 ppm (1,225 mg/m³)
	Propan-2-ol	67-63-0	REL-TWA: 400 ppm (980 mg/m ³ - up to 10 hrs.)
	2-Butoxyethanol	111-76-2	IDLH: 700 ppm
	2-Butoxyethanol	111-76-2	REL-TWA: 24 mg/m ³ (5 ppm [up to 10 hr])
	Proprietary ingredient 2 (PF2)	N/A	Ceiling Limit: 25 ppm
	Proprietary ingredient 2 (PF2)	N/A	Ceiling Limit: 125 mg/m ³
	Methyl chloride	74-87-3	IDLH: 2000 ppm
	Ethylene oxide	75-21-8	IDLH: 800 ppm
	Ethylene oxide	75-21-8	Ceiling Limit: 9 mg/m ³ (5 ppm [10-min/day])
	Ethylene oxide	75-21-8	REL: 0.18 mg/m ³ (0.1 ppm)
	1,4-dioxane	123-91-1	Ceiling Limit: 3.6 mg/m ³ (1 ppm [30-min])
	1,4-dioxane	123-91-1	IDLH: 500 ppm
	Acetaldehyde	75-07-0	IDLH: 2000 ppm
	Formaldehyde	50-00-0	REL-TWA: 0.016 ppm (up to 1 hr)

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	Formaldehyde	50-00-0	Ceiling Limit: 0.1 ppm (15 min)
	Formaldehyde	50-00-0	IDLH: 20 ppm
OSHA	Propan-2-ol	67-63-0	8-Hour TWA-PEL: 980 mg/m ³ (400 ppm)
	2-Butoxyethanol	111-76-2	8-Hour TWA-PEL: 240 mg/m ³ (50 ppm)
	Proprietary ingredient 2 (PF2)	N/A	Ceiling Limit: 25 ppm
	Proprietary ingredient 2 (PF2)	N/A	Ceiling Limit: 125 mg/m ³
	Proprietary ingredient 3 (PF2)	N/A	PEL: 5 ppm
	Proprietary ingredient 3 (PF2)	N/A	PEL: 15 mg/m ³
	Proprietary ingredient 3 (PF2)	N/A	TWA: 10 mg/m ³
	Proprietary ingredient 3 (PF2)	N/A	TWA: 5 mg/m ³
	Proprietary ingredient 3 (PF2)	N/A	8-Hour TWA-PEL: 5 mg/m ³
	Proprietary ingredient 3 (PF2)	N/A	8-Hour TWA-PEL: 10 mg/m ³
	Ethane-1,2-diol	107-21-1	Ceiling Limit: 125 mg/m ³ (50 ppm)
	Methyl chloride	74-87-3	8-Hour TWA-PEL: 210 mg/m ³ (100 ppm)
	Methyl chloride	74-87-3	PEL Ceiling: 200 ppm (300 ppm [Peak - 5 min in any 3 hrs])
	Glycerol	56-81-5	8-Hour TWA-PEL: 15 mg/m ³ (Mist, total)
	Glycerol	56-81-5	8-Hour TWA-PEL: 5 mg/m ³ (Mist, respirable fraction)
	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 ³ (100 ppm [Table Z-1])
	1,4-dioxane	123-91-1	TWA: 90 mg/m³ (25 ppm [Table Z-1-A])
	Acetaldehyde	75-07-0	8-Hour TWA-PEL: 200 ppm
	Acetaldehyde	75-07-0	8-Hour TWA-PEL: 360 mg/m ³
	Acetaldehyde	75-07-0	TWA: 50 ppm
	Acetaldehyde	75-07-0	TWA: 240 mg/m ³
	Acetaldehyde	75-07-0	STEL: 100 ppm
	Acetaldehyde	75-07-0	STEL: 485 mg/m ³
	Formaldehyde	50-00-0	8-Hour TWA-PEL: 0.75 ppm
	Formaldehyde	50-00-0	15-Minute STEL: 2 ppm
	Formaldehyde	50-00-0	8-Hour TWA-PEL: 0.5 ppm (Action level)
United States(California)	Propan-2-ol	67-63-0	8-Hour TWA-PEL: 980 mg/m ³ (400 ppm)
	2-Butoxyethanol	111-76-2	8-Hour TWA-PEL: 97 mg/m³ (20 ppm)
	Ethane-1,2-diol	107-21-1	Ceiling Limit: 100 mg/m ³ (40 ppm)
	Methyl chloride	74-87-3	8-Hour TWA-PEL: 105 mg/m ³ (50 ppm)

