

# SAFETY DATA SHEET

WEICON®

Brake Cleaner Spray

## Section 1. Identification

**GHS product identifier** : Brake Cleaner Spray  
**Product code** : 112030  
**Product type** : Aerosol.

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

Identified uses	
Aerosol product-Cleaning agent-Preparation of material for application	
Uses advised against	Reason
Not applicable.	

**Supplier's details** : WEICON GmbH & Co. KG  
Königsberger Str. 25,  
48157 Münster, Germany  
phone: +49 251 93220,  
Fax: +49 251 9322244  
email: info@weicon.de,  
URL: www.weicon.de

**e-mail address of person responsible for this SDS** : msds@weicon.de

**Emergency telephone number** : +1 202 464 2554 / TRANSPORT EMERGENCY CONTACT - USA (24h): Tel: +1 202 464 2554

## 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** : FLAMMABLE AEROSOLS - Category 1  
GASES UNDER PRESSURE - Compressed gas  
SKIN IRRITATION - Category 2  
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3

### GHS label elements

**Hazard pictograms** :

**Signal word** : Danger

**Hazard statements** : H222 - Extremely flammable aerosol.  
H280 - Contains gas under pressure; may explode if heated.  
H315 - Causes skin irritation.  
H336 - May cause drowsiness or dizziness.

### Precautionary statements

**Prevention** : P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
P211 - Do not spray on an open flame or other ignition source.  
P251 - Pressurized container: Do not pierce or burn, even after use.  
P271 - Use only outdoors or in a well-ventilated area.

**Response** : Not applicable.

## Section 2. Hazards identification

Storage	: P405 - Store locked up.
Disposal	: P501 - Dispose of waste according to applicable legislation.
Hazards not otherwise classified	: None known.

## Section 3. Composition/information on ingredients

Substance/mixture	: Mixture
-------------------	-----------

Ingredient name	%	CAS number
Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane	≥50 - ≤75	-
pentane	≥10 - ≤25	109-66-0
ethanol	≤10	64-17-5
butane	≤10	106-97-8
propane	≤10	74-98-6
isobutane	≤3	75-28-5
propan-2-ol	<1	67-63-0
benzyl salicylate	≤0.3	118-58-1
(R)-p-mentha-1,8-diene	≤0.2	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

<b>Eye contact</b>	: 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. Get medical attention.
<b>Inhalation</b>	: 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. Get medical attention. If necessary, call a poison center or physician. 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.
<b>Skin contact</b>	: Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.
<b>Ingestion</b>	: 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. Get medical attention. If necessary, call a poison center or 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.

## Section 4. First aid measures

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

#### Potential acute health effects

- |                     |   |
|---------------------|---|
| <b>Eye contact</b>  | : No known significant effects or critical hazards.                                     |
| <b>Inhalation</b>   | : Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness. |
| <b>Skin contact</b> | : Causes skin irritation.   |
| <b>Ingestion</b>    | : Can cause central nervous system (CNS) depression.                                    |

#### Over-exposure signs/symptoms

- |                     |   |
|---------------------|---|
| <b>Eye contact</b>  | : Adverse symptoms may include the following:<br>pain or irritation<br>watering<br>redness  |
| <b>Inhalation</b>   | : Adverse symptoms may include the following:<br>respiratory tract irritation<br>coughing<br>nausea or vomiting<br>headache<br>drowsiness/fatigue<br>dizziness/vertigo<br>unconsciousness |
| <b>Skin contact</b> | : Adverse symptoms may include the following:<br>irritation<br>redness  |
| <b>Ingestion</b>    | : No specific data.   |

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

- |                                   |  |
|-----------------------------------|--|
| <b>Notes to physician</b>         | : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.  |
| <b>Specific treatments</b>        | : No specific treatment.   |
| <b>Protection of first-aiders</b> | : 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. |

See toxicological information (Section 11)

## Section 5. Fire-fighting measures

#### Extinguishing media

- |                                       |   |
|---------------------------------------|---|
| <b>Suitable extinguishing media</b>   | : Use an extinguishing agent suitable for the surrounding fire. |
| <b>Unsuitable extinguishing media</b> | : None known.   |

- |   |   |
|---|---|
| <b>Specific hazards arising from the chemical</b> | : Extremely 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. |
|---|---|

