

# SAFETY DATA SHEET



## Graffiti Remover

### Section 1. Identification

**GHS product identifier** : Graffiti Remover  
**Product code** : 015  
**Other means of identification** : Not available.  
**Product type** : Gas.

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

Identified uses	
Graffiti Remover	
Uses advised against	Reason
For Industrial and Institutional Use Only	-

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

**Emergency telephone number (with hours of operation)** : Chemtrec (800) 424-9300 24 hour

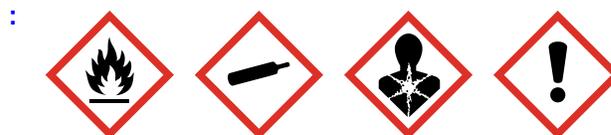
### Section 2. Hazards identification

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

**Classification of the substance or mixture** : FLAMMABLE AEROSOLS - Category 1  
GASES UNDER PRESSURE - Compressed gas  
SKIN IRRITATION - Category 2  
EYE IRRITATION - Category 2A  
TOXIC TO REPRODUCTION (Unborn child) - Category 2  
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3  
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2  
ASPIRATION HAZARD - Category 1

#### GHS label elements

##### Hazard pictograms



**Signal word** : Danger

## Section 2. Hazards identification

- Hazard statements** : Extremely flammable aerosol.  
 Contains gas under pressure; may explode if heated.  
 Causes serious eye irritation.  
 Causes skin irritation.  
 Suspected of damaging the unborn child.  
 May be fatal if swallowed and enters airways.  
 May cause drowsiness or dizziness.  
 May cause damage to organs through prolonged or repeated exposure.
- Precautionary statements**
- Prevention** : Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves. Wear eye or face protection: Recommended: safety glasses. Wear protective clothing: Recommended: Chemical resistant gloves. 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. Use only outdoors or in a well-ventilated area. Do not breathe gas. Wash hands thoroughly after handling. Pressurized container: Do not pierce or burn, even after use.
- Response** : Get medical attention if you feel unwell. IF exposed or concerned: Get medical attention. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or physician if you feel unwell. IF SWALLOWED: Immediately call a POISON CENTER or physician. Do NOT induce vomiting. IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing and wash it before reuse. If skin irritation occurs: Get medical attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention.
- Storage** : Store locked up. Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F. Store in a well-ventilated place.
- 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
toluene	≥25 - ≤50	108-88-3
propane	≤10	74-98-6
acetone	≤10	67-64-1
2-(2-butoxyethoxy)ethanol	≤10	112-34-5
2-butoxyethanol	≤5	111-76-2
Quaternary ammonium compounds, benzyl(hydrogenated tallow alkyl) dimethyl, chlorides, compds. with bentonite and bis(hydrogenated tallow alkyl)dimethylammonium chlorides	≤5	71011-25-1
sodium hydroxide	≤5	1310-73-2

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 as hazardous to health or the environment 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. Continue to rinse for at least 10 minutes. Get medical attention.
- Inhalation** : 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.
- Skin contact** : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. To avoid the risk of static discharges and gas ignition, soak contaminated clothing thoroughly with water before removing it. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : As this product is a gas, refer to the inhalation section. Aspiration hazard if swallowed. Can enter lungs and cause damage. Do not induce vomiting.

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

#### Potential acute health effects

- Eye contact** : Causes serious eye irritation. Contact with rapidly expanding gas may cause burns or frostbite.
- Inhalation** : Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness.
- Skin contact** : Causes skin irritation. Contact with rapidly expanding gas may cause burns or frostbite.
- Ingestion** : Can cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways. As this product is a gas, refer to the inhalation section.

#### Over-exposure signs/symptoms

- Eye contact** : Adverse symptoms may include the following:  
pain or irritation  
watering  
redness
- Inhalation** : Adverse symptoms may include the following:  
nausea or vomiting  
headache  
drowsiness/fatigue  
dizziness/vertigo  
unconsciousness  
reduced fetal weight  
increase in fetal deaths  
skeletal malformations
- Skin contact** : Adverse symptoms may include the following:  
irritation  
redness  
reduced fetal weight  
increase in fetal deaths  
skeletal malformations
- Ingestion** : Adverse symptoms may include the following:  
nausea or vomiting  
reduced fetal weight  
increase in fetal deaths  
skeletal malformations

## Section 4. First aid measures

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

- Notes to physician** : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
- 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.

