Safety Data Sheet

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Flea and Tick (Mast)

SECTION 1: Identification

Product Identifier

Product Name: Flea and Tick (Mast)
Product code: MS-424

Recommended Use of the Product and Restriction on Use

Relevant Identified Uses: Pet Shampoo
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
Mast Solutions
430 North Franklin Street
Lancaster, PA 17602
631-255-9869
jonk@mastsolutionsinc.com
www.mastsolutionsinc.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

Label elements

Hazard Pictograms:



Signal Word: Danger

Hazard statements:

H315 Causes skin irritation
H318 Causes serious eye damage

Precautionary Statements:

P264 Wash hands thoroughly after handling
P280 Wear protective gloves/protective clothing/eye protection/face protection
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

Hazards Not Otherwise Classified: None

SECTION 3: Composition/Information on Ingredients

Identification	Name	Weight %
CAS Number: 2235-54-3	Ammonium dodecyl sulphate	<16
CAS Number: 9004-82-4	2-dodecoxyethyl hydrogen sulfate	<3.05
CAS Number: 61792-31-2	N-[3-(dimethylamino)propyl]dodecanamide N-oxide	<1.5
CAS Number: 61789-40-0	1-Propanaminium, 3-amino-N-(carboxymethyl)-N,N-dimethyl-, N-coco acyl derivs., hydroxides, inner salts	<1
CAS Number: 68140-00-1	Amides, coco, N-(hydroxyethyl)	<1
CAS Number: 64-17-5	Ethanol	<0.8
CAS Number: 67806-10-4	N-[3-(dimethylamino)propyl]myristamide N-oxide	<0.5
CAS Number: 68131-39-5	Alcohols, C12-15, ethoxylated	<0.15
CAS Number: 52-51-7	Bronopol (INN) 2-bromo-2-nitropropane-1,3-diol	<0.01
CAS Number: 75-21-8	Ethylene oxide	<0.0045
CAS Number: 123-91-1	1,4-dioxane	<0.0045
CAS Number: 67-56-1	Methanol	<0.0045
CAS Number: 79-43-6	Dichloroacetic acid	<0.000060

Additional Information: None

SECTION 4: First Aid Measures

Description of First Aid Measures

General Notes:

Show this Safety Data Sheet to the doctor in attendance.

After Inhalation:

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

After Skin Contact:

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

After Eye Contact:

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.

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.

Notes for the Doctor:

Treat symptomatically.

SECTION 5: Firefighting Measures

Extinguishing Media

Suitable Extinguishing Media:

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

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:

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.

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:

Country (Legal Basis)	Substance	Identifier	Permissible concentration
OSHA	Ethanol	64-17-5	8-Hour TWA-PEL: 1900 mg/m³ ([1000 ppm])
	1,4-dioxane	123-91-1	8-Hour TWA-PEL: 360 mg/m³ (100 ppm)
	Methanol	67-56-1	8-Hour TWA-PEL: 260 mg/m³ (200 ppm)
	Ethylene oxide	75-21-8	8-Hour TWA: 1 ppm
	Methanol	67-56-1	15-Minute STEL: 325 mg/m³ (250 ppm)
NIOSH	Ethanol	64-17-5	REL-TWA: 1900 mg/m³ (1000 ppm [up to 10 hr.])
	Ethanol	64-17-5	IDLH: 3300 ppm
	1,4-dioxane	123-91-1	IDLH: 500 ppm
	1,4-dioxane	123-91-1	Ceiling Limit: 3.6 mg/m³ (1 ppm [30-min])
	Methanol	67-56-1	IDLH: 6000 ppm
	Methanol	67-56-1	15-Minute STEL: 325 mg/m³ (250 ppm)
	Methanol	67-56-1	REL-TWA: 260 mg/m³ (200 ppm [up to 10 hr])
	Ethylene oxide	75-21-8	8-Hour TWA: 0.1 ppm (0.18 mg/m3)
	Ethylene oxide	75-21-8	IDLH: 800 ppm