- |   |  |
|---|--|
| <b>Hazardous thermal decomposition products</b> | : Decomposition products may include the following materials:<br>carbon dioxide<br>carbon monoxide |
|---|--|

- |   |  |
|---|--|
| <b>Special protective actions for fire-fighters</b> | : 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. |
|---|--|

## Section 5. Fire-fighting measures

### 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. Avoid breathing 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. Use spark-proof tools and explosion-proof equipment. 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. 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. 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). 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

: 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. Protect from sunlight. Store locked up. 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
Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane pentane	<p>None.</p> <p><b>ACGIH TLV (United States, 1/2023). [Pentane all isomers]</b> TWA: 1000 ppm 8 hours. <b>OSHA PEL 1989 (United States, 3/1989).</b> TWA: 600 ppm 8 hours. TWA: 1800 mg/m<sup>3</sup> 8 hours. STEL: 750 ppm 15 minutes. STEL: 2250 mg/m<sup>3</sup> 15 minutes. <b>NIOSH REL (United States, 10/2020).</b> TWA: 120 ppm 10 hours. TWA: 350 mg/m<sup>3</sup> 10 hours. CEIL: 610 ppm 15 minutes. CEIL: 1800 mg/m<sup>3</sup> 15 minutes. <b>OSHA PEL (United States, 5/2018).</b> TWA: 1000 ppm 8 hours. TWA: 2950 mg/m<sup>3</sup> 8 hours. <b>CAL OSHA PEL (United States, 5/2018).</b> TWA: 1800 mg/m<sup>3</sup> 8 hours. TWA: 600 ppm 8 hours.</p>
ethanol	<p><b>ACGIH TLV (United States, 1/2023).</b> STEL: 1000 ppm 15 minutes. <b>OSHA PEL 1989 (United States, 3/1989).</b> TWA: 1000 ppm 8 hours. TWA: 1900 mg/m<sup>3</sup> 8 hours. <b>NIOSH REL (United States, 10/2020).</b> TWA: 1000 ppm 10 hours. TWA: 1900 mg/m<sup>3</sup> 10 hours. <b>OSHA PEL (United States, 5/2018).</b> TWA: 1000 ppm 8 hours. TWA: 1900 mg/m<sup>3</sup> 8 hours. <b>CAL OSHA PEL (United States, 5/2018).</b> TWA: 1900 mg/m<sup>3</sup> 8 hours. TWA: 1000 ppm 8 hours.</p>
butane	<p><b>OSHA PEL 1989 (United States, 3/1989).</b> TWA: 800 ppm 8 hours. TWA: 1900 mg/m<sup>3</sup> 8 hours. <b>NIOSH REL (United States, 10/2020).</b> TWA: 800 ppm 10 hours. TWA: 1900 mg/m<sup>3</sup> 10 hours. <b>ACGIH TLV (United States, 1/2021). [Butane] Explosive potential.</b> STEL: 1000 ppm 15 minutes.</p>
propane	<p><b>OSHA PEL 1989 (United States, 3/1989).</b> TWA: 1000 ppm 8 hours. TWA: 1800 mg/m<sup>3</sup> 8 hours. <b>NIOSH REL (United States, 10/2020).</b> TWA: 1000 ppm 10 hours. TWA: 1800 mg/m<sup>3</sup> 10 hours. <b>OSHA PEL (United States, 5/2018).</b> TWA: 1000 ppm 8 hours. TWA: 1800 mg/m<sup>3</sup> 8 hours. <b>ACGIH TLV (United States, 1/2023). Oxygen</b></p>

