

# SAFETY DATA SHEET



Recover

## Section 1. Identification

**GHS product identifier** : Recover  
**Product code** : 1684  
**Other means of identification** : Not available.  
**Product type** : Liquid.

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

#### Identified uses

Floor Stripper

#### 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

## 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** : ACUTE TOXICITY (oral) - Category 4  
SKIN CORROSION - Category 1B  
SERIOUS EYE DAMAGE - Category 1  
SKIN SENSITIZATION - Category 1

### GHS label elements

#### Hazard pictograms



**Signal word** : Danger

**Hazard statements** : Harmful if swallowed.  
Causes severe skin burns and eye damage.  
May cause an allergic skin reaction.

### Precautionary statements

**Prevention** : Wear protective gloves. Wear protective clothing: Recommended: Chemical resistant gloves. Wear eye or face protection: Recommended: splash goggles. Avoid breathing vapor. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Contaminated work clothing must not be allowed out of the workplace.

**Response** : IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or doctor. IF SWALLOWED: Immediately call a POISON CENTER or doctor. Rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. Immediately call a POISON CENTER or doctor. Wash contaminated clothing before reuse. IF ON SKIN: Wash with plenty of water. If skin irritation or rash occurs: Get medical advice or attention. IF IN EYES: Rinse cautiously with water for several

## Section 2. Hazards identification

minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor.

- Storage** : Store locked up.
- Disposal** : Dispose of contents and container in accordance with all local, regional, national and international regulations.
- Hazards not otherwise classified** : None known.

## Section 3. Composition/information on ingredients

- Substance/mixture** : Mixture
- Other means of identification** : Not available.

Ingredient name	%	CAS number
2-butoxyethanol	≥10 - ≤25	111-76-2
2-hexyloxyethanol	≤10	112-25-4
benzyl alcohol	≤5	100-51-6
Alcohols, C9-11, ethoxylated	≤5	68439-46-3
2-aminoethanol	≤3	141-43-5
(R)-p-mentha-1,8-diene	≤0.3	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** : Get medical attention immediately. Call a poison center or physician. Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician.
- Inhalation** : Get medical attention immediately. Call a poison center or physician. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. 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** : Get medical attention immediately. Call a poison center or physician. Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.

## Section 4. First aid measures

- Ingestion** : Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Chemical burns must be treated promptly by a physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

### Most important symptoms/effects, acute and delayed

#### Potential acute health effects

- Eye contact** : Causes serious eye damage.
- Inhalation** : No known significant effects or critical hazards.
- Skin contact** : Causes severe burns. May cause an allergic skin reaction.
- Ingestion** : Harmful if swallowed.

#### Over-exposure signs/symptoms

- Eye contact** : Adverse symptoms may include the following:  
pain  
watering  
redness
- Inhalation** : No specific data.
- Skin contact** : Adverse symptoms may include the following:  
pain or irritation  
redness  
blistering may occur
- Ingestion** : Adverse symptoms may include the following:  
stomach pains

### 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. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

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** : In a fire or if heated, a pressure increase will occur and the container may burst.

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

## Section 5. Fire-fighting measures

- 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.
- 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. Do not touch or walk through spilled material. Do not breathe vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. 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".
- 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. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry 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. 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. 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 (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

## Section 7. Handling and storage

### Precautions for safe handling

- Protective measures** : Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.
- 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.

