



Material Safety Data Sheet

BULLDOG BRAKE CLEANER (AEROSOL)

1. Product and company identification

Supplier	: Chemtool Incorporated 801 West Rockton Road Rockton, IL 61072 U.S.A. Tel: +01 815.957.4140 Fax: +01 815.624.0292
Material uses	: Industrial applications: Cleaner; Aerosol.
Product code	: 4028-9046731
MSDS #	: 2358
Validation date	: 9/26/2013.
In case of emergency	: INFOTRAC U.S. and Canada - 800.535.5053 Outside the U.S. and Canada - +01 352.323.3500

2. Hazards identification

Emergency overview

Physical state	: Liquid [Aerosol.]
Color	: Colorless
Odor	: Lemon-like.
Signal word	: DANGER!
Hazard statements	: EXTREMELY FLAMMABLE AEROSOL. CAUSES EYE IRRITATION. MAY CAUSE SKIN IRRITATION.
Precautionary measures	: Do not breathe vapor or mist. Do not eat, drink or smoke when using this product. Avoid contact with eyes, skin and clothing. Keep away from heat, sparks, open flames and hot surfaces. - No smoking. Do not spray on an open flame or other ignition source. Pressurized container: Do not pierce or burn, even after use. Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F. Wash thoroughly after handling.
OSHA/HCS status	: This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
Routes of entry	: Dermal contact. Eye contact. Inhalation. Ingestion.
Potential acute health effects	
Inhalation	: No known significant effects or critical hazards. Vapors may cause drowsiness and dizziness.
Ingestion	: No known significant effects or critical hazards.

2. Hazards identification

Skin : Slightly irritating to the skin. Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis.

Eyes : Severely irritating to eyes. Risk of serious damage to eyes.

Potential chronic health effects

Chronic effects : Contains material that may cause target organ damage, based on animal data.

Carcinogenicity : No known significant effects or critical hazards.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : No known significant effects or critical hazards.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

Target organs : Contains material which may cause damage to the following organs: blood, kidneys, lungs, the nervous system, liver, gastrointestinal tract, upper respiratory tract, skin, central nervous system (CNS), eye, lens or cornea.

Over-exposure signs/symptoms

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

Ingestion : No specific data.

Skin : Adverse symptoms may include the following:
irritation
redness

Eyes : Adverse symptoms may include the following:
pain or irritation
watering
redness

Medical conditions aggravated by over-exposure : Pre-existing disorders involving any target organs mentioned in this MSDS as being at risk may be aggravated by over-exposure to this product.

See toxicological information (Section 11)

3. Composition/information on ingredients

United States

Name	CAS number	%
acetone	67-64-1	50-70
methyl acetate	79-20-9	10-20
Carbon dioxide	124-38-9	10-20
xylene	1330-20-7	3-7
heptane	142-82-5	3-7

Canada

Name	CAS number	%
acetone	67-64-1	50-70
methyl acetate	79-20-9	10-20
Carbon dioxide	124-38-9	10-20
xylene	1330-20-7	3-7
heptane	142-82-5	3-7

3. Composition/information on ingredients

Mexico

Classification

Name	CAS number	UN number	%	IDLH	H	F	R	Special
acetone	67-64-1	UN1993	50-70	2500 ppm	2	3	0	-
methyl acetate	79-20-9	UN1993	10-20	3100 ppm	2	3	0	-
xylene	1330-20-7	UN1993	3-7	900 ppm	2	3	0	-
heptane	142-82-5	UN1993	3-7	750 ppm	1	3	0	-
Carbon dioxide	124-38-9	UN1956	10-20	40000 ppm	0	0	0	-

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.

4. First aid measures

- Eye contact** : Check for and remove any contact lenses. Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical attention immediately.
- Skin contact** : In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention immediately.
- Inhalation** : Move exposed person to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.
- Ingestion** : Wash out mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention immediately.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.
- Notes to physician** : No specific treatment. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

5. Fire-fighting measures

- Flammability of the product** : Extremely flammable aerosol. 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. Runoff to sewer may create fire or explosion hazard.

Extinguishing media

- Suitable** : Use an extinguishing agent suitable for the surrounding fire.
- Not suitable** : None known.
- Special exposure hazards** : 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.
- Hazardous thermal decomposition products** : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide

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.

6. Accidental release measures

Personal precautions : 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 (see Section 8).

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 for 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.

7. Handling and storage

Handling : Put on appropriate personal protective equipment (see Section 8). 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. 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 non-sparking tools. Empty containers retain product residue and can be hazardous.

Storage : Do not store above the following temperature: 50°C (122°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) and food and drink. Eliminate all ignition sources. Use appropriate containment to avoid environmental contamination.

8. Exposure controls/personal protection

United States

Ingredient	Exposure limits
acetone	<p>ACGIH TLV (United States, 3/2012). TWA: 500 ppm 8 hours. TWA: 1188 mg/m³ 8 hours. STEL: 750 ppm 15 minutes. STEL: 1782 mg/m³ 15 minutes.</p> <p>OSHA PEL 1989 (United States, 3/1989). TWA: 750 ppm 8 hours. TWA: 1800 mg/m³ 8 hours. STEL: 1000 ppm 15 minutes. STEL: 2400 mg/m³ 15 minutes.</p> <p>NIOSH REL (United States, 1/2013). TWA: 250 ppm 10 hours. TWA: 590 mg/m³ 10 hours.</p> <p>OSHA PEL (United States, 6/2010). TWA: 1000 ppm 8 hours. TWA: 2400 mg/m³ 8 hours.</p>
methyl acetate	<p>ACGIH TLV (United States, 3/2012). TWA: 200 ppm 8 hours. TWA: 606 mg/m³ 8 hours. STEL: 250 ppm 15 minutes. STEL: 757 mg/m³ 15 minutes.</p> <p>OSHA PEL 1989 (United States, 3/1989). TWA: 200 ppm 8 hours. TWA: 610 mg/m³ 8 hours. STEL: 250 ppm 15 minutes. STEL: 760 mg/m³ 15 minutes.</p> <p>NIOSH REL (United States, 1/2013). TWA: 200 ppm 10 hours. TWA: 610 mg/m³ 10 hours. STEL: 250 ppm 15 minutes. STEL: 760 mg/m³ 15 minutes.</p> <p>OSHA PEL (United States, 6/2010). TWA: 200 ppm 8 hours. TWA: 610 mg/m³ 8 hours.</p>
Carbon dioxide	<p>ACGIH TLV (United States, 1/2011). TWA: 5000 ppm 8 hours. TWA: 9000 mg/m³ 8 hours. STEL: 30000 ppm 15 minutes. STEL: 54000 mg/m³ 15 minutes.</p> <p>OSHA PEL 1989 (United States, 3/1989). TWA: 10000 ppm 8 hours. TWA: 18000 mg/m³ 8 hours. STEL: 30000 ppm 15 minutes. STEL: 54000 mg/m³ 15 minutes.</p> <p>NIOSH REL (United States, 6/2009). TWA: 5000 ppm 10 hours. TWA: 9000 mg/m³ 10 hours. STEL: 30000 ppm 15 minutes. STEL: 54000 mg/m³ 15 minutes.</p> <p>OSHA PEL (United States, 6/2010).</p>

8. Exposure controls/personal protection

xylene	<p>TWA: 5000 ppm 8 hours. TWA: 9000 mg/m³ 8 hours.</p> <p>ACGIH TLV (United States