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** : Contains gas under pressure. 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.

- Hazardous thermal decomposition products** : Decomposition products may include the following materials:  
carbon dioxide  
carbon monoxide  
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. Contact supplier immediately for specialist advice. 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. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing gas. 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".

## Section 6. Accidental release measures

**Environmental precautions** : Ensure emergency procedures to deal with accidental gas releases are in place to avoid contamination of the environment. 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** : Immediately contact emergency personnel. Stop leak if without risk. Use spark-proof tools and explosion-proof equipment.
- Large spill** : Immediately contact emergency personnel. Stop leak if without risk. Use spark-proof tools and explosion-proof equipment. 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). Contains gas under pressure. Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50°C. Do not pierce or burn, even after use. Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe gas. Do not swallow. 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. Do not puncture or incinerate 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.

**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 in a segregated and approved area. Store away from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10). Store locked up. Eliminate all ignition sources. Keep container tightly closed and sealed until ready for use. 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
toluene	<p><b>OSHA PEL 1989 (United States, 3/1989).</b>            TWA: 100 ppm 8 hours.            TWA: 375 mg/m<sup>3</sup> 8 hours.            STEL: 150 ppm 15 minutes.            STEL: 560 mg/m<sup>3</sup> 15 minutes.</p> <p><b>OSHA PEL Z2 (United States, 2/2013).</b>            TWA: 200 ppm 8 hours.            CEIL: 300 ppm            AMP: 500 ppm 10 minutes.</p> <p><b>NIOSH REL (United States, 10/2016).</b>            TWA: 100 ppm 10 hours.            TWA: 375 mg/m<sup>3</sup> 10 hours.            STEL: 150 ppm 15 minutes.</p>

## Section 8. Exposure controls/personal protection

propane	<p>STEL: 560 mg/m<sup>3</sup> 15 minutes.  <b>ACGIH TLV (United States, 3/2018).</b>  TWA: 20 ppm 8 hours.</p> <p><b>OSHA PEL 1989 (United States, 3/1989).</b>  TWA: 1000 ppm 8 hours.  TWA: 1800 mg/m<sup>3</sup> 8 hours.</p> <p><b>NIOSH REL (United States, 10/2016).</b>  TWA: 1000 ppm 10 hours.  TWA: 1800 mg/m<sup>3</sup> 10 hours.</p> <p><b>OSHA PEL (United States, 5/2018).</b>  TWA: 1000 ppm 8 hours.  TWA: 1800 mg/m<sup>3</sup> 8 hours.</p> <p><b>ACGIH TLV (United States, 3/2018). Oxygen Depletion [Asphyxiant]. Explosive potential.</b></p>
acetone	<p><b>ACGIH TLV (United States, 3/2018).</b>  TWA: 250 ppm 8 hours.  STEL: 500 ppm 15 minutes.</p> <p><b>OSHA PEL 1989 (United States, 3/1989).</b>  TWA: 750 ppm 8 hours.  TWA: 1800 mg/m<sup>3</sup> 8 hours.  STEL: 1000 ppm 15 minutes.  STEL: 2400 mg/m<sup>3</sup> 15 minutes.</p> <p><b>NIOSH REL (United States, 10/2016).</b>  TWA: 250 ppm 10 hours.  TWA: 590 mg/m<sup>3</sup> 10 hours.</p> <p><b>OSHA PEL (United States, 5/2018).</b>  TWA: 1000 ppm 8 hours.  TWA: 2400 mg/m<sup>3</sup> 8 hours.</p>
2-(2-butoxyethoxy)ethanol	<p><b>ACGIH TLV (United States, 3/2018).</b>  TWA: 10 ppm 8 hours. Form: Inhalable fraction and vapor</p>
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, 10/2016).</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, 3/2018).</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>
Quaternary ammonium compounds, benzyl(hydrogenated tallow alkyl) dimethyl, chlorides, compds. with bentonite and bis(hydrogenated tallow alkyl)dimethylammonium chlorides sodium hydroxide	<p>None.</p> <p><b>ACGIH TLV (United States, 3/2017).</b>  C: 2 mg/m<sup>3</sup></p> <p><b>OSHA PEL 1989 (United States, 3/1989).</b>  CEIL: 2 mg/m<sup>3</sup></p> <p><b>NIOSH REL (United States, 10/2016).</b>  CEIL: 2 mg/m<sup>3</sup></p> <p><b>OSHA PEL (United States, 6/2016).</b></p>

## Section 8. Exposure controls/personal protection

TWA: 2 mg/m<sup>3</sup> 8 hours.

