# SAFETY DATA SHEET

Betco Cide-Bet II

## Section 1. Identification

**GHS product identifier** : Betco Cide-Bet II

**Product code** : 087

**Other means of identification** : Not available.

**Product type** : Aerosol.

**Relevant identified uses of the substance or mixture and uses advised against**

| Identified uses |
| --- |
| Disinfectant |

**Uses advised against**
Not applicable.

**Supplier's details** : Betco Corporation
400 Van Camp Road
Bowling Green, Ohio 43402
www.betco.com
888-462-3826

**Emergency telephone number** : Chemtrec (800) 424-9300 24 hour

**EPA Details** : EPA Statement:
This chemical is a product registered by the United States Environmental Protection Agency and is subject to certain labeling requirements under federal law. These requirements differ from the classification criteria and hazard information required for safety data sheets (SDS), and for workplace labels of non-EPA registered chemicals. Below is the signal word as required on the label:

EPA Establishment Number : 4170

EPA Registration Number : 44446-23

EPA Signal Word : Caution

## Section 2. Hazards identification

**OSHA/HCS status** : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

**Classification of the substance or mixture** : AEROSOLS - Category 2

**GHS label elements**

**Hazard pictograms** :



**Signal word** : Warning

**Hazard statements** : Flammable aerosol. Pressurized container: may burst if heated.

**Precautionary statements**

**Prevention** : Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Do not spray on an open flame or other ignition source. Do not pierce or burn, even after use.

**Response** : Not applicable.

# Section 2. Hazards identification

**Storage** : Protect from sunlight. Do not expose to temperatures exceeding 122 °F/50 °C.

**Disposal** : Not applicable.

**Hazards not otherwise classified** : None known.

**Hazards identified when used** : No known significant effects or critical hazards.

# Section 3. Composition/information on ingredients

**Substance/mixture** : Mixture

**Other means of identification** : Not available.

| Ingredient name | Synonyms | % | Identifiers |
|---|---|---|---|
| 2-butoxyethanol | ethylene glycol monobutyl ether; butyl cellosolve; Ethanol, 2-butoxy-; Butylglycol; Ethylene glycol, mono-n-butyl ester; Jeffersol EB; Ektasolve EB; Dowanol EB; Butyl oxitol; EGBE; Butyl cellosolve7 | ≥5 - ≤10 | CAS: 111-76-2 |
| propane | Propyl hydride; n-Propane; Dimethyl methane; Bottled gas; propane in gaseous state; propane liquefied; chlorodifluoromethane—1,1-difluoroethane—propane; 1,1,1,2-tetrafluoroethane—1,1-difluoroethane—propane; 1,1-difluoroethane—propane; E 944; HC-290; R290; E 944 | ≥5 - ≤10 | CAS: 74-98-6 |
| propan-2-ol | isopropanol; 2-Propanol | ≥1 - ≤5 | CAS: 67-63-0 |
| tetrasodium ethylene diamine tetraacetate | Glycine, N,N'-1,2-ethanediylbis[N-(carboxymethyl)-, sodium salt (1:4); Glycine, N,N'-1,2-ethanediylbis[N-(carboxymethyl)-, tetrasodium salt; (Ethylenedinitrilo)tetraacetic acid, tetrasodium salt; Sodium EDTA; Tetrasodium EDTA; tetrasodium ededate; EDTA tetrasodium salt; ACETIC ACID, (ETHYLENEDINITRILO)TETRA-, TETRASODIUM SALT; EDTA, TETRASODIUM; TETRASODIUM (ETHYLENEDINITRILO) TETRAACETATE; TETRASODIUM ETHYLENEDINITRILOTETRAACETATE | ≥1 - ≤5 | CAS: 64-02-8 |
| 4-Nonylphenol, branched, ethoxylated | Poly(oxy-1,2-ethanediyl), .alpha.-(4-nonylphenyl)-.omega.-hydroxy-, branched; Poly(oxy-1,2-ethanediyl), alpha-(4-nonylphenyl)-omega- hydroxy-, branched; Poly(oxy-1,2-ethanediyl), α-(4-nonylphenyl)-ω-hydroxy-, branched; Poly(oxy-1,2-ethanediyl), .alpha.-(4-nonylphenyl)-.omega.-hydroxy-branched; Polyethylene glycol, | ≥1 - ≤5 | CAS: 127087-87-0 |