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Country (Legal Basis)	Substance	Identifier	Permissible concentration
	Methyl chloride	74-87-3	15-Minute STEL: 210 mg/m ³ (100 ppm)
	Methyl chloride	74-87-3	PEL Ceiling: 300 ppm
	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)
	Ethylene oxide	75-21-8	STEL: 5 ppm
	Ethylene oxide	75-21-8	PEL: 2 mg/m ³ (1 ppm)
	Ethylene oxide	75-21-8	REL: 0.03 mg/m ³ (Chronic inhalation)
	1,4-dioxane	123-91-1	8-Hour TWA-PEL: 1 mg/m ³ (0.28 ppm)
	1,4-dioxane	123-91-1	REL: 3000 ug/m ³ ([8 hr]; Acute inhalation)
	1,4-dioxane	123-91-1	REL: 3000 ug/m ³ ([8 hr]; Chronic inhalation)
	Acetaldehyde	75-07-0	Ceiling Limit: 45 mg/m ³ (25 ppm)
	Formaldehyde	50-00-0	15-Minute STEL: 2 ppm
	Formaldehyde	50-00-0	8-Hour TWA-PEL: 0.75 ppm
	Formaldehyde	50-00-0	8-Hour TWA: 0.5 ppm (Action level)

Biological Limit Values:

Country (Legal Basis)	Substance	ldentifi er	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
	Propan-2-ol	67-63-0	Acetone	Urine	EOS/EOW	40 mg/L
	Ethylene oxide	75-21-8		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

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recognized national standards (or equivalent).

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).

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).

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).

Respiratory Protection:

If engineering controls do not maintain airborne concentrations below the applicable workplace exposure limits, or to an acceptable level (if exposure limits have not been established), a respirator approved by recognized national standards (or equivalent) must be worn.

General Hygienic Measures:

When handling chemical products, do not eat, drink or smoke. Wash hands after handling, before breaks, and at the end of the workday. Avoid contact with skin, eyes and clothing. Wash contaminated clothing before reuse. Perform routine housekeeping.

SECTION 9: Physical and Chemical Properties

Information on Basic Physical and Chemical Properties

Appearance	Liquid
Odor	Std.
Odor threshold	Not determined or not available.
рН	6-8
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.

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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:

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.

Name	Route	Result
OFS	oral	LD50 Rat: >15800 mg/kg
	dermal	LD50 Rabbit: >7940 mg/kg
Propan-2-ol	oral	LD50 Rat: 5840 mg/kg
	dermal	LD50 Rabbit: 12,800 mg/kg
	inhalation	LC50 Rat: 72.6 mg/L (4 hr - Vapor)
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])
4-Nonylphenol, branched, ethoxylated	oral	LD50 Rat: 657.2 mg/kg
Proprietary ingredient 1 (PF2)	oral	LD50 Rat: 1000 - 2000 mg/kg
Proprietary ingredient 2 (PF2)	dermal	LD50 Rabbit: >2000 mg/kg