## Section 8. Exposure controls/personal protection

	<b>Depletion [Asphyxiant]. Explosive potential.</b> <b>CAL OSHA PEL (United States, 5/2018).</b> TWA: 1800 mg/m <sup>3</sup> 8 hours. TWA: 1000 ppm 8 hours.
isobutane	<b>NIOSH REL (United States, 10/2020).</b> TWA: 800 ppm 10 hours. TWA: 1900 mg/m <sup>3</sup> 10 hours. <b>ACGIH TLV (United States, 1/2021).</b> <b>[Butane] Explosive potential.</b> STEL: 1000 ppm 15 minutes.
propan-2-ol	<b>ACGIH TLV (United States, 1/2023).</b> TWA: 200 ppm 8 hours. STEL: 400 ppm 15 minutes. <b>OSHA PEL 1989 (United States, 3/1989).</b> TWA: 400 ppm 8 hours. TWA: 980 mg/m <sup>3</sup> 8 hours. STEL: 500 ppm 15 minutes. STEL: 1225 mg/m <sup>3</sup> 15 minutes. <b>NIOSH REL (United States, 10/2020).</b> TWA: 400 ppm 10 hours. TWA: 980 mg/m <sup>3</sup> 10 hours. STEL: 500 ppm 15 minutes. STEL: 1225 mg/m <sup>3</sup> 15 minutes. <b>OSHA PEL (United States, 5/2018).</b> TWA: 400 ppm 8 hours. TWA: 980 mg/m <sup>3</sup> 8 hours. <b>CAL OSHA PEL (United States, 5/2018).</b> STEL: 1225 mg/m <sup>3</sup> 15 minutes. STEL: 500 ppm 15 minutes. TWA: 980 mg/m <sup>3</sup> 8 hours. TWA: 400 ppm 8 hours.
benzyl salicylate	None.
(R)-p-mentha-1,8-diene	<b>OARS WEEL (United States, 4/2022).</b> TWA: 30 ppm 8 hours.

### Biological exposure indices

Ingredient name	Exposure indices
propan-2-ol	<b>ACGIH BEI (United States, 1/2023)</b> BEI: 40 mg/l, acetone [in urine]. Sampling time: end of shift at end of workweek.

- Appropriate engineering controls** : Use only with adequate ventilation. 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

## Section 8. Exposure controls/personal protection

<b>Hygiene measures</b>	: 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.
<b>Eye/face protection</b>	: 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.
<b><u>Skin protection</u></b>	
<b>Hand protection</b>	: 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. Recommended : 1 - 4 hours (breakthrough time): Protective gloves made of nitrile rubber (material thickness of 0,4 mm); EN 374-5 Cat. III 4 - 8 hours (breakthrough time): Protective gloves made of Viton®/ butyl rubber (material thickness of 0,7 mm); EN388 Cat.II / EN374 Cat.III / EN374-2
<b>Body protection</b>	: 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.
<b>Other skin protection</b>	: 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.
<b>Respiratory protection</b>	: 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. Recommended : organic vapor (Type AX) and particulate filter

## Section 9. Physical and chemical properties

### Appearance

<b>Physical state</b>	: Aerosol.
<b>Color</b>	: Colorless.
<b>Odor</b>	: Characteristic.
<b>Odor threshold</b>	: Not available.
<b>pH</b>	: Not applicable.
<b>Melting point/freezing point</b>	: Not applicable.
<b>Boiling point, initial boiling point, and boiling range</b>	: Not available.
<b>Flash point</b>	: Closed cup: Not applicable.
<b>Evaporation rate</b>	: Not available.
<b>Flammability</b>	: Not available.
<b>Lower and upper explosion limit/flammability limit</b>	: Lower: 0.8% Upper: 15%
<b>Vapor pressure</b>	: 57.3 kPa (429.79 mm Hg)
<b>Relative vapor density</b>	: Not available.
<b>Relative density</b>	: Not applicable.
<b>Density</b>	: 0.669 g/cm <sup>3</sup> [20°C (68°F)]
<b>Solubility(ies)</b>	:
	Not available.
<b>Solubility in water</b>	: 5 g/l

## Section 9. Physical and chemical properties

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

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

**Decomposition temperature** : Not available.

**Heat of combustion** : 14.38 kJ/g

**Viscosity** : Not applicable.

**Flow time (ISO 2431)** : 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** : Under normal conditions of storage and use, hazardous reactions will not occur.