- 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

- 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: chemical splash goggles. Recommended: safety glasses
- 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. 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. 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.
- 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. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.
- Personal protective equipment (Pictograms)** :



## Section 9. Physical and chemical properties

### Appearance

Physical state	: Gas. [Compressed gas.]
Color	: Tan.
Odor	: Aromatic.
Odor threshold	: Not available.
pH	: Not available.
Melting point	: Not available.
Boiling point	: Not available.
Flash point	: Closed cup: <-18°C (<-0.4°F)
Evaporation rate	: Not available.
Flammability (solid, gas)	: Extremely flammable in the presence of the following materials or conditions: open flames, sparks and static discharge.
Lower and upper explosive (flammable) limits	: Not available.
Vapor pressure	: Not available.
Vapor density	: Not available.
Relative density	: 0.827
Solubility	: Partially soluble in the following materials: cold water and hot water.
Solubility in water	: Not available.
Partition coefficient: n-octanol/water	: Not available.
Auto-ignition temperature	: Not available.
Decomposition temperature	: Not available.
Viscosity	: Not available.
Flow time (ISO 2431)	: Not available.
<b>Aerosol product</b>	
Type of aerosol	: Spray
Heat of combustion	: 22.07 kJ/g

## 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	: Not available.
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
toluene	LC50 Inhalation Vapor	Rat	49 g/m <sup>3</sup>	4 hours
	LD50 Oral	Rat	636 mg/kg	-
acetone	LD50 Oral	Rat	5800 mg/kg	-
	LD50 Dermal	Rabbit	2700 mg/kg	-
2-(2-butoxyethoxy)ethanol	LD50 Oral	Rat	4500 mg/kg	-
	LC50 Inhalation Gas.	Rat	450 ppm	4 hours
2-butoxyethanol	LD50 Dermal	Rabbit	220 mg/kg	-
	LD50 Oral	Rat	250 mg/kg	-

#### Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
toluene	Eyes - Mild irritant	Rabbit	-	0.5 minutes 100 milligrams	-
	Eyes - Mild irritant	Rabbit	-	870 Micrograms	-
	Eyes - Severe irritant	Rabbit	-	24 hours 2 milligrams	-
	Skin - Mild irritant	Pig	-	24 hours 250 microliters	-
	Skin - Mild irritant	Rabbit	-	435 milligrams	-
	Skin - Moderate irritant	Rabbit	-	24 hours 20 milligrams	-
	Skin - Moderate irritant	Rabbit	-	500 milligrams	-
acetone	Eyes - Mild irritant	Human	-	186300 parts per million	-
	Eyes - Mild irritant	Rabbit	-	10 microliters	-
	Eyes - Moderate irritant	Rabbit	-	24 hours 20 milligrams	-
	Eyes - Severe irritant	Rabbit	-	20 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
2-(2-butoxyethoxy)ethanol	Eyes - Moderate irritant	Rabbit	-	395 milligrams	-
	Eyes - Severe irritant	Rabbit	-	24 hours 20 milligrams	-
2-butoxyethanol	Eyes - Moderate irritant	Rabbit	-	20 milligrams	-
	Eyes - Severe irritant	Rabbit	-	24 hours 100 milligrams	-
	Eyes - Severe irritant	Rabbit	-	100 milligrams	-
sodium hydroxide	Skin - Mild irritant	Rabbit	-	500 milligrams	-
	Eyes - Severe irritant	Monkey	-	24 hours 1 Percent	-
	Eyes - Mild irritant	Rabbit	-	400 Micrograms	-
	Eyes - Severe irritant	Rabbit	-	24 hours 50 Micrograms	-
	Eyes - Severe irritant	Rabbit	-	1 Percent	-
	Eyes - Severe irritant	Rabbit	-	0.5 minutes 1 milligrams	-

## Section 11. Toxicological information

	Skin - Mild irritant	Human	-	24 hours 2 Percent	-
	Skin - Severe irritant	Rabbit	-	24 hours 500 milligrams	-

**Sensitization**

Not available.