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Name	Route	Result
Proprietary ingredient 3 (PF2)	oral	LD50 Rat: >2000 mg/kg
	dermal	LD50 Rabbit: >2000 mg/kg
1-Propanaminium, 3-amino-N- (carboxymethyl)-N,N-dimethyl-,		LD50 Rat: 4900 mg/kg
N-coco acyl derivs., hydroxides, inner salts	dermal	LD50 Rat: > 2000 mg/kg
Methyl chloride	inhalation	LC50 Rat: 2566 ppmV (4 hr - Gas)
	oral	LD50 Rat: 1800 mg/kg
Quaternary ammonium compounds, dicoco alkyldimethyl, chlorides	Oral ATE	LD50 Rat: 500 mg/L
Glycerol	oral	LD50 Rat: 27,200 mg/kg
	dermal	LD50 Guinea Pig: 56,750 mg/kg
	inhalation	LC50 Rat: > 5850 mg/m³ (4 hr [Aerosol])
Ethane-1,2-diol	dermal	LD50 Mouse: > 3500 mg/kg
	Oral ATE	LD50 Rat: 500 mg/kg (Converted acute toxicity point estimate)
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
1,4-dioxane	oral	LD50 Rat: 5150 mg/kg
	dermal	LD50 Rabbit: 7600 mg/kg
	inhalation	LC50 Rat: 9158 ppmV (4 hr [vapor])
Formaldehyde	oral	LD50 Rat: 100 mg/kg
	inhalation	LC50 Rat: <463 ppmV (4 hr (vapor))
	dermal	LD50 Rabbit: 270 mg/kg
Dichloroacetic acid	dermal	LD50 Rabbit: 797 mg/kg
	oral	LD50 Rat: 2820 mg/kg

Skin Corrosion/Irritation

Assessment:

Causes skin irritation.

Product Data:

No data available.

Name	Result
Quaternary ammonium compounds, dicoco alkyldimethyl, chlorides	Causes severe skin burns.
2-Butoxyethanol	Causes skin irritation.
4-Nonylphenol, branched, ethoxylated	Causes skin irritation.

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Name	Result
1-Propanaminium, 3-amino-N- (carboxymethyl)-N,N-dimethyl-, N-coco acyl derivs., hydroxides, inner salts	
Ethylene oxide	Causes severe skin burns.
Formaldehyde	Causes severe skin burns.
Dichloroacetic acid	Causes severe skin burns.

Serious Eye Damage/Irritation

Assessment:

Causes serious eye damage.

Product Data:

No data available.

Substance Data:

Name	Result
Propan-2-ol	Causes serious eye irritation.
Quaternary ammonium compounds, dicoco alkyldimethyl, chlorides	Causes serious eye damage.
2-Butoxyethanol	Causes serious eye irritation.
4-Nonylphenol, branched, ethoxylated	Causes serious eye damage.
1-Propanaminium, 3-amino-N- (carboxymethyl)-N,N-dimethyl-, N-coco acyl derivs., hydroxides, inner salts	
Ethylene oxide	Causes serious eye damage.
1,4-dioxane	Causes serious eye irritation.
Acetaldehyde	Causes serious eye irritation.
Formaldehyde	Causes serious eye damage.
Dichloroacetic acid	Causes serious eye damage.

Respiratory or Skin Sensitization

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

Product Data:

No data available.

Substance Data:

Name	Result
Formaldehyde	May cause an allergic skin reaction.

Carcinogenicity

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

Product Data: No data available.

Name	Species	Result
Methyl chloride	Rat	Suspected of causing cancer via inhalation.

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Name	Species	Result
Ethylene oxide		May cause cancer.
1,4-dioxane		May cause cancer. This substance is characterized as "likely to be carcinogenic to humans." This characterization is based on the following findings: (1) inadequate evidence of carcinogenicity in humans, and (2) sufficient evidence in animals (i.e., hepatic tumors in multiple species [three strains of rats, two strains of mouse, and in guinea pigs] mesotheliomas of the peritoneum, mammary, and nasal tumors have also been observed in rats following 2 years of oral exposure to this substance). U.S. Environmental Protection Agency's Integrated Risk Information System (IRIS).
Acetaldehyde	Rat	The IARC has concluded that there is inadequate evidence in humans for the carcinogenicity of Acetaldehyde and that there is sufficient evidence in experimental animals for the carcinogenicity of Acetaldehyde. The overall conclusion was that Acetaldehyde is possibly carcinogenic to humans (Group 2B).
Formaldehyde		May cause cancer.