Flea and Tick (Mast)

Country (Legal Basis)	Substance	Identifier	Permissible concentration
	Ethylene oxide	75-21-8	Ceiling Limit: 5 ppm (9 mg/m3)
ACGIH	Ethanol	64-17-5	15-Minute STEL: 1000 ppm
	Dichloroacetic acid	79-43-6	8-Hour TWA: 0.5 ppm
	1,4-dioxane	123-91-1	8-Hour TWA: 20 ppm
	Methanol	67-56-1	15-Minute STEL: 250 ppm
	Methanol	67-56-1	8-Hour TWA: 200 ppm
	Ethylene oxide	75-21-8	8-Hour TWA: 1 ppm
United States(California)	Ethanol	64-17-5	8-Hour TWA-PEL: 1900 mg/m³ ([1000 ppm])
	1,4-dioxane	123-91-1	8-Hour TWA-PEL: 1 mg/m³ (0.28 ppm)
	Methanol	67-56-1	Ceiling Limit: 1000 ppm
	Methanol	67-56-1	15-Minute STEL: 325 mg/m³ (250 ppm)
	Methanol	67-56-1	8-Hour TWA-PEL: 260 mg/m³ (200 ppm)
	Ethylene oxide	75-21-8	15-Minute STEL: 5 ppm

Biological Limit Values:

Country (Legal Basis)	Substance	Identifier	Determinant	Specimen	Sampling time	Permissible limits
ACGIH	Methanol	67-56-1	Methanol	Urine	End of shift	15 mg/L
	Ethylene oxide	75-21-8	S-(2-Hydroxyethyl)mercapturic acid (HEMA)	creatinine urine	End of Shift	5 µg/g

Information on Monitoring Procedures:

Not determined or not applicable.

Appropriate Engineering Controls:

Emergency eye wash stations and safety showers should be available in the immediate vicinity of use or handling. Provide adequate ventilation to maintain the airborne concentrations of vapor, mists, and/or dusts below the applicable workplace exposure limits, while observing recognized national standards (or equivalent).

Personal Protection Equipment

Eye and Face Protection:

Safety glasses or goggles. Use eye protection equipment that has been tested and approved by recognized national standards (or equivalent).

Skin and Body Protection:

Chemical resistant, impervious gloves approved by the appropriate standards. Gloves must be inspected prior to use. Avoid skin contact with used gloves. Appropriate techniques should be used to remove used gloves and contaminated clothing. Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. Ensure that all personal protective equipment is approved by recognized national standards (or equivalent).

Respiratory Protection:

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

General Hygienic Measures:

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

SECTION 9: Physical and Chemical Properties

Information on Basic Physical and Chemical Properties

Appearance	Liquid
Odor	Fresh Scent
Odor threshold	Not determined or not available.
pH	Not determined or not available.
Melting point/freezing point	Not determined or not available.
Initial boiling point/range	Not determined or not available.
Flash point (closed cup)	Not determined or not available.
Evaporation rate	Not determined or not available.
Flammability (solid, gas)	Not determined or not available.
Upper flammability/explosive limit	Not determined or not available.
Lower flammability/explosive limit	Not determined or not available.
Vapor pressure	Not determined or not available.
Vapor density	Not determined or not available.
Density	Not determined or not available.
Relative density	Not determined or not available.
Solubilities	Not determined or not available.
Partition coefficient (n-octanol/water)	Not determined or not available.
Auto/Self-ignition temperature	Not determined or not available.
Decomposition temperature	Not determined or not available.
Dynamic viscosity	Not determined or not available.
Kinematic viscosity	Not determined or not available.
Explosive properties	Not determined or not available.
Oxidizing properties	Not determined or not available.

SECTION 10: Stability and Reactivity

Reactivity:
Not reactive under recommended handling and storage conditions.

Chemical Stability:
Stable under recommended handling and storage conditions.

Possibility of Hazardous Reactions:
Hazardous reactions are not anticipated under recommended conditions of handling and storage.