# Section 3. Composition/information on ingredients

| | | | |
|---|---|---|---|
| | mono(p-nonylphenyl) ether, branched; α-hydroxy-ω-(4-octylphenyl)poly(ethane-1,2-diyloxy), branched, as other chemical product; α-hydroxy-ω-(4-octylphenyl)poly(ethane-1,2-diyloxy), branched; α-hydroxy-ω-(4-octylphenyl)poly(ethane-1,2-diyloxy), branched, as non-ionic organic surface-active agent; 4-nonylphenol, branched, ethoxylated, as other chemical product; Nonylphenol polyethylene glycol ether; nonylphenol, ethoxylated | | |
| (R)-p-mentha-1,8-diene | d-limonene; Cyclohexene, 1-methyl-4-(1-methylethenyl)-, (4R)-; Cyclohexene, 1-methyl-4-(1-methylethenyl)-, (R)-; Limonene, D-; (4R)-1-methyl-4-(prop-1-en-2-yl)cyclohexene; (+)-limonene; d-limonene; (4R) -1-methyl-4-(1-methylethenyl) cyclohexene; (R)-4-isopropenyl-1-methylcyclohexene; (4R) -1-methyl-4-(prop-1-en-2-yl) cyclohex-1-ene; LIMONENE, (+)-; P-MENTHA-1,8-DIENE, (R)-(+)- | ≥0.1 - ≤1 | CAS: 5989-27-5 |

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

**There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified and hence require reporting in this section.**

**Occupational exposure limits, if available, are listed in Section 8.**

# Section 4. First aid measures

## Description of necessary first aid measures

**Eye contact** : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.

**Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

**Skin contact** : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.

**Ingestion** : Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel.

## Most important symptoms/effects, acute and delayed

### Potential acute health effects

**Eye contact** : No known significant effects or critical hazards.

**Inhalation** : No known significant effects or critical hazards.

**Skin contact** : No known significant effects or critical hazards.

**Ingestion** : No known significant effects or critical hazards.

## Over-exposure signs/symptoms

# Section 4. First aid measures

**Eye contact** : Adverse symptoms may include the following:
irritation
redness

**Inhalation** : Adverse symptoms may include the following:
respiratory tract irritation
coughing

**Skin contact** : No specific data.

**Ingestion** : No specific data.

## Indication of immediate medical attention and special treatment needed, if necessary

**Notes to physician** : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

**Specific treatments** : No specific treatment.

**Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training.

**See toxicological information (Section 11)**

# Section 5. Fire-fighting measures

## Extinguishing media

**Suitable extinguishing media** : Use an extinguishing agent suitable for the surrounding fire.

**Unsuitable extinguishing media** : None known.

**Specific hazards arising from the chemical** : Flammable aerosol. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Gas may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back, causing fire or explosion. Bursting aerosol containers may be propelled from a fire at high speed.

**Hazardous thermal decomposition products** : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
nitrogen oxides
metal oxide/oxides

**Special protective actions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

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

# Section 6. Accidental release measures

## Personal precautions, protective equipment and emergency procedures

**For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. In the case of aerosols being ruptured, care should be taken due to the rapid escape of the pressurized contents and propellant. If a large number of containers are ruptured, treat as a bulk material spillage according to the instructions in the clean-up section. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Put on appropriate personal protective equipment.