International Agency for Research on Cancer (IARC):

Name	Classification
Propan-2-ol	Group 3
Methyl chloride	Group 3
Quaternary ammonium compounds, dicoco alkyldimethyl, chlorides	Not Applicable
2-Butoxyethanol	Group 3
4-Nonylphenol, branched, ethoxylated	Not Applicable
Glycerol	Not Applicable
1-Propanaminium, 3-amino-N- (carboxymethyl)-N,N-dimethyl-, N-coco acyl derivs., hydroxides, inner salts	
Ethane-1,2-diol	Not Applicable
Ethylene oxide	Group 1
1,4-dioxane	Group 2B
Acetaldehyde	Group 2B
Formaldehyde	Group 1
Dichloroacetic acid	Group 2B

National Toxicology Program (NTP):

Name	Classification
Propan-2-ol	Not Applicable
Methyl chloride	Not Applicable
Quaternary ammonium compounds, dicoco alkyldimethyl, chlorides	Not Applicable

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Name	Classification
2-Butoxyethanol	Not Applicable
4-Nonylphenol, branched, ethoxylated	Not Applicable
Glycerol	Not Applicable
1-Propanaminium, 3-amino-N- (carboxymethyl)-N,N-dimethyl-, N-coco acyl derivs., hydroxides, inner salts	Not Applicable
Ethane-1,2-diol	Not Applicable
Ethylene oxide	Known to be human carcinogens
1,4-dioxane	Reasonably anticipated to be human carcinogens
Acetaldehyde	Reasonably anticipated to be human carcinogens
Formaldehyde	Known to be human carcinogens
Dichloroacetic acid	Reasonably anticipated to be human carcinogens

OSHA Carcinogens:

Ingredient Name	CAS	OSHA Carcinogens Status
Formaldehyde	50-00-0	Yes

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.
Acetaldehyde	Suspected of causing genetic defects.
Formaldehyde	Suspected of causing 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 drowsiness or dizziness.

Product Data:

No data available.

Name	Result
Propan-2-ol	May cause drowsiness or dizziness.

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

Specific Target Organ Toxicity (Repeated Exposure)

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

- Product Data:
- No data available.

Substance Data:

Name	Result
Methyl chloride	May causes damage to organs through prolonged or repeated exposure.
Ethane-1,2-diol	May cause damage to Kidneys through prolonged or repeated Oral exposure.
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.

Name	Result
OFS	Fish LC50 Fish: >1000 mg/L (96 hours)
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])
Ethane-1,2-diol	Aquatic Plants EC50 Green Algae: 479 mg/L (72 h)
	Aquatic Invertebrates EC50 Daphnia magna: 13,900 mg/L (48 h)
	Fish LC50 Pimephales promelas: 72,860 mg/L (96 h)

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Name	Result
Propan-2-ol	Fish LC50 Pimephales promelas: 10,000 mg/L (96 hr)
	Aquatic Invertebrates EC50 Daphnia magna: >10,000 mg/L (48 hr [immobilization])
4-Nonylphenol, branched,	Fish LC50 Lepomis macrochirus: 84.7 mg/L (96 hr - freshwater, statis)
ethoxylated	Aquatic Invertebrates EC50 Daphnia magna: 23.066 mg/L (48 hr - freshwater, static)
Glycerol	Fish LC50 Pimephales promelas: 885 mg/L (96 hr)
	Aquatic Invertebrates LC50 Daphnia magna: 1955 mg/L (48 hr)
1-Propanaminium, 3-amino-N- (carboxymethyl)-N,N-dimethyl-,	
N-coco acyl derivs., hydroxides, inner salts	Aquatic Invertebrates EC50 Daphnia magna: 6.4 mg/L (48 hr)
Methyl chloride	Aquatic Plants EC50 Algae: 231 mg/L (96 hr [growth rate])
	Fish LC50 Lepomis macrochirus: 550 mg/L (96 hr)
	Aquatic Invertebrates EC50 Daphnia magna: 200 mg/L (48 hr [mobility])
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)
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)

Chronic (Long-Term) Toxicity

Assessment: Based on available data, the classification criteria are not met. **Product Data:** No data available.