**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	Species	Dose	Exposure
pentane	LC50 Inhalation Vapor	Rat	364 g/m <sup>3</sup>	4 hours
ethanol	LC50 Inhalation Vapor	Rat	124700 mg/m <sup>3</sup>	4 hours
	LD50 Oral	Rat	7 g/kg	-
butane	LC50 Inhalation Vapor	Rat	658000 mg/m <sup>3</sup>	4 hours
isobutane	LC50 Inhalation Vapor	Rat	658000 mg/m <sup>3</sup>	4 hours
propan-2-ol	LD50 Dermal	Rabbit	12800 mg/kg	-
	LD50 Oral	Rat	5000 mg/kg	-
benzyl salicylate	LD50 Oral	Rat	2227 mg/kg	-
(R)-p-mentha-1,8-diene	LD50 Dermal	Rabbit	>5000 mg/kg	-
	LD50 Oral	Rat	4400 mg/kg	-

#### Acute toxicity estimates

Not available.

#### Irritation/Corrosion

## Section 11. Toxicological information

Product/ingredient name	Result	Species	Score	Exposure	Observation
ethanol	Eyes - Mild irritant	Rabbit	-	24 hours 500 mg	-
propan-2-ol	Eyes - Moderate irritant	Rabbit	-	10 mg	-
	Eyes - Moderate irritant	Rabbit	-	24 hours 100 mg	-
	Eyes - Severe irritant	Rabbit	-	100 mg	-
	Skin - Mild irritant	Rabbit	-	500 mg	-
(R)-p-mentha-1,8-diene	Skin - Mild irritant	Rabbit	-	24 hours 10 %	-

### Sensitization

Not available.

### Mutagenicity

Not available.

### Carcinogenicity

Not available.

### Classification

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

### Reproductive toxicity

Not available.

### Teratogenicity

Not available.

### Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane	Category 3	-	Narcotic effects
pentane	Category 3	-	Narcotic effects
propan-2-ol	Category 3	-	Narcotic effects

### Specific target organ toxicity (repeated exposure)

Not available.

### Aspiration hazard

Name	Result
Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane	ASPIRATION HAZARD - Category 1
pentane	ASPIRATION HAZARD - Category 1
(R)-p-mentha-1,8-diene	ASPIRATION HAZARD - Category 1

**Information on the likely routes of exposure** : Not available.

### Potential acute health effects

## Section 11. Toxicological information

<b>Eye contact</b>	: No known significant effects or critical hazards.
<b>Inhalation</b>	: Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness.
<b>Skin contact</b>	: Causes skin irritation.
<b>Ingestion</b>	: Can cause central nervous system (CNS) depression.

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

<b>Eye contact</b>	: Adverse symptoms may include the following: pain or irritation watering redness
<b>Inhalation</b>	: Adverse symptoms may include the following: respiratory tract irritation coughing nausea or vomiting headache drowsiness/fatigue dizziness/vertigo unconsciousness
<b>Skin contact</b>	: Adverse symptoms may include the following: irritation redness
<b>Ingestion</b>	: No specific data.

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

#### Short term exposure

<b>Potential immediate effects</b>	: Not available.
<b>Potential delayed effects</b>	: Not available.

#### Long term exposure

<b>Potential immediate effects</b>	: Not available.
<b>Potential delayed effects</b>	: Not available.

#### Potential chronic health effects

Not available.

<b>General</b>	: No known significant effects or critical hazards.
<b>Carcinogenicity</b>	: No known significant effects or critical hazards.
<b>Mutagenicity</b>	: No known significant effects or critical hazards.
<b>Teratogenicity</b>	: No known significant effects or critical hazards.
<b>Developmental effects</b>	: No known significant effects or critical hazards.
<b>Fertility effects</b>	: No known significant effects or critical hazards.