Conditions to Avoid:
Extreme heat, open flames, hot surfaces, sparks, ignition sources and incompatible materials.

Incompatible Materials:
None known.

Hazardous Decomposition Products:
Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological Information

Acute Toxicity

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

Product Data: No data available.

Substance Data:

Name	Route	Result
Bronopol (INN) 2-bromo-2-nitropropane-1,3-diol	dermal	LD50 Rat: 1600 mg/kg
	oral	LD50 Rat: 193 mg/kg
	inhalation	LC50 Rat: > 0.588 mg/L (4 hr [aerosol])
1-Propanaminium, 3-amino-N-(carboxymethyl)-N,N-dimethyl-, N-coco acyl derivs., hydroxides, inner salts	oral	LD50 Rat: > 5000 mg/kg
	dermal	LD50 Rat: > 2000 mg/kg
Ethanol	oral	LD50 Rat: 10,470 mg/kg
	inhalation	LC50 Rat: 116.9 mg/L (4 hr [vapor])
	dermal	LD50 Rabbit: 17,100 mg/kg
Alcohols, C12-15, ethoxylated	oral	LD50 Rat: >2000 mg/kg
	dermal	LD50 Rabbit: 2500 mg/kg
Dichloroacetic acid	dermal	LD50 Rabbit: 797 mg/kg
	oral	LD50 Rat: 2820 mg/kg
1,4-dioxane	oral	LD50 Rat: 5150 mg/kg
	dermal	LD50 Rabbit: 7600 mg/kg
Methanol	Oral ATE	LD50 Rat: 100 mg/kg
	Dermal ATE	LD50 Rabbit: 300 mg/kg
	Inhalation ATE	LC50 Rat: 3 mg/L (4 hr [vapor])
Ammonium dodecyl sulphate	oral	LD50 Rat: 4700 mg/kg
2-dodecoxyethyl hydrogen sulfate	oral	LD50 Rat: 1600 mg/kg
N-[3-(dimethylamino)propyl]dodecanamide N-oxide	oral	LD50 Rat: 300 - 2000 mg/kg
N-[3-(dimethylamino)propyl]myristamide N-oxide	Oral ATE	LD50 Rat: 500 mg/kg
Ethylene oxide	inhalation	LC50 Rat: 660 ppmV (4 hr [Gas])
	oral	LD50 Rat: 270 mg/kg

Skin Corrosion/Irritation

Assessment:

Causes skin irritation.

Product Data:

No data available.

Substance Data:

Name	Result
Bronopol (INN) 2-bromo-2-nitropropane-1,3-diol	Causes skin irritation.

Flea and Tick (Mast)

Name	Result
1-Propanaminium, 3-amino-N-(carboxymethyl)-N,N-dimethyl-, N-coco acyl derivs., hydroxides, inner salts	Causes skin irritation.
Ammonium dodecyl sulphate	Causes skin irritation.
Dichloroacetic acid	Causes severe skin burns.
2-dodecoxyethyl hydrogen sulfate	Causes skin irritation.
N-[3-(dimethylamino)propyl]dodecanamide N-oxide	Causes skin irritation.
N-[3-(dimethylamino)propyl]myristamide N-oxide	Causes skin irritation.
Ethylene oxide	Causes severe skin burns.

Serious Eye Damage/Irritation

Assessment:

Causes serious eye damage.

Product Data:

No data available.

Substance Data:

Name	Result
Bronopol (INN) 2-bromo-2-nitropropane-1,3-diol	Causes serious eye damage.
1-Propanaminium, 3-amino-N-(carboxymethyl)-N,N-dimethyl-, N-coco acyl derivs., hydroxides, inner salts	Causes serious eye irritation.
Ammonium dodecyl sulphate	Causes serious eye irritation.
Dichloroacetic acid	Causes serious eye damage.
2-dodecoxyethyl hydrogen sulfate	Causes serious eye irritation.
Alcohols, C12-15, ethoxylated	Causes serious eye damage.
N-[3-(dimethylamino)propyl]dodecanamide N-oxide	Causes serious eye damage.
N-[3-(dimethylamino)propyl]myristamide N-oxide	Causes serious eye damage.
Ethanol	Causes serious eye irritation.
Ethylene oxide	Causes serious eye damage
1,4-dioxane	Causes serious eye irritation.