Name	Result
2-Butoxyethanol	Fish LC50 Poecilia reticulata: 983 mg/L (7 d)
	Aquatic Invertebrates EC50 Daphnia magna: 297 mg/L (21 d [reproduction])
Ethane-1,2-diol	Fish NOEC Pimephales promelas: 2629 mg/L (7 d)
	Aquatic Invertebrates EC50 Daphnia magna: 690 mg/L (16 d)
Propan-2-ol	Aquatic Invertebrates NOEC Daphnia magna: 141 mg/L (16 d [growth])
Glycerol	Aquatic Plants EC50 Freshwater algae: 2900 mg/L (8 d)
1-Propanaminium, 3-amino-N- (carboxymethyl)-N,N-dimethyl-, N-coco acyl derivs., hydroxides, inner salts	
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)

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Persistence and Degradability

Product Data: No data available.

Substance Data:

Name	Result
4-Nonylphenol, branched, ethoxylated	The substance is readily biodegradable (81% degradation in 28 days).
1-Propanaminium, 3-amino-N- (carboxymethyl)-N,N-dimethyl-, N-coco acyl derivs., hydroxides, inner salts	
2-Butoxyethanol	Readily biodegradable (90.4% degradation after 28 days, measured by CO2 evolution).
Ethane-1,2-diol	Readily biodegradable (90-100% degradation after 10 days).
Methyl chloride	This substance is readily biodegradable. 77% degradation after 28 days in closed bottle test.
Propan-2-ol	The substance has a BOD5/ThOD ratio of 0.50, and is therefore considered to be readily degradable.
Glycerol	The substance is readily biodegradable. 94% degradation, measured by DOC removal, after 28 days.
Ethylene oxide	Readily biodegradable (96% degradation after 28 days).
1,4-dioxane	Not readily biodegradable (< 10 $\%$ degradation after 29 days).
Acetaldehyde	This substance is readily biodegradable (80% degradation [BOD] after 14 days).
Formaldehyde	Readily biodegradable (99% degradation after 28 days).
Dichloroacetic acid	This substance is readily biodegradable.

Bioaccumulative Potential

Product Data: No data available.

Substance Data:

Name	Result
4-Nonylphenol, branched, ethoxylated	The substance is not expected to bioaccumulate (BCF: 7.86 L/kg ww).
1-Propanaminium, 3-amino-N- (carboxymethyl)-N,N-dimethyl-, N-coco acyl derivs., hydroxides, inner salts	
Ethane-1,2-diol	Bioaccumulation in organisms is not to be expected (log Kow: -1.36).
Propan-2-ol	Bioaccumulation is not expected. BCF (aquatic species): 1.015 L/kg ww [QSAR]
2-Butoxyethanol	Not expected to bioaccumulate (log Kow = 0.83).
Glycerol	The substance is not expected to bioaccumulate (log Kow = -1.76).
Methyl chloride	Bioaccumulation is not expected based on log Kow of 0.91.
Ethylene oxide	Low potential for bioaccumulation (logKow = -0.3).
1,4-dioxane	Does not accumulate in aquatic organisms (mean BCF: 0.45).
Formaldehyde	Accumulation in aquatic organisms is not to be expected.
Dichloroacetic acid	This substance has low potential for bioaccumulation.

Mobility in Soil

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Product Data: No data available.