**For emergency responders** : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

# Section 6. Accidental release measures

**Environmental precautions** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

## Methods and materials for containment and cleaning up

**Small spill** : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Absorb with an inert material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

**Large spill** : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations.

# Section 7. Handling and storage

## Precautions for safe handling

**Protective measures** : Put on appropriate personal protective equipment (see Section 8). Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50°C. Do not pierce or burn, even after use. Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing gas. Avoid breathing vapor or mist. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Empty containers retain product residue and can be hazardous.

**Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

**Conditions for safe storage, including any incompatibilities** : Do not store above the following temperature: 49°C (120.2°F). Store in accordance with local regulations. Store away from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Eliminate all ignition sources. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

# Section 8. Exposure controls/personal protection

## Control parameters

### Occupational exposure limits

| Ingredient name | Exposure limits |
|---|---|
| 2-butoxyethanol | **NIOSH REL (United States, 10/2020)**<br>Absorbed through skin.<br>TWA 10 hours: 5 ppm.<br>TWA 10 hours: 24 mg/m³.<br>**CAL OSHA PEL (United States, 5/2018)**<br>Absorbed through skin.<br>TWA 8 hours: 97 mg/m³.<br>TWA 8 hours: 20 ppm.<br>**OSHA PEL (United States, 5/2018)** Absorbed through skin.<br>TWA 8 hours: 50 ppm.<br>TWA 8 hours: 240 mg/m³.<br>**OSHA PEL 1989 (United States, 3/1989)**<br>Absorbed through skin.<br>TWA 8 hours: 25 ppm. |

# Section 8. Exposure controls/personal protection

| | |
|---|---|
| propane | TWA 8 hours: 120 mg/m³.<br>**ACGIH TLV (United States, 1/2024)** A3.<br>TWA 8 hours: 20 ppm.<br>**NIOSH REL (United States, 10/2020)**<br>TWA 10 hours: 1000 ppm.<br>TWA 10 hours: 1800 mg/m³.<br>**CAL OSHA PEL (United States, 5/2018)**<br>TWA 8 hours: 1800 mg/m³.<br>TWA 8 hours: 1000 ppm.<br>**OSHA PEL (United States, 5/2018)**<br>TWA 8 hours: 1000 ppm.<br>TWA 8 hours: 1800 mg/m³.<br>**OSHA PEL 1989 (United States, 3/1989)**<br>TWA 8 hours: 1000 ppm.<br>TWA 8 hours: 1800 mg/m³.<br>**ACGIH TLV (United States, 1/2024)** Oxygen depletion [asphyxiant] , Explosive potential. |
| propan-2-ol | None. |
| tetrasodium ethylene diamine tetraacetate | None. |
| 4-Nonylphenol, branched, ethoxylated | None. |
| (R)-p-mentha-1,8-diene | **OARS WEEL (United States, 6/2024)**<br>TWA 8 hours: 30 ppm. |

**Biological exposure indices**

| Ingredient name | Exposure indices |
|---|---|
| 2-butoxyethanol | **ACGIH BEI (United States, 1/2024)**<br>BEI: 200 mg/g creatinine, butoxyacetic acid (BAA) [in urine]. Sampling time: end of shift. |
| propan-2-ol | **ACGIH BEI (United States, 1/2022)**<br>BEI: 40 mg/l, acetone [in urine]. Sampling time: end of shift at end of workweek. |

**Appropriate engineering controls** : Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

**Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

**Individual protection measures**

**Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

**Eye/face protection** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields. Recommended: safety glasses with side-shields

**Skin protection**

## Section 8. Exposure controls/personal protection

**Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. 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. < 1 hour (breakthrough time): disposable vinyl

**Body protection** : 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. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.

**Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

**Respiratory protection** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

**Personal protective equipment (Pictograms)** :



## Section 9. Physical and chemical properties

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

**Appearance**

**Physical state** : Liquid. [Compressed gas.]

**Color** : Clear. Colorless.

**Odor** : Floral.

**Odor threshold** : Not available.

**pH** : 12.2 to 13

**Melting point/freezing point** : Not available.

**Boiling point or initial boiling point and boiling range** : Not available.

**Flash point** : Closed cup: -104.44°C (-156°F)

**Evaporation rate** : Not available.

**Flammability** : Flammable in the presence of the following materials or conditions: heat.

**Lower and upper explosion limit/flammability limit** : Not available.

**Vapor pressure** :

| | Vapor Pressure at 20˚C | | | Vapor pressure at 50˚C | | |
|---|---|---|---|---|---|---|
| **Ingredient name** | **mm Hg** | **kPa** | **Method** | **mm Hg** | **kPa** | **Method** |
| propane | 6300.51192 | 840 | | | | |
| butane | 1602.88 | 213.7 | | | | |
| ammonia | 360.02925 | 48 | | | | |
| propan-2-ol | 33 | 4.4 | | | | |
| water | 17.5 | 2.3 | | | | |
| (R)-p-mentha-1,8-diene | 1.5 | 0.2 | | | | |

# Section 9. Physical and chemical properties

| | | | | | | |
|---|---|---|---|---|---|---|
| 2-butoxyethanol | 0.75006 | 0.1 | | | | |
| Linalool | 0.2 | 0.027 | OECD 104 | | | |
| 2,6-dimethyloct-7-en-2-ol | 0.15 | 0.02 | EU A.4 | | | |
| alpha-Terpineol | 0.049 | 0.0065 | | | | |
| citral | 0.0345 | 0.0046 | | | | |
| 2,6-di-tert-butyl-p-cresol | 0.00825 | 0.0011 | | | | |
| benzyl salicylate | 0.000078 | 0.00001 | | | | |
| geraniol | 0.00006 | 0.000008 | | | | |
| tetrasodium ethylene diamine tetraacetate | 0 | 0 | | | | |
| benzyl benzoate | 0 | 0 | | | | |

**Relative vapor density** : Not available.

**Relative density** : 0.966

**Solubility(ies)** :

| Media | Result |
|---|---|
| cold water | Soluble |
| hot water | Soluble |

**Solubility in water** : Not available.

**Partition coefficient: n-octanol/water** : Not applicable.

**Auto-ignition temperature** : Not available.

**Decomposition temperature** : Not available.

**Heat of combustion** : 9.278 kJ/g

**Viscosity** : Dynamic (room temperature): Not available.
Kinematic (room temperature): Not available.
Kinematic (40°C (104°F)): Not available.

**Particle characteristics**

**Median particle size** : Not applicable.

**Aerosol product**

**Type of aerosol** : Spray

# Section 10. Stability and reactivity

**Reactivity** : No specific test data related to reactivity available for this product or its ingredients.

**Chemical stability** : The product is stable.

**Possibility of hazardous reactions** : Hazardous reactions or instability may occur under certain conditions of storage or use.

**Conditions to avoid** : Avoid all possible sources of ignition (spark or flame).

**Incompatible materials** : No specific data.

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

# Section 11. Toxicological information

## Information on toxicological effects

### Acute toxicity

| Product/ingredient name | Result |
|---|---|
| 2-butoxyethanol | **Rabbit - Dermal - LD50**<br>220 mg/kg<br>**Rat - Oral - LD50**<br>250 mg/kg<br>**Rat - Inhalation - LC50 Gas.**<br>450 ppm [4 hours]<br>Toxic effects: Behavioral - Ataxia Gross Metabolite Changes - Weight loss or decreased weight gain |
| propan-2-ol | **Rabbit - Dermal - LD50**<br>12800 mg/kg<br>**Rat - Oral - LD50**<br>5000 mg/kg<br>Toxic effects: Behavioral - General anesthetic |
| tetrasodium ethylene diamine tetraacetate | **Rat - Oral - LD50**<br>10 g/kg |
| (R)-p-mentha-1,8-diene | **Rat - Oral - LD50**<br>4400 mg/kg<br>Toxic effects: Behavioral - Changes in motor activity (specific assay) Lung, Thorax, or Respiration - Respiratory depression Other - Hair<br>**Rabbit - Dermal - LD50**<br>>5000 mg/kg |