**Mutagenicity**

Not available.

**Carcinogenicity**

Not available.

**Classification**

Product/ingredient name	OSHA	IARC	NTP
toluene	-	3	-
2-butoxyethanol	-	3	-

**Reproductive toxicity**

Not available.

**Teratogenicity**

Not available.

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

Name	Category	Route of exposure	Target organs
Graffiti Remover	Category 3	Not applicable.	Narcotic effects
toluene	Category 3	Not applicable.	Narcotic effects
propane	Category 3	Not applicable.	Respiratory tract irritation
acetone	Category 3	Not applicable.	Narcotic effects

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

Name	Category	Route of exposure	Target organs
Graffiti Remover	Category 2	Not determined	Not determined
toluene	Category 2	Not determined	Not determined

**Aspiration hazard**

Name	Result
Graffiti Remover	ASPIRATION HAZARD - Category 1
toluene	ASPIRATION HAZARD - Category 1
2-butoxyethanol	ASPIRATION HAZARD - Category 1

**Information on the likely routes of exposure** : Routes of entry anticipated: Dermal, Inhalation.

**Potential acute health effects**

**Eye contact** : Causes serious eye irritation. Contact with rapidly expanding gas may cause burns or frostbite.

**Inhalation** : Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness.

**Skin contact** : Causes skin irritation. Contact with rapidly expanding gas may cause burns or frostbite.

## Section 11. Toxicological information

**Ingestion** : Can cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways. As this product is a gas, refer to the inhalation section.

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

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

**Inhalation** : Adverse symptoms may include the following:  
nausea or vomiting  
headache  
drowsiness/fatigue  
dizziness/vertigo  
unconsciousness  
reduced fetal weight  
increase in fetal deaths  
skeletal malformations

**Skin contact** : Adverse symptoms may include the following:  
irritation  
redness  
reduced fetal weight  
increase in fetal deaths  
skeletal malformations

**Ingestion** : Adverse symptoms may include the following:  
nausea or vomiting  
reduced fetal weight  
increase in fetal deaths  
skeletal malformations

### 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** : May cause damage to organs through prolonged or repeated exposure.

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

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

**Teratogenicity** : Suspected of damaging the unborn child.

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

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

### Numerical measures of toxicity

#### Acute toxicity estimates

Not available.

## Section 11. Toxicological information

## Section 12. Ecological information

### Toxicity

Product/ingredient name	Result	Species	Exposure
toluene	Acute EC50 12500 µg/l Fresh water	Algae - Pseudokirchneriella subcapitata	72 hours
	Acute EC50 11600 µg/l Fresh water	Crustaceans - Gammarus pseudolimnaeus - Adult	48 hours
	Acute EC50 6000 µg/l Fresh water	Daphnia - Daphnia magna - Juvenile (Fledgling, Hatchling, Weanling)	48 hours
acetone	Acute LC50 5500 µg/l Fresh water	Fish - Oncorhynchus kisutch - Fry	96 hours
	Chronic NOEC 1000 µg/l Fresh water	Daphnia - Daphnia magna	21 days
	Acute EC50 20.565 mg/l Marine water	Algae - Ulva pertusa	96 hours
	Acute LC50 6000000 µg/l Fresh water	Crustaceans - Gammarus pulex	48 hours
	Acute LC50 10000 µg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 5600 ppm Fresh water	Fish - Poecilia reticulata	96 hours
	Chronic NOEC 4.95 mg/l Marine water	Algae - Ulva pertusa	96 hours
2-(2-butoxyethoxy)ethanol 2-butoxyethanol	Chronic NOEC 0.016 ml/L Fresh water	Crustaceans - Daphniidae	21 days
	Chronic NOEC 0.1 ml/L Fresh water	Daphnia - Daphnia magna - Neonate	21 days
	Chronic NOEC 5 µg/l Marine water	Fish - Gasterosteus aculeatus - Larvae	42 days
	Acute LC50 1300000 µg/l Fresh water	Fish - Lepomis macrochirus	96 hours
	Acute EC50 >1000 mg/l Fresh water	Daphnia - Daphnia magna	48 hours
sodium hydroxide	Acute LC50 800000 µg/l Marine water	Crustaceans - Crangon crangon	48 hours
	Acute LC50 1250000 µg/l Marine water	Fish - Menidia beryllina	96 hours
	Acute EC50 40.38 mg/l Fresh water	Crustaceans - Ceriodaphnia dubia - Neonate	48 hours
	Acute LC50 125 ppm Fresh water	Fish - Gambusia affinis - Adult	96 hours