## Section 12. Ecological information

### Toxicity

## Section 12. Ecological information

Product/ingredient name	Result	Species	Exposure
ethanol	Acute EC50 17.921 mg/l Marine water	Algae - <i>Ulva pertusa</i>	96 hours
	Acute EC50 3306 mg/l Marine water	Algae - <i>Ulva pertusa</i>	96 hours
	Acute EC50 1074 mg/l Fresh water	Crustaceans - <i>Cypris subglobosa</i>	48 hours
	Acute EC50 2 mg/l Fresh water	Daphnia - <i>Daphnia magna</i>	48 hours
	Acute EC50 7640 mg/l Fresh water	Daphnia - <i>Daphnia magna</i>	48 hours
	Acute EC50 12.9 g/L Fresh water	Fish - <i>Pimephales promelas</i>	96 hours
	Acute EC50 12800 mg/l Fresh water	Fish - <i>Pimephales promelas</i>	96 hours
	Acute LC50 25500 µg/l Marine water	Crustaceans - <i>Artemia franciscana</i> - Larvae	48 hours
	Acute LC50 5577000 µg/l Fresh water	Crustaceans - <i>Ceriodaphnia dubia</i> - Neonate	48 hours
	Acute LC50 3715000 µg/l Fresh water	Crustaceans - <i>Ceriodaphnia dubia</i> - Neonate	48 hours
	Acute LC50 6076000 µg/l Fresh water	Crustaceans - <i>Ceriodaphnia dubia</i> - Neonate	48 hours
	Acute LC50 5680 mg/l Fresh water	Daphnia - <i>Daphnia magna</i> - Neonate	48 hours
	Acute LC50 9248000 µg/l Fresh water	Daphnia - <i>Daphnia magna</i> - Neonate	48 hours
	Acute LC50 11000000 µg/l Marine water	Fish - <i>Alburnus alburnus</i>	96 hours
	Acute LC50 42000 µg/l Fresh water	Fish - <i>Oncorhynchus mykiss</i>	4 days
	Acute LC50 12720 ppm Fresh water	Fish - <i>Pimephales promelas</i>	96 hours
	Chronic NOEC 14 ppm Fresh water	Algae - <i>Eutreptiella</i> sp.	96 hours
	Chronic NOEC 350 ppm Fresh water	Algae - <i>Heterosigma akashiwo</i>	96 hours
propan-2-ol	Chronic NOEC 50 µl/L Marine water	Algae - <i>Hormosira banksii</i> - Gamete	72 hours
	Chronic NOEC 20 ppm Fresh water	Algae - <i>Prorocentrum minimum</i>	96 hours
	Chronic NOEC 4.995 mg/l Marine water	Algae - <i>Ulva pertusa</i>	96 hours
	Chronic NOEC 100 µl/L Fresh water	Daphnia - <i>Daphnia magna</i> - Neonate	21 days
	Chronic NOEC 0.375 µl/L Fresh water	Fish - <i>Gambusia holbrooki</i> - Larvae	12 weeks
	Acute EC50 7550 mg/l Fresh water	Daphnia - <i>Daphnia magna</i> - Neonate	48 hours
	Acute LC50 1400000 µg/l Marine water	Crustaceans - <i>Crangon crangon</i>	48 hours
	Acute LC50 4200 mg/l Fresh water	Fish - <i>Rasbora heteromorpha</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> -	96 hours
(R)-p-mentha-1,8-diene			

## Section 12. Ecological information

		Juvenile (Fledgling, Hatchling, Weanling)	
--	--	---	--

### Persistence and degradability

Not available.

### Bioaccumulative potential

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
pentane	3.45	171	Low
ethanol	-0.35	-	Low
butane	2.89	-	Low
propane	1.09	-	Low
isobutane	2.8	-	Low
propan-2-ol	0.05	-	Low
benzyl salicylate	-	1170	High
(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

<b>Disposal methods</b>	: 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
<b>UN number</b>	UN1950	UN1950	UN1950	UN1950	UN1950
<b>UN proper shipping name</b>	Aerosols	AEROSOLS	AEROSOLES	AÉROSOLS (Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane, pentane)	Aerosols, flammable (Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane, pentane)

## Section 14. Transport information

Transport hazard class(es)	2.1 	2.1  	2.1 	2.1  	2.1 
Packing group	-	-	-	-	-
Environmental hazards	No.	Yes.	Yes. The environmentally hazardous substance mark is not required.	Yes.	Yes. The environmentally hazardous substance mark is not required.