**Conclusion/Summary [Product]** : Not available.

### Skin corrosion/irritation

| Product/ingredient name | Result |
|---|---|
| Betco Cide-Bet II | **Mammal - species unspecified - Skin - Not irritant** |
| 2-butoxyethanol | **Rabbit - Skin - Mild irritant**<br>Amount/concentration applied: 500 mg |
| propan-2-ol | **Rabbit - Skin - Mild irritant**<br>Amount/concentration applied: 500 mg |
| tetrasodium ethylene diamine tetraacetate | **Rabbit - Skin - Moderate irritant**<br>Duration of treatment/exposure: 24 hours<br>Amount/concentration applied: 500 mg |
| (R)-p-mentha-1,8-diene | **Rabbit - Skin - Mild irritant**<br>Duration of treatment/exposure: 24 hours<br>Amount/concentration applied: 10 %<br>**Mouse - Skin - Severe irritant**<br>Duration of treatment/exposure: 168 hours<br>Amount/concentration applied: 700 mg l |

**Conclusion/Summary [Product]** : Not available.

### Serious eye damage/eye irritation

| Product/ingredient name | Result |
|---|---|
| 2-butoxyethanol | **Rabbit - Eyes - Moderate irritant**<br>Duration of treatment/exposure: 24 hours<br>Amount/concentration applied: 100 mg<br>**Rabbit - Eyes - Severe irritant**<br>Amount/concentration applied: 100 mg |
| propan-2-ol | **Rabbit - Eyes - Moderate irritant**<br>Duration of treatment/exposure: 24 hours<br>Amount/concentration applied: 100 mg |

# Section 11. Toxicological information

| | |
|---|---|
| tetrasodium ethylene diamine tetraacetate | **Rabbit - Eyes - Moderate irritant**<br>Amount/concentration applied: 10 mg<br>**Rabbit - Eyes - Severe irritant**<br>Amount/concentration applied: 100 mg<br>**Rabbit - Eyes - Moderate irritant**<br>Duration of treatment/exposure: 24 hours<br>Amount/concentration applied: 100 mg |

**Conclusion/Summary [Product]** : Not available.

## Respiratory corrosion/irritation

Not available.

**Conclusion/Summary [Product]** : Not available.

## Respiratory or skin sensitization

Not available.

### Skin

**Conclusion/Summary [Product]** : Not available.

### Respiratory

**Conclusion/Summary [Product]** : Not available.

## Germ cell mutagenicity

Not available.

**Conclusion/Summary [Product]** : Not available.

## Carcinogenicity

Not available.

**Conclusion/Summary [Product]** : Not available.

### Classification

| Product/ingredient name | OSHA | IARC | NTP |
|---|---|---|---|
| 2-butoxyethanol | - | 3 | - |
| propan-2-ol | - | 3 | - |
| (R)-p-mentha-1,8-diene | - | 3 | - |

## Reproductive toxicity

Not available.

**Conclusion/Summary [Product]** : Not available.

## Specific target organ toxicity (single exposure)

**Product/ingredient name** **Result**

# Section 11. Toxicological information

| | |
|---|---|
| propane | SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3 |
| propan-2-ol | SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3 |

## Specific target organ toxicity (repeated exposure)

Not available.

## Aspiration hazard

| Product/ingredient name | Result |
|---|---|
| 2-butoxyethanol | ASPIRATION HAZARD - Category 1 |

## Information on the likely routes of exposure

Routes of entry anticipated: Dermal, Inhalation, Eyes.