Substance Data:

Name	Result
	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.
Propan-2-ol	The substance is highly mobile in soil with a low potential for adsorption to soil and sediment. Koc at 20 °C: 3.478
Glycerol	Given that this substance is a common biochemical present in most if not all species, there is no reason to believe that it wouldn't be rapidly degraded in soil.
Ethane-1,2-diol	Highly mobile (Koc: 1 L/kg).
Methyl chloride	Adsorption to soil and sediment is expected to be low due to the log Koc value of 1.12 and the gaseous form of the substance.
1,4-dioxane	Significant adsorption to solid soil phase is not expected (calculated log Koc: 0.51 at 25 °C).
Formaldehyde	Adsorption to solid soil phase is possible.
Dichloroacetic acid	This substance will not adsorb at all to soils or sediments should these environmental compartments be exposed to it.

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:

4-Nonylphenol, branched, ethoxylated	The substance is not PBT.
1-Propanaminium, 3-amino-N- (carboxymethyl)-N,N- dimethyl-, N-coco acyl derivs., hydroxides, inner salts	Substance is not PBT.
2-Butoxyethanol	The substance is not PBT.
Propan-2-ol	This substance is not PBT.
Methyl chloride	The substance is not PBT.
Glycerol	The substance is not PBT.
Ethane-1,2-diol	The substance is not PBT.
Ethylene oxide	This substance is not PBT.
1,4-dioxane	This substance is not PBT.
Acetaldehyde	This substance is not PBT.
Formaldehyde	Not a PBT substance.
Dichloroacetic acid	This substance is not PBT.
vPvB assessment:	
4-Nonylphenol, branched, ethoxylated	The substance is not vPvB.

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1-Propanaminium, 3-amino-N- (carboxymethyl)-N,N- dimethyl-, N-coco acyl derivs., hydroxides, inner salts	Substance is not vPvB.
2-Butoxyethanol	The substance is not vPvB.
Propan-2-ol	This substance is not vPvB.
Methyl chloride	The substance is not vPvB.
Glycerol	The substance is not vPvB.
Ethane-1,2-diol	The substance is not vPvB.
Ethylene oxide	This substance is not vPvB.
1,4-dioxane	This substance is not vPvB.
Acetaldehyde	This substance is not vPvB.
Formaldehyde	Not a vPvB substance.
Dichloroacetic acid	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

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UN Transport Hazard Class(es)	None
Packing Group	None
Environmental Hazards	None
Special Precautions for User	None

SECTION 15: Regulatory Information

United States Regulations

Inventory Listing (TSCA): All ingredients are listed-active or exempt.

Significant New Use Rule (TSCA Section 5): None of the ingredients are listed.

Export Notification under TSCA Section 12(b):

67-63-0	Propan-2-ol	Not Listed
61789-77-3	Quaternary ammonium compounds, dicoco alkyldimethyl, chlorides	Not Listed
111-76-2	2-Butoxyethanol	Not Listed
127087-87-0	4-Nonylphenol, branched, ethoxylated	Not Listed
61789-40-0	1-Propanaminium, 3-amino-N-(carboxymethyl)-N,N-dimethyl-, N-coco acyl derivs., hydroxides, inner salts	Not Listed
107-21-1	Ethane-1,2-diol	Not Listed
74-87-3	Methyl chloride	Not Listed
56-81-5	Glycerol	Not Listed
75-21-8	Ethylene oxide	Not Listed
123-91-1	1,4-dioxane	Not Listed
75-07-0	Acetaldehyde	Listed
50-00-0	Formaldehyde	Not Listed
79-43-6	Dichloroacetic acid	Not Listed

SA	SARA Section 302 Extremely Hazardous Substances:		
	75-21-8	Ethylene oxide	Listed
	50-00-0	Formaldehyde	Listed

SARA Section 313 Toxic Chemicals:

67-63-0	Propan-2-ol	Listed
111-76-2	2-Butoxyethanol	Listed
127087-87-0	4-Nonylphenol, branched, ethoxylated	Listed
107-21-1	Ethane-1,2-diol	Listed
74-87-3	Methyl chloride	Listed