Respiratory or Skin Sensitization

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

Product Data:

No data available.

Flea and Tick (Mast)

Substance Data:

Name	Result
1-Propanaminium, 3-amino-N-(carboxymethyl)-N,N-dimethyl-, N-coco acyl derivs., hydroxides, inner salts	May cause an allergic skin reaction.

Carcinogenicity

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

Product Data: No data available.

Substance Data:

Name	Species	Result
Dichloroacetic acid		Suspected of causing cancer.
Ethylene oxide		May cause cancer.
1,4-dioxane		May cause cancer.

International Agency for Research on Cancer (IARC):

Name	Classification
Ethanol	Group 1
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
1,4-dioxane	Group 2B
Methanol	Not Applicable
Ammonium dodecyl sulphate	Not Applicable
2-dodecoxyethyl hydrogen sulfate	Not Applicable
N-[3-(dimethylamino)propyl]dodecanamide N-oxide	Not Applicable
Amides, coco, N-(hydroxyethyl)	Not Applicable
N-[3-(dimethylamino)propyl]myristamide N-oxide	Not Applicable
Alcohols, C12-15, ethoxylated	Not Applicable
Bronopol (INN) 2-bromo-2-nitropropane-1,3-diol	Not Applicable

National Toxicology Program (NTP):

Name	Classification
Ethanol	Known to be human carcinogens
1-Propanaminium, 3-amino-N-(carboxymethyl)-N,N-dimethyl-, N-coco acyl derivs., hydroxides, inner salts	Not Applicable

Flea and Tick (Mast)

Name	Classification
Dichloroacetic acid	Reasonably anticipated to be human carcinogens
1,4-dioxane	Reasonably anticipated to be human carcinogens
Methanol	Not Applicable
Ammonium dodecyl sulphate	Not Applicable
2-dodecoxyethyl hydrogen sulfate	Not Applicable
N-[3-(dimethylamino)propyl]dodecanamide N-oxide	Not Applicable
Amides, coco, N-(hydroxyethyl)	Not Applicable
N-[3-(dimethylamino)propyl]myristamide N-oxide	Not Applicable
Alcohols, C12-15, ethoxylated	Not Applicable
Bronopol (INN) 2-bromo-2-nitropropane-1,3-diol	Not Applicable
Ethylene oxide	Known to be human carcinogens

OSHA Carcinogens:

Ingredient Name	CAS	OSHA Carcinogens Status
Ethylene oxide	75-21-8	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.

Reproductive Toxicity

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

Product Data:

No data available.

Substance Data:

Name	Result
Dichloroacetic acid	May damage fertility or the unborn child.
	May cause harm to breast-fed children.
Ethylene oxide	May damage fertility or the unborn child.

Specific Target Organ Toxicity (Single Exposure)

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

Product Data:

No data available.

Substance Data:

Flea and Tick (Mast)

Name	Result
Bronopol (INN) 2-bromo-2-nitropropane-1,3-diol	May cause respiratory irritation.
Ethylene oxide	May cause respiratory irritation.
	May cause drowsiness or dizziness.
1,4-dioxane	May cause respiratory irritation.
Methanol	Causes damage to optic nerves.

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
N-[3-(dimethylamino)propyl]myristamide N-oxide	May cause damage to spleen through prolonged or repeated oral exposure.
Dichloroacetic acid	May cause damage to organs (brain, liver, testes) through prolonged or repeated exposure
Ethylene oxide	Cause damage to organs through prolonged or repeated exposure.

Aspiration toxicity

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

Product Data:

No data available.

Substance Data: No data available.

Information on Likely Routes of Exposure:

No data available.

Symptoms Related to the Physical, Chemical, and Toxicological Characteristics:

No data available.