## Section 7. Handling and storage

**Conditions for safe storage, including any incompatibilities** : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. 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	<p><b>OSHA PEL 1989 (United States, 3/1989).</b>  <b>Absorbed through skin.</b>            TWA: 25 ppm 8 hours.            TWA: 120 mg/m<sup>3</sup> 8 hours.</p> <p><b>NIOSH REL (United States, 10/2020).</b>  <b>Absorbed through skin.</b>            TWA: 5 ppm 10 hours.            TWA: 24 mg/m<sup>3</sup> 10 hours.</p> <p><b>ACGIH TLV (United States, 1/2022).</b>            TWA: 20 ppm 8 hours.</p> <p><b>OSHA PEL (United States, 5/2018).</b>  <b>Absorbed through skin.</b>            TWA: 50 ppm 8 hours.            TWA: 240 mg/m<sup>3</sup> 8 hours.</p> <p><b>CAL OSHA PEL (United States, 5/2018).</b>  <b>Absorbed through skin.</b>            TWA: 97 mg/m<sup>3</sup> 8 hours.            TWA: 20 ppm 8 hours.</p>
2-hexyloxyethanol benzyl alcohol	None.
Alcohols, C9-11, ethoxylated 2-aminoethanol	<p><b>OARS WEEL (United States, 4/2022).</b>            TWA: 10 ppm 8 hours.</p> <p>None.</p> <p><b>ACGIH TLV (United States, 1/2022).</b>            TWA: 3 ppm 8 hours.            TWA: 7.5 mg/m<sup>3</sup> 8 hours.            STEL: 6 ppm 15 minutes.            STEL: 15 mg/m<sup>3</sup> 15 minutes.</p>
(R)-p-mentha-1,8-diene	<p><b>OSHA PEL 1989 (United States, 3/1989).</b>            TWA: 3 ppm 8 hours.            TWA: 8 mg/m<sup>3</sup> 8 hours.            STEL: 6 ppm 15 minutes.            STEL: 15 mg/m<sup>3</sup> 15 minutes.</p> <p><b>NIOSH REL (United States, 10/2020).</b>            TWA: 3 ppm 10 hours.            TWA: 8 mg/m<sup>3</sup> 10 hours.            STEL: 6 ppm 15 minutes.            STEL: 15 mg/m<sup>3</sup> 15 minutes.</p> <p><b>OSHA PEL (United States, 5/2018).</b>            TWA: 3 ppm 8 hours.            TWA: 6 mg/m<sup>3</sup> 8 hours.</p> <p><b>CAL OSHA PEL (United States, 5/2018).</b>            STEL: 15 mg/m<sup>3</sup> 15 minutes.            STEL: 6 ppm 15 minutes.            TWA: 8 mg/m<sup>3</sup> 8 hours.            TWA: 3 ppm 8 hours.</p> <p><b>OARS WEEL (United States, 4/2022).</b>            TWA: 30 ppm 8 hours.</p>

## Section 8. Exposure controls/personal protection

### Biological exposure indices

Ingredient name	Exposure indices
2-butoxyethanol	<b>ACGIH BEI (United States, 1/2022)</b> BEI: 200 mg/g creatinine, butoxyacetic acid (BAA) [in urine]. Sampling time: end of shift.

**Appropriate engineering controls** : 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.

**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. Contaminated work clothing should not be allowed out of the workplace. 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: chemical splash goggles and/ or face shield. If inhalation hazards exist, a full-face respirator may be required instead. Recommended: splash goggles

### Skin protection

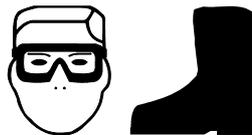
**Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves 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.

**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. Recommended: Chemical resistant 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. Recommended: natural rubber (latex)

**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 and safety characteristics

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

### Appearance

<b>Physical state</b>	: Liquid.
<b>Color</b>	: Clear. Colorless.
<b>Odor</b>	: Lemon-like.
<b>Odor threshold</b>	: Not available.
<b>pH</b>	: 9 to 10
<b>Melting point/freezing point</b>	: Not available.
<b>Boiling point, initial boiling point, and boiling range</b>	: Not available.
<b>Flash point</b>	: Closed cup: >100°C (>212°F)
<b>Flammability</b>	: Not available.
<b>Lower and upper explosion limit/flammability limit</b>	: Not available.
<b>Vapor pressure</b>	:

Ingredient name	Vapor Pressure at 20 °C			Vapor pressure at 50 °C		
	mm Hg	kPa	Method	mm Hg	kPa	Method
water	17.5	2.3				
(R)-p-mentha-1,8-diene	1.5	0.2				
2-butoxyethanol	0.75	0.1				
Linalyl acetate	<0.75	<0.1				
2-aminoethanol	0.4	0.053				
Linalool	0.2	0.027	OECD 104			
2,6-dimethyloct-7-en-2-ol	0.15	0.02	EU A.4			
2-hexyloxyethanol	0.08	0.011	OECD 104			
citronellol	<0.08	<0.011				
benzyl alcohol	0.05	0.0067				
alpha-Terpineol	0.049	0.0065				
citral	0.03	0.004				
eugenol	0.03	0.004				
2,6-di-tert-butyl-p-cresol	0.01	0.0013				
2,2'-iminodiethanol	<0.0075	<0.001				
1-(5,6,7,8-tetrahydro-3,5,5,6,8,8-hexamethyl-2-naphthyl)ethan-1-one	0.00051	0.000068	OECD 104			
benzyl salicylate	0.000078	0.00001				
citric acid	0.000000017	0.000000023				
geraniol	0	0				

**Relative vapor density** : Not available.

**Relative density** : 0.999

**Solubility(ies)** :

Media	Result
cold water	Easily soluble
hot water	Easily soluble

## Section 9. Physical and chemical properties and safety characteristics

- Solubility in water** : Not available.
- Miscible with water** : Yes.
- Partition coefficient: n-octanol/water** : Not applicable.
- Auto-ignition temperature** :

Ingredient name	°C	°F	Method
2-hexyloxyethanol	220	428	
citral	225	437	DIN 51794
2-butoxyethanol	230	446	DIN 51794
Linalool	235	455	
(R)-p-mentha-1,8-diene	237	458.6	
citronellol	240	464	
Linalyl acetate	270	518	EU A.15
sodium xylenesulphonate	320.9	609.6	EU A.16
2-aminoethanol	410	770	
benzyl alcohol	436	816.8	
benzyl salicylate	440	824	
1-(5,6,7,8-tetrahydro-3,5,5,6,8,8-hexamethyl-2-naphthyl)ethan-1-one	>400	>752	EU A.16
2,2'-iminodiethanol	662	1223.6	
citric acid	1010	1850	

- Decomposition temperature** : Not available.
- Viscosity** : Not available.
- Particle characteristics**
- Median particle size** : Not applicable.

## 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** : Under normal conditions of storage and use, hazardous reactions will not occur.
- Conditions to avoid** : No specific data.
- 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	Species	Dose	Exposure
2-butoxyethanol	LC50 Inhalation Gas.	Rat	450 ppm	4 hours
	LD50 Dermal	Rabbit	220 mg/kg	-
	LD50 Oral	Rat	250 mg/kg	-
2-hexyloxyethanol	LD50 Dermal	Rabbit	720 mg/kg	-
	LD50 Oral	Rat	830 mg/kg	-
	LD50 Dermal	Rabbit	2000 mg/kg	-
benzyl alcohol	LD50 Oral	Rat	1230 mg/kg	-
	LD50 Oral	Rat	1378 mg/kg	-
Alcohols, C9-11, ethoxylated	LD50 Oral	Rat	1720 mg/kg	-
2-aminoethanol	LD50 Oral	Rat	>5000 mg/kg	-
(R)-p-mentha-1,8-diene	LD50 Dermal	Rabbit	4400 mg/kg	-
	LD50 Oral	Rat	-	-

#### Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
2-butoxyethanol	Eyes - Moderate irritant	Rabbit	-	24 hours 100 mg	-
	Eyes - Severe irritant	Rabbit	-	100 mg	-
	Skin - Mild irritant	Rabbit	-	500 mg	-
2-hexyloxyethanol	Eyes - Mild irritant	Rabbit	-	1 mg	-
	Skin - Mild irritant	Rabbit	-	500 mg	-
	Skin - Mild irritant	Man	-	48 hours 16 mg	-
benzyl alcohol	Skin - Moderate irritant	Pig	-	100 %	-
	Skin - Moderate irritant	Rabbit	-	24 hours 100 mg	-
	Eyes - Severe irritant	Rabbit	-	250 ug	-
2-aminoethanol	Skin - Moderate irritant	Rabbit	-	505 mg	-
	Skin - Mild irritant	Rabbit	-	24 hours 10 %	-
(R)-p-mentha-1,8-diene	Skin - Mild irritant	Rabbit	-	-	-

#### Sensitization

Not available.

#### Mutagenicity

Not available.

#### Carcinogenicity

Not available.

#### Classification

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

#### Reproductive toxicity

Not available.