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	75-21-8	Ethylene oxide	Listed	
	123-91-1 1,4-dioxane		Listed	
	75-07-0 Acetaldehyde		Listed	
	50-00-0	Formaldehyde	Listed	
CE	RCLA:		-	
	111-76-2	2-Butoxyethanol Listed	N/A	
	107-21-1	Ethane-1,2-diol Listed	5000 lb	
	74-87-3	Methyl chloride Listed	100 Lbs.	
	75-21-8	Ethylene oxide Listed	10 lbs	
	123-91-1	1,4-dioxane Listed	100 lbs	
	75-07-0	Acetaldehyde Listed	1,000	
	50-00-0	Formaldehyde Listed	100 lb	
RC	RCRA:			
	74-87-3	Methyl chloride Listed	U045	
	75-21-8	Ethylene oxide Listed	U115	
	123-91-1	1,4-dioxane Listed	U108	
	75-07-0	Acetaldehyde Listed	U001	
	50-00-0	Formaldehyde Listed	U122	
Se	ction 112(r) of the	Clean Air Act (CAA):		
	74-87-3	Methyl chloride	Listed	
	75-21-8	Ethylene oxide	Listed	
	50-00-0	Formaldehyde	Listed	
Ма	ssachusetts Right	to Know:	-	
	67-63-0	Propan-2-ol	Listed	
	107-21-1	Ethane-1,2-diol	Listed	
	74-87-3	Methyl chloride	Listed	
	111-76-2	2-Butoxyethanol	Listed	
	56-81-5	Glycerol	Listed	

New Jersey Right to Know:

Ethylene oxide

1,4-dioxane

Acetaldehyde

Formaldehyde

75-21-8

123-91-1

75-07-0

50-00-0

67-63-0	Propan-2-ol	Listed
107-21-1	Ethane-1,2-diol	Listed
74-87-3	Methyl chloride	Listed
111-76-2	2-Butoxyethanol	Listed
56-81-5	Glycerol	Listed
75-21-8	Ethylene oxide	Listed
123-91-1	1,4-dioxane	Listed
75-07-0	Acetaldehyde	Listed
50-00-0	Formaldehyde	Listed

Listed

Listed

Listed

Listed

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	79-43-6	Dichloroacetic acid	Listed	
Nev	New York Right to Know:			
	67-63-0	Propan-2-ol	Listed	
	107-21-1	Ethane-1,2-diol	Listed	
	74-87-3	Methyl chloride	Listed	
	111-76-2	2-Butoxyethanol	Listed	
	75-21-8	Ethylene oxide	Listed	
	123-91-1	1,4-dioxane	Listed	
	75-07-0	Acetaldehyde	Listed	
	50-00-0	Formaldehyde	Listed	
	79-43-6	Dichloroacetic acid	Listed	

Pennsylvania Right to Know:

67-63-0	Propan-2-ol	Listed
107-21-1	Ethane-1,2-diol	Listed
74-87-3	Methyl chloride	Listed
111-76-2	2-Butoxyethanol	Listed
56-81-5	Glycerol	Listed
75-21-8	Ethylene oxide	Listed
123-91-1	1,4-dioxane	Listed
75-07-0	Acetaldehyde	Listed
50-00-0	Formaldehyde	Listed
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California Proposition 65:

WARNING: This product can expose you to chemicals including 1,4-dioxane, Acetaldehyde and Formaldehyde which are known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

WARNING: This product can expose you to chemicals including Ethylene oxide and Dichloroacetic acid; which are known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

Additional information: Not determined.

SECTION 16: Other Information

Abbreviations and Acronyms: None

Disclaimer:

This product has been classified in accordance with OSHA HCS 2012 guidelines. The information provided in this SDS is correct, to the best of our knowledge, based on information available. The information given is designed only as a guidance for safe handling, use, storage, transportation and disposal and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials, unless specified in the text. The responsibility to provide a safe workplace remains with the user.

NFPA: 0-0-0 HMIS: 0-0-0 Initial Preparation Date: 06.19.2019 Revision date: 01.25.2023

End of Safety Data Sheet

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