Other Information:

No data available.

SECTION 12: Ecological Information

Acute (Short-Term) Toxicity

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

Product Data: No data available.

Substance Data:

Name	Result
Bronopol (INN) 2-bromo-2-nitropropane-1,3-diol	Aquatic Invertebrates EC50 Daphnia magna: 0.69 mg/L (48 hr [mortality])
	Aquatic Plants EC50 Desmodesmus subspicatus: 0.026 mg/L (72 hr [growth rate])
Alcohols, C12-15, ethoxylated	Aquatic Invertebrates EC50 Acartia tonsa: 0.88 mg/L (48 hr [mortality])
	Aquatic Plants EC50 Raphidocelis subcapitata: 0.031 mg/L (72 hr [growth rate])
	Fish LC50 Pimephales promelas: 0.628 mg/L (96 hr [QSAR substance data])

Flea and Tick (Mast)

Name	Result
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 [mobility])
	Aquatic Plants EC50 Ulva lactuca: 30 mg/L (48 hr [biomass])
Dichloroacetic acid	Fish LC50 Marine water fish: >2000 mg/L (96 h)
	Aquatic Plants EC50 Marine water algae: 148.2 mg/L (72 h [cell number])
Ethanol	Fish LC50 Pimephales promelas: 15,300 mg/L (96 hr)
	Aquatic Invertebrates EC50 Daphnia magna: >10,000 mg/L (48 hr [mobility; read-across substance data])
	Aquatic Plants EC50 Chlorella vulgaris: 275 mg/L (72 hr [growth rate])
	Bacteria LC50 Paramaecium caudatum: 5,800 mg/L (4 hr)
Ethylene oxide	Aquatic Plants EC50 Raphidocelis subcapitata: 240 mg/L (96 hr [growth rate, Read-across substance data])
	Aquatic Invertebrates EC50 Daphnia magna: 350 mg/L (48 hr [mobility, Read-across substance data])
	Fish LC50 Oncorhynchus mykiss: 52 mg/L (96 hr [Read-across substance data])
1,4-dioxane	Fish LC50 Pimephales promelas: 9850 mg/L (96 hr)
	Aquatic Invertebrates EC50 Daphnia magna: >1000 mg/L (48 hr [mobility])
	Aquatic Plants EC50 Pseudokirchneriella subcapitata: >1000 mg/L (72 hr [growth rate])
Methanol	Fish LC50 Lepomis macrochirus: 15,400 mg/L (96 hr)
	Aquatic Invertebrates EC50 Daphnia magna: 18,260 mg/L (96 hr [mobility])
	Aquatic Plants EC50 Raphidocelis subcapitata: 22,000 mg/L (96 hr [growth rate])
N-[3-(dimethylamino)propyl]dodecanamide N-oxide	Aquatic Invertebrates EC50 Daphnia magna: 71 mg/L (48 hr [mobility])
	Aquatic Plants EC50 Raphidocelis subcapitata: 0.29 mg/L (72 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
Alcohols, C12-15, ethoxylated	Aquatic Invertebrates NOEC Daphnia magna: 0.036 mg/L (21 d [mortality])
	Fish EC10 Pimephales promelas: 0.265 mg/L (28 d [reproduction, QSAR substance data])
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 [reproduction])
Ethanol	Aquatic Invertebrates NOEC Daphnia Magna: 9.6 mg/L (10 d [reproduction])
	Fish NOEC Danio rerio: 250 mg/L (5 d)

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Name	Result
1,4-dioxane	Fish NOEC Pimephales promelas: 145 mg/L (32 d [mortality])
	Aquatic Invertebrates NOEC Daphnia magna: 1000 mg/L (21 d [reproduction])
	Aquatic Plants NOEC Pseudokirchneriella subcapitata: 1000 mg/L (72 hr [growth rate])
Methanol	Aquatic Invertebrates NOEC Daphnia magna: 208 mg/L (21 d [reproduction, QSAR substance data])
	Fish NOEC Pimephales promelas: 446.7 mg/L (28 d [QSAR substance data])

Persistence and Degradability

Product Data: No data available.