#### Teratogenicity

Not available.

#### Specific target organ toxicity (single exposure)

Product/ingredient name	Category	Route of exposure	Target organs
2-aminoethanol	Category 3	-	Respiratory tract irritation

#### Specific target organ toxicity (repeated exposure)

## Section 11. Toxicological information

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: Oral, Dermal, Inhalation, Eyes.

### Potential acute health effects

- Eye contact** : Causes serious eye damage.
- Inhalation** : No known significant effects or critical hazards.
- Skin contact** : Causes severe burns. May cause an allergic skin reaction.
- Ingestion** : Harmful if swallowed.

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

- Eye contact** : Adverse symptoms may include the following:
  - pain
  - watering
  - redness
- Inhalation** : No specific data.
- Skin contact** : Adverse symptoms may include the following:
  - pain or irritation
  - redness
  - blistering may occur
- Ingestion** : Adverse symptoms may include the following:
  - stomach pains

### 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.

- General** : Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.
- 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.

### Numerical measures of toxicity

#### Acute toxicity estimates

## Section 11. Toxicological information

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapors) (mg/l)	Inhalation (dusts and mists) (mg/l)
Recover	1952.8	N/A	N/A	N/A	N/A
2-butoxyethanol	500	N/A	N/A	N/A	N/A
2-hexyloxyethanol	830	N/A	N/A	N/A	N/A
benzyl alcohol	1230	N/A	N/A	N/A	N/A
2-aminoethanol	1720	N/A	N/A	N/A	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	Species	Exposure
2-butoxyethanol	Acute EC50 >1000 mg/l Fresh water	Daphnia - <i>Daphnia magna</i>	48 hours
	Acute LC50 800000 µg/l Marine water	Crustaceans - <i>Crangon crangon</i>	48 hours
	Acute LC50 1250 ppm Marine water	Fish - <i>Menidia beryllina</i>	96 hours
benzyl alcohol	Acute LC50 10 ppm Fresh water	Fish - <i>Lepomis macrochirus</i>	96 hours
	Acute EC50 5.36 mg/l Fresh water	Crustaceans - <i>Ceriodaphnia dubia</i> - Neonate	48 hours
Alcohols, C9-11, ethoxylated	Acute EC50 2686 µg/l Fresh water	Daphnia - <i>Daphnia magna</i> - Neonate	48 hours
	Acute LC50 8500 µg/l Fresh water	Fish - <i>Pimephales promelas</i>	96 hours
2-aminoethanol	Acute EC50 8.42 mg/l Fresh water	Algae - <i>Desmodesmus subspicatus</i>	72 hours
	Acute LC50 >100000 µg/l Marine water	Crustaceans - <i>Crangon crangon</i> - Adult	48 hours
(R)-p-mentha-1,8-diene	Acute LC50 170 mg/l Fresh water	Fish - <i>Carassius auratus</i>	96 hours
	Acute EC50 421 µg/l Fresh water	Daphnia - <i>Daphnia magna</i>	48 hours
	Acute EC50 688 µg/l Fresh water	Fish - <i>Pimephales promelas</i> - Juvenile (Fledgling, Hatchling, Weanling)	96 hours

### Persistence and degradability

Not available.

### Bioaccumulative potential

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
2-butoxyethanol	0.81	-	Low
2-hexyloxyethanol	1.97	-	Low
benzyl alcohol	0.87	-	Low
2-aminoethanol	-1.31	-	Low
(R)-p-mentha-1,8-diene	4.38	-	High

### Mobility in soil

Soil/water partition coefficient (K<sub>oc</sub>) : 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. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

## Section 14. Transport information

	DOT Classification	TDG Classification	Mexico Classification	IMDG	IATA
<b>UN number</b>	UN1760	UN1760	UN1760	UN1760	UN1760
<b>UN proper shipping name</b>	Corrosive liquid, n. o.s. (2-hexyloxyethanol)	Corrosive liquid, n. o.s. (2-hexyloxyethanol)			
<b>Transport hazard class(es)</b>	8 	8 	8 	8 	8 
<b>Packing group</b>	II	II	II	II	II
<b>Environmental hazards</b>	No.	No.	No.	No.	No.