### Persistence and degradability

Not available.

### Bioaccumulative potential

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
toluene	2.73	90	low
propane	1.09	-	low
acetone	-0.23	-	low
2-(2-butoxyethoxy)ethanol	1	-	low
2-butoxyethanol	0.81	-	low

### 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. Empty pressure vessels should be returned to the supplier. 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.

### United States - RCRA Toxic hazardous waste "U" List

Ingredient	CAS #	Status	Reference number
Toluene; Benzene, methyl-Acetone (l); 2-Propanone (l)	108-88-3 67-64-1	Listed Listed	U220 U002

## Section 14. Transport information

	DOT Classification	TDG Classification	Mexico Classification	ADR/RID	IMDG	IATA
UN number	UN1950	UN1950	UN1950	UN1950	UN1950	UN1950
UN proper shipping name	Aerosols, Flammable	Aerosols, Flammable	Aerosols, Flammable	Aerosols, Flammable	Aerosols	Aerosols, Flammable
Transport hazard class(es)	2.1  	2.1  	2.1  	2  	2.1  	2.1  
Packing group	-	-	-	-	-	-
Environmental hazards	Yes.	Yes.	Yes. The environmentally hazardous substance mark is not required.	Yes.	Yes.	Yes. The environmentally hazardous substance mark is not required.

### Additional information

#### DOT Classification

: This product is not regulated as a marine pollutant when transported on inland waterways in sizes of ≤5 L or ≤5 kg or by road, rail, or inland air in non-bulk sizes, provided the packagings meet the general provisions of §§ 173.24 and 173.24a. **Reportable quantity** 4000 lbs / 1816 kg. Package sizes shipped in quantities less than the product reportable quantity are not subject to the RQ (reportable quantity) transportation requirements. **Limited quantity** Yes.

#### 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

## Section 14. Transport information

- ADR/RID** : The environmentally hazardous substance mark is not required when transported in sizes of ≤5 L or ≤5 kg.  
**Tunnel code** (D)
- IMDG** : **Limited quantity** Yes. The marine pollutant mark is not required when transported in sizes of ≤5 L or ≤5 kg.
- IATA** : **Limited quantity** Yes. The environmentally hazardous substance mark may appear if required by other transportation regulations.
- 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 Annex II of MARPOL and the IBC Code** : Not available.

## Section 15. Regulatory information

- U.S. Federal regulations** : **TSCA 8(a) CDR Exempt/Partial exemption:** Not determined  
**Clean Water Act (CWA) 307:** toluene  
**Clean Water Act (CWA) 311:** toluene; sodium hydroxide  
**Clean Air Act (CAA) 112 regulated flammable substances:** propane; butane
- 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)** : Listed
- 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  
EYE IRRITATION - Category 2A  
TOXIC TO REPRODUCTION (Unborn child) - Category 2  
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3  
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2  
ASPIRATION HAZARD - Category 1