Substance Data:

Name	Result
Bronopol (INN) 2-bromo-2-nitropropane-1,3-diol	The substance is readily biodegradable. 70 - 80% degradation in water, measured by CO2 evolution, after 28 days.
Dichloroacetic acid	The substance is readily biodegradable. 93% degradation, measured by Oxygen consumption, after 15 days.
1,4-dioxane	The substance is not readily biodegradable in water. 1% degradation in water, measured by CO2 evolution, after 60 days.
Methanol	The substance is readily biodegradable. 97% degradation in water, measured by O2 consumption, after 20 days.
N-[3-(dimethylamino)propyl]dodecanamide N-oxide	The substance is readily biodegradable. 74% degradation measured by CO2 evolution after 28 days.
1-Propanaminium, 3-amino-N-(carboxymethyl)-N,N-dimethyl-, N-coco acyl derivs., hydroxides, inner salts	The substance is readily biodegradable .>90% degradation in water, measured by test mat. analysis, after 5 days.
Ethanol	The substance is readily biodegradable. 84% degradation measured by O2 consumption, after 20 days.
Alcohols, C12-15, ethoxylated	Standard biodegradability studies are not applicable to UVCB substances.
Ethylene oxide	The substance is readily biodegradable. 107% degradation in water, measured by O2 consumption, after 28 days.

Bioaccumulative Potential

Product Data: No data available.

Substance Data:

Name	Result
Dichloroacetic acid	This substance has low potential for bioaccumulation.
Ethanol	The substance is not expected to bioaccumulate in organisms (estimated BCF: 3).
1,4-dioxane	The substance is not expected to bioaccumulate (BCF: 0.3 - 0.7).
1-Propanaminium, 3-amino-N-(carboxymethyl)-N,N-dimethyl-, N-coco acyl derivs., hydroxides, inner salts	Standard bioaccumulation studies are not applicable to UVCB substances.
Alcohols, C12-15, ethoxylated	Standard bioaccumulation studies are not applicable to UVCB substances.
Bronopol (INN) 2-bromo-2-nitropropane-1,3-diol	The substance is not expected to bioaccumulate (BCF=3.9 L/kg basis-whole body w.w., QSAR substance data).

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Name	Result
Ethylene oxide	The substance is not expected to bioaccumulate (log Pow: -0.3 at 25 °C).
Methanol	The substance is not expected to bioaccumulate (BCF: 4.5, basis-intestine, aquatic species).

Mobility in Soil

Product Data: No data available.

Substance Data:

Name	Result
Dichloroacetic acid	This substance will not adsorb at all to soils or sediments should these environmental compartments be exposed to it.
Ethanol	The substance is highly mobile, therefore, adsorption to soil and sediment is not expected (log Koc: 0.2).
1,4-dioxane	The substance is highly mobile, therefore, adsorption to soil and sediment is not expected (Log Koc: 0.42 L/Kg at 25 °C).
Methanol	The substance is highly mobile, therefore, adsorption to soil and sediment is not expected (Koc: 0.13 - 0.61 dimensionless).
1-Propanaminium, 3-amino-N-(carboxymethyl)-N,N-dimethyl-, N-coco acyl derivs., hydroxides, inner salts	The substance is mobile, therefore, there is low potential for adsorption to soil and sediment (log Koc: 1.812 dimensionless at 25 °C, Read-across substance data).
Alcohols, C12-15, ethoxylated	Standard adsorption/desorption studies are not applicable to UVCB substances.
Bronopol (INN) 2-bromo-2-nitropropane-1,3-diol	The substance is highly mobile; therefore, adsorption to soil is not expected (Koc= 1 L/kg at 25 °C, QSAR substance data).
Ethylene oxide	The substance is highly mobile, therefore, adsorption to soil and sediment is not expected (log Koc: 0.51 dimensionless, QSAR substance data).