### Additional information

**TDG Classification** : Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2.40-2.42 (Class 8).

**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-(4-hydroxy-4-methylpentyl)cyclohex-3-enecarbaldehyde;  $\alpha$ -hexylcinnamaldehyde  
**TSCA 8(a) CDR Exempt/Partial exemption:** Not determined  
**Clean Water Act (CWA) 307:** dodecanenitrile

**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

## Section 15. Regulatory information

**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** : ACUTE TOXICITY (oral) - Category 4  
SKIN CORROSION - Category 1B  
SERIOUS EYE DAMAGE - Category 1  
SKIN SENSITIZATION - Category 1

#### Composition/information on ingredients

Name	%	Classification
2-butoxyethanol	≥10 - ≤25	FLAMMABLE LIQUIDS - Category 4 ACUTE TOXICITY (oral) - Category 4 SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2A ASPIRATION HAZARD - Category 1
2-hexyloxyethanol	≤10	FLAMMABLE LIQUIDS - Category 4 ACUTE TOXICITY (oral) - Category 4 SKIN CORROSION - Category 1B EYE IRRITATION - Category 2B
benzyl alcohol	≤5	ACUTE TOXICITY (oral) - Category 4 EYE IRRITATION - Category 2A
Alcohols, C9-11, ethoxylated	≤5	FLAMMABLE LIQUIDS - Category 4 ACUTE TOXICITY (oral) - Category 4 SKIN CORROSION - Category 1B SERIOUS EYE DAMAGE - Category 1 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
2-aminoethanol	≤3	FLAMMABLE LIQUIDS - Category 4 ACUTE TOXICITY (oral) - Category 4 SKIN CORROSION - Category 1B SERIOUS EYE DAMAGE - Category 1 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
(R)-p-mentha-1,8-diene	≤0.3	FLAMMABLE LIQUIDS - Category 3 SKIN IRRITATION - Category 2 SKIN SENSITIZATION - Category 1

### SARA 313

	Product name	CAS number	%
<b>Form R - Reporting requirements</b>	2-butoxyethanol	111-76-2	≥10 - ≤25
	2-hexyloxyethanol	112-25-4	≤10
<b>Supplier notification</b>	2-butoxyethanol	111-76-2	≥10 - ≤25
	2-hexyloxyethanol	112-25-4	≤10

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; BENZYL ALCOHOL; ETHANOLAMINE

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

**New Jersey** : The following components are listed: 2-BUTOXY ETHANOL; GLYCOL ETHERS; ETHANOLAMINE

**Pennsylvania** : The following components are listed: ETHANOL, 2-BUTOXY-; BENZENEMETHANOL; ETHANOL, 2-AMINO-

### California Prop. 65

## Section 15. Regulatory information

**⚠ WARNING:** This product can expose you to Diethanolamine, which is known to the State of California to cause cancer. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

Ingredient name	No significant risk level	Maximum acceptable dosage level
Diethanolamine	-	-

### 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** : All components are listed or exempted.
- Canada** : All components are listed or exempted.
- China** : All components are listed or exempted.
- Eurasian Economic Union** : **Russian Federation inventory:** Not determined.
- Japan** : **Japan inventory (CSCL):** Not determined.  
**Japan inventory (ISHL):** Not determined.
- New Zealand** : All components are listed or exempted.
- Philippines** : All components are listed or exempted.
- Republic of Korea** : Not determined.
- Taiwan** : All components are listed or exempted.
- Thailand** : Not determined.
- Turkey** : Not determined.
- United States** : Not determined.
- Viet Nam** : Not determined.

## Section 16. Other information

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

Health	/	3
Flammability		1
Physical hazards		0

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.)

## Section 16. Other information



### Procedure used to derive the classification

Classification	Justification
ACUTE TOXICITY (oral) - Category 4	Calculation method
SKIN CORROSION - Category 1B	Calculation method
SERIOUS EYE DAMAGE - Category 1	Calculation method
SKIN SENSITIZATION - Category 1	Calculation method

### History

**Date of printing** : 9/6/2024

**Date of issue/Date of revision** : 9/6/2024

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

**Version** : 1

**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.