### Composition/information on ingredients

## Section 15. Regulatory information

Name	%	Classification
toluene	≥25 - ≤50	FLAMMABLE LIQUIDS - Category 2 SKIN IRRITATION - Category 2 TOXIC TO REPRODUCTION (Unborn child) - Category 2 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2
propane	≤10	ASPIRATION HAZARD - Category 1 FLAMMABLE GASES - Category 1 GASES UNDER PRESSURE - Liquefied gas SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
acetone	≤10	FLAMMABLE LIQUIDS - Category 2 EYE IRRITATION - Category 2A SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3
butane	≤10	FLAMMABLE GASES - Category 1 GASES UNDER PRESSURE - Liquefied gas
2-(2-butoxyethoxy)ethanol	≤10	EYE IRRITATION - Category 2A
2-butoxyethanol	≤5	FLAMMABLE LIQUIDS - Category 4 ACUTE TOXICITY (oral) - Category 4 SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2A ASPIRATION HAZARD - Category 1
Quaternary ammonium compounds, benzyl (hydrogenated tallow alkyl) dimethyl, chlorides, compds. with bentonite and bis (hydrogenated tallow alkyl) dimethylammonium chlorides	≤5	EYE IRRITATION - Category 2A
sodium hydroxide	≤5	CORROSIVE TO METALS - Category 1 SKIN CORROSION - Category 1A SERIOUS EYE DAMAGE - Category 1

### SARA 313

	Product name	CAS number	%
<b>Form R - Reporting requirements</b>	toluene	108-88-3	≥25 - ≤50
	2-(2-butoxyethoxy)ethanol	112-34-5	≤10
	2-butoxyethanol	111-76-2	≤5
<b>Supplier notification</b>	toluene	108-88-3	≥25 - ≤50
	2-(2-butoxyethoxy)ethanol	112-34-5	≤10
	2-butoxyethanol	111-76-2	≤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: TOLUENE; METHYLBENZENE; PROPANE; ACETONE; BUTANE; 2-BUTOXYETHANOL; BUTYL CELLOSOLVE; SODIUM HYDROXIDE

#### New York

: The following components are listed: Toluene; Acetone; 2-Propanone; Sodium hydroxide

#### New Jersey

: The following components are listed: TOLUENE; BENZENE, METHYL-; PROPANE; ACETONE; 2-PROPANONE; BUTANE; GLYCOL ETHERS; 2-BUTOXY ETHANOL; BUTYL CELLOSOLVE; SODIUM HYDROXIDE; CAUSTIC SODA

## Section 15. Regulatory information

**Pennsylvania** : The following components are listed: BENZENE, METHYL-; PROPANE; 2-PROPANONE; BUTANE; ETHANOL, 2-BUTOXY-; 9-OCTADECENOIC ACID (Z)-; SODIUM HYDROXIDE

### California Prop. 65

**⚠ WARNING:** This product can expose you to chemicals including Silica, crystalline, which is known to the State of California to cause cancer, and Toluene, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

Ingredient name	No significant risk level	Maximum acceptable dosage level
Toluene	-	Yes.
Silica, crystalline	-	-

### 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.  
**Europe** : All components are listed or exempted.  
**Japan** : **Japan inventory (ENCS):** Not determined.  
**Japan inventory (ISHL):** Not determined.  
**Malaysia** : Not determined  
**New Zealand** : All components are listed or exempted.  
**Philippines** : Not determined.  
**Republic of Korea** : Not determined.  
**Taiwan** : All components are listed or exempted.  
**Thailand** : Not determined.  
**Turkey** : Not determined.  
**United States** : All components are listed or exempted.  
**Viet Nam** : Not determined.

## Section 16. Other information

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

Health	*	3
Flammability		3
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.)



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Copyright ©2001, National Fire Protection Association, Quincy, MA 02269. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactivity hazards of chemicals. The user is referred to certain limited number of chemicals with recommended classifications in NFPA 49 and NFPA 325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.

### Procedure used to derive the classification

Classification	Justification
FLAMMABLE AEROSOLS - Category 1	Expert judgment
GASES UNDER PRESSURE - Compressed gas	On basis of test data
SKIN IRRITATION - Category 2	Expert judgment
EYE IRRITATION - Category 2A	Expert judgment
TOXIC TO REPRODUCTION (Unborn child) - Category 2	Expert judgment
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3	Expert judgment
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2	Expert judgment
ASPIRATION HAZARD - Category 1	Expert judgment

### History

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## Section 16. Other information

**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)  
UN = United Nations

**References** : Not available.

✔ Indicates information that has changed from previously issued version.

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