## Potential acute health effects

**Eye contact** : No known significant effects or critical hazards.

**Inhalation** : No known significant effects or critical hazards.

**Skin contact** : No known significant effects or critical hazards.

**Ingestion** : No known significant effects or critical hazards.

## Symptoms related to the physical, chemical and toxicological characteristics

**Eye contact** : Adverse symptoms may include the following:
irritation
redness

**Inhalation** : Adverse symptoms may include the following:
respiratory tract irritation
coughing

**Skin contact** : No specific data.

**Ingestion** : No specific data.

## Delayed and immediate effects and also chronic effects from short and long term exposure

**Short term exposure**

**Potential immediate effects** : Not available.

**Potential delayed effects** : Not available.

**Long term exposure**

**Potential immediate effects** : Not available.

**Potential delayed effects** : Not available.

## Potential chronic health effects

Not available.

**Conclusion/Summary [Product]** : Not available.

**General** : No known significant effects or critical hazards.

**Carcinogenicity** : No known significant effects or critical hazards.

**Mutagenicity** : No known significant effects or critical hazards.

**Reproductive toxicity** : No known significant effects or critical hazards.

# Section 11. Toxicological information

## Numerical measures of toxicity

### Acute toxicity estimates

| Product/ingredient name | Oral (mg/kg) | Dermal (mg/kg) | Inhalation (gases) (ppm) | Inhalation (vapors) (mg/l) | Inhalation (dusts and mists) (mg/l) |
|---|---|---|---|---|---|
| 2-butoxyethanol | 500 | N/A | N/A | N/A | N/A |
| propan-2-ol | 5000 | 12800 | N/A | N/A | N/A |
| tetrasodium ethylene diamine tetraacetate | 500 | N/A | N/A | N/A | N/A |
| 4-Nonylphenol, branched, ethoxylated | 500 | N/A | N/A | 11 | N/A |
| (R)-p-mentha-1,8-diene | 4400 | N/A | N/A | N/A | N/A |

# Section 12. Ecological information

## Toxicity

| Product/ingredient name | Result |
|---|---|
| 2-butoxyethanol | **Acute - LC50 - Marine water**<br>Crustaceans - Common shrimp, sand shrimp - *Crangon crangon*<br>800 mg/l [48 hours]<br>Effect: Mortality<br>**Acute - LC50 - Marine water**<br>Fish - Inland silverside - *Menidia beryllina*<br>1250 ppm [96 hours]<br>Effect: Mortality |
| propan-2-ol | **Acute - LC50 - Marine water**<br>Crustaceans - Common shrimp, sand shrimp - *Crangon crangon*<br>1400000 µg/l [48 hours]<br>Effect: Mortality<br>**Acute - LC50 - Fresh water**<br>Fish - Harlequinfish, red rasbora - *Rasbora heteromorpha*<br>Size: 1 to 3 cm<br>4200 mg/l [96 hours]<br>Effect: Mortality |
| tetrasodium ethylene diamine tetraacetate | **Acute - LC50 - Fresh water**<br>Fish - Bluegill - *Lepomis macrochirus*<br>Size: 34 mm; Weight: 0.74 g<br>486 mg/l [96 hours]<br>Effect: Mortality |
| (R)-p-mentha-1,8-diene | **Acute - EC50 - Fresh water**<br>ASTM<br>Fish - Fathead minnow - *Pimephales promelas* - Juvenile (Fledgling, Hatchling, Weanling)<br>Age: 34 days; Size: 19.1 mm; Weight: 0.085 g<br>688 µg/l [96 hours]<br>Effect: Behavior<br>**Acute - EC50 - Fresh water**<br>ASTM<br>Daphnia - Water flea - *Daphnia magna*<br>Age: <24 hours<br>421 µg/l [48 hours]<br>Effect: Intoxication |

**Conclusion/Summary [Product]** : Not available.

## Persistence and degradability

Not available.