### Additional information

- DOT Classification** : Limited quantity Yes.  
Packaging instruction Exceptions: 306. Non-bulk: None. Bulk: None.  
Quantity limitation Passenger aircraft/rail: 75 kg. Cargo aircraft: 150 kg.  
Special provisions N82
- TDG Classification** : Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2.13-2.17 (Class 2), 2.7 (Marine pollutant mark).  
The marine pollutant mark is not required when transported by road or rail.  
Explosive Limit and Limited Quantity Index 1  
Passenger Carrying Road or Rail Index 75  
Special provisions 80, 107
- Mexico Classification** : Special provisions 63, 190, 277, 327, 344
- IMDG** : The marine pollutant mark is not required when transported in sizes of  $\leq$  5 L or  $\leq$  5 kg.  
Emergency schedules F-D, S-U  
Special provisions 63, 190, 277, 327, 344, 381, 959
- IATA** : The environmentally hazardous substance mark may appear if required by other transportation regulations.  
Quantity limitation Passenger and Cargo Aircraft: 75 kg. Packaging instructions: 203.  
Cargo Aircraft Only: 150 kg. Packaging instructions: 203. Limited Quantities -  
Passenger Aircraft: 30 kg. Packaging instructions: Y203.  
Special provisions A145, A167, A802
- 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:** pentane  
**TSCA 8(a) CDR Exempt/Partial exemption:** Not determined  
**Clean Air Act (CAA) 112 regulated flammable substances:** pentane; butane; propane; Isobutane
- Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs)** : Not 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

## Section 15. Regulatory information

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

### SARA 302/304

#### Composition/information on ingredients

No products were found.

**SARA 304 RQ** : Not applicable.

### SARA 311/312

**Classification** : FLAMMABLE AEROSOLS - Category 1  
 GASES UNDER PRESSURE - Compressed gas  
 SKIN IRRITATION - Category 2  
 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3

#### Composition/information on ingredients

Name	%	Classification
Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane	≥50 - ≤75	FLAMMABLE LIQUIDS - Category 2 SKIN IRRITATION - Category 2 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3 ASPIRATION HAZARD - Category 1
pentane	≥10 - ≤25	FLAMMABLE LIQUIDS - Category 2 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3 ASPIRATION HAZARD - Category 1
ethanol	≤10	FLAMMABLE LIQUIDS - Category 2
butane	≤10	FLAMMABLE GASES - Category 1 GASES UNDER PRESSURE - Compressed gas
propane	≤10	FLAMMABLE GASES - Category 1 GASES UNDER PRESSURE - Compressed gas
isobutane	≤3	FLAMMABLE GASES - Category 1 GASES UNDER PRESSURE - Compressed gas
propan-2-ol	<1	FLAMMABLE LIQUIDS - Category 2 EYE IRRITATION - Category 2A SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3
benzyl salicylate	≤0.3	SKIN SENSITIZATION - Category 1B
(R)-p-mentha-1,8-diene	≤0.2	FLAMMABLE LIQUIDS - Category 3 SKIN IRRITATION - Category 2 SKIN SENSITIZATION - Category 1B ASPIRATION HAZARD - Category 1

#### State regulations

**Massachusetts** : The following components are listed: PENTANE; ETHYL ALCOHOL; BUTANE; PROPANE; ISOBUTANE

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

**New Jersey** : The following components are listed: PENTANE; ETHYL ALCOHOL; BUTANE; PROPANE; Isobutane

**Pennsylvania** : The following components are listed: PENTANE; ETHANOL; BUTANE; PROPANE; PROPANE, 2-METHYL-

#### California Prop. 65

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

## Section 15. Regulatory information

### 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	: <b>Russian Federation inventory:</b> Not determined.
Japan	: <b>Japan inventory (CSCL):</b> All components are listed or exempted. <b>Japan inventory (ISHL):</b> Not determined.
New Zealand	: Not determined.
Philippines	: Not determined.
Republic of Korea	: Not determined.
Taiwan	: Not determined.
Thailand	: Not determined.
Turkey	: All components are listed or exempted.
United States	: Not determined.
Viet Nam	: Not determined.

## Section 16. Other information

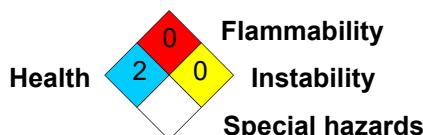
### Hazardous Material Information System (U.S.A.)

Health	/	2
Flammability		4
Physical hazards		3

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

## Section 16. Other information

Classification	Justification
FLAMMABLE AEROSOLS - Category 1	On basis of test data
GASES UNDER PRESSURE - Compressed gas	On basis of test data
SKIN IRRITATION - Category 2	Calculation method
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3	Calculation method

### History

**Date of printing** : 5/15/2025

**Date of issue/Date of revision** : 5/12/2025

**Date of previous issue** : 2/19/2025

**Version** : 2.3

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