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:

1-Propanaminium, 3-amino-N-(carboxymethyl)-N,N-dimethyl-, N-coco acyl derivs., hydroxides, inner salts	The substance is not PBT.
Dichloroacetic acid	The substance is not PBT.
Ethanol	The substance is not PBT.
Alcohols, C12-15, ethoxylated	The substance is not PBT.
1,4-dioxane	The substance is not PBT.
Methanol	The substance is not PBT.
Bronopol (INN) 2-bromo-2-nitropropane-1,3-diol	The substance is not PBT.
Ethylene oxide	The substance is not PBT.

vPvB assessment:

Flea and Tick (Mast)

1-Propanaminium, 3-amino-N-(carboxymethyl)-N,N-dimethyl-, N-coco acyl derivs., hydroxides, inner salts	The substance is not vPvB.
Dichloroacetic acid	The substance is not vPvB.
Ethanol	The substance is not vPvB.
Alcohols, C12-15, ethoxylated	The substance is not vPvB.
1,4-dioxane	The substance is not vPvB.
Methanol	The substance is not vPvB.
Bronopol (INN) 2-bromo-2-nitropropane-1,3-diol	The substance is not vPvB.
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 material according to regulatory entities.

Contaminated packages:

Not determined or not applicable.

SECTION 14: Transport Information

United States Transportation of Dangerous Goods (49 CFR DOT)

UN Number	Not Regulated
UN Proper Shipping Name	Not regulated
UN Transport Hazard Class(es)	None
Packing Group	None
Environmental Hazards	None
Special Precautions for User	None

International Maritime Dangerous Goods (IMDG)

UN Number	Not regulated
UN Proper Shipping Name	Not regulated
UN Transport Hazard Class(es)	None
Packing Group	None
Environmental Hazards	None
Special Precautions for User	None

International Air Transport Association Dangerous Goods Regulations (IATA-DGR)

UN Number	Not regulated
UN Proper Shipping Name	Not regulated
UN Transport Hazard Class(es)	None
Packing Group	None
Environmental Hazards	None

Flea and Tick (Mast)

Special Precautions for User	None

SECTION 15: Regulatory Information

United States Regulations

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

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

Export Notification under TSCA Section 12(b): None of the ingredients are listed.

SARA Section 302 Extremely Hazardous Substances:

75-21-8	Ethylene oxide	Listed

SARA Section 313 Toxic Chemicals:

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

CERCLA:

123-91-1	1,4-dioxane	Listed	100 lbs
67-56-1	Methanol	Listed	5000 lbs
75-21-8	Ethylene oxide	Listed	10 lbs

RCRA:

123-91-1	1,4-dioxane	Listed	U108
67-56-1	Methanol	Listed	U154
75-21-8	Ethylene oxide	Listed	U115

Section 112(r) of the Clean Air Act (CAA):

75-21-8	Ethylene oxide	Listed

Massachusetts Right to Know:

64-17-5	Ethanol	Listed
123-91-1	1,4-dioxane	Listed
67-56-1	Methanol	Listed
75-21-8	Ethylene oxide	Listed

New Jersey Right to Know:

64-17-5	Ethanol	Listed
79-43-6	Dichloroacetic acid	Listed
123-91-1	1,4-dioxane	Listed
67-56-1	Methanol	Listed
75-21-8	Ethylene oxide	Listed

New York Right to Know:

64-17-5	Ethanol	Listed
79-43-6	Dichloroacetic acid	Listed
123-91-1	1,4-dioxane	Listed
67-56-1	Methanol	Listed
75-21-8	Ethylene oxide	Listed

Pennsylvania Right to Know:

64-17-5	Ethanol	Listed

Flea and Tick (Mast)

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

California Proposition 65:

⚠ **WARNING:** This product can expose you to 1,4-dioxane; which is known to the State of California to cause cancer; and Methanol, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

⚠ **WARNING:** This product can expose you to chemicals including Dichloroacetic acid and Ethylene oxide; 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: 04.10.2026

End of Safety Data Sheet