# Section 12. Ecological information

**Conclusion/Summary [Product]** : Not available.

## Bioaccumulative potential

| Product/ingredient name | $LogP_{ow}$ | BCF | Potential |
|---|---|---|---|
| 2-butoxyethanol | 0.81 | - | Low |
| propane | 1.09 | - | Low |
| propan-2-ol | 0.05 | - | Low |
| tetrasodium ethylene diamine tetraacetate | 5.01 | 1.8 | Low |
| (R)-p-mentha-1,8-diene | 4.38 | - | High |

## Mobility in soil

**Soil/Water partition coefficient** : Not available.

## Other adverse effects

No known significant effects or critical hazards.

# Section 13. Disposal considerations

**Disposal methods** : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Do not puncture or incinerate container.

# Section 14. Transport information

| | DOT Classification | TDG Classification | Mexico Classification | IMDG | IATA |
|---|---|---|---|---|---|
| **UN number** | UN1950 | UN1950 | UN1950 | UN1950 | UN1950 |
| **UN proper shipping name** | AEROSOLS, FLAMMABLE | Aerosols, Flammable | AEROSOLS, FLAMMABLE | AEROSOLS | AEROSOLS, FLAMMABLE |
| **Transport hazard class(es)** | 2.1   | 2.1   | 2.1   | 2.1   | 2.1   |
| **Packing group** | - | - | - | - | - |
| **Environmental hazards** | No. | No. | No. | No. | No. |

## Additional information

**DOT Classification** : **Limited quantity** Yes.

**TDG Classification** :

**IMDG** : **Limited quantity** Yes

**IATA** : **Limited quantity** Yes

# Section 14. Transport information

**Special precautions for user** : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

**Transport in bulk according to IMO instruments** : Not available.

# Section 15. Regulatory information

## U.S. Federal regulations

**TSCA 8(a) PAIR**: 4-Nonylphenol, branched, ethoxylated; α-hexylcinnamaldehyde; 2,4,6-trimethylcyclohex-3-enecarbaldehyde

**TSCA 8(a) CDR Exempt/Partial exemption**: Not determined

**Clean Water Act (CWA) 307**: dodecanenitrile

**Clean Water Act (CWA) 311**: ammonia

**Clean Air Act (CAA) 112 regulated flammable substances**: butane; propane

## TSCA 12(b) - Chemical export notification

Not applicable.

**Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs)** : Listed

**Clean Air Act Section 602 Class I Substances** : Not listed

**Clean Air Act Section 602 Class II Substances** : Not listed

**DEA List I Chemicals (Precursor Chemicals)** : Not listed

**DEA List II Chemicals (Essential Chemicals)** : Not listed

## SARA 302/304

### Composition/information on ingredients

No products were found.

**SARA 304 RQ** : Not applicable.

## SARA 311/312

**Classification** : AEROSOLS - Category 2

### Composition/information on ingredients

| Name | % | Classification |
|---|---|---|
| 2-butoxyethanol | ≥5 - ≤10 | FLAMMABLE LIQUIDS - Category 4<br>ACUTE TOXICITY (oral) - Category 4<br>SKIN IRRITATION - Category 2<br>EYE IRRITATION - Category 2A<br>ASPIRATION HAZARD - Category 1 |
| butane | ≥5 - ≤10 | FLAMMABLE GASES - Category 1A<br>GASES UNDER PRESSURE - Compressed gas |
| propane | ≥5 - ≤10 | FLAMMABLE GASES - Category 1A<br>GASES UNDER PRESSURE - Liquefied gas<br>SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3 |
| propan-2-ol | ≥1 - ≤5 | FLAMMABLE LIQUIDS - Category 2<br>EYE IRRITATION - Category 2A<br>SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3 |
| tetrasodium ethylene diamine tetraacetate | ≥1 - ≤5 | ACUTE TOXICITY (oral) - Category 4<br>SERIOUS EYE DAMAGE - Category 1 |

# Section 15. Regulatory information

| | | |
|---|---|---|
| 4-Nonylphenol, branched, ethoxylated | ≥1 - ≤5 | ACUTE TOXICITY (oral) - Category 4<br>ACUTE TOXICITY (inhalation) - Category 4<br>SERIOUS EYE DAMAGE - Category 1 |
| (R)-p-mentha-1,8-diene | ≥0.1 - ≤1 | FLAMMABLE LIQUIDS - Category 3<br>SKIN IRRITATION - Category 2<br>SKIN SENSITIZATION - Category 1 |

## SARA 313

| | Product name | CAS number | % |
|---|---|---|---|
| **Form R - Reporting requirements** | 2-butoxyethanol<br>4-Nonylphenol, branched, ethoxylated | 111-76-2<br>127087-87-0 | ≥5 - ≤10<br>≥1 - ≤5 |
| **Supplier notification** | 2-butoxyethanol<br>4-Nonylphenol, branched, ethoxylated | 111-76-2<br>127087-87-0 | ≥5 - ≤10<br>≥1 - ≤5 |

SARA 313 notifications must not be detached from the SDS and any copying and redistribution of the SDS shall include copying and redistribution of the notice attached to copies of the SDS subsequently redistributed.

## State regulations

**Massachusetts** : The following components are listed: 2-BUTOXYETHANOL; BUTANE; PROPANE; ISOPROPYL ALCOHOL

**New York** : None of the components are listed.

**New Jersey** : The following components are listed: 2-BUTOXY ETHANOL; BUTANE; PROPANE; ISOPROPYL ALCOHOL

**Pennsylvania** : The following components are listed: ETHANOL, 2-BUTOXY-; BUTANE; PROPANE; 2-PROPANOL

## California Prop. 65

This product does not require a Safe Harbor warning under California Prop. 65.

## International regulations

### Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

### Montreal Protocol

Not listed.

### Stockholm Convention on Persistent Organic Pollutants

Not listed.

### Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

### UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

## Inventory list

**Australia** : Not determined.

**Canada** : Not determined.

**China** : Not determined.

**Eurasian Economic Union** : **Russian Federation inventory**: Not determined.

**Japan** : **Japan inventory (CSCL)**: Not determined.
**Japan inventory (ISHL)**: Not determined.

**New Zealand** : Not determined.

**Philippines** : Not determined.

**Republic of Korea** : Not determined.

**Taiwan** : Not determined.

**Thailand** : Not determined.

**Turkey** : Not determined.

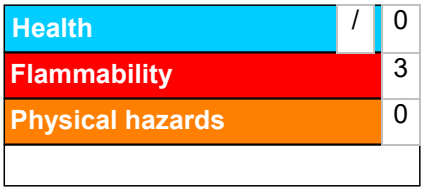
# Section 15. Regulatory information

**United States** : Not determined.

**Viet Nam** : Not determined.

# Section 16. Other information

## Hazardous Material Information System (U.S.A.)




**Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings and the associated label are not required on SDSs or products leaving a facility under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered trademark and service mark of the American Coatings Association, Inc.**

**The customer is responsible for determining the PPE code for this material. For more information on HMIS® Personal Protective Equipment (PPE) codes, consult the HMIS® Implementation Manual.**

## National Fire Protection Association (U.S.A.)




## Procedure used to derive the classification

| Classification | Justification |
|---|---|
| AEROSOLS - Category 2 | Expert judgment |

## History

**Date of printing** : 10/16/2025

**Date of issue/Date of revision** : 10/16/2025

**Date of previous issue** : No previous validation

**Version** : 0.01

**Key to abbreviations** : ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
N/A = Not available
SGG = Segregation Group
UN = United Nations

**References** : Not available.

**Indicates information that has changed from previously issued version.**

## Notice to reader

**To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.**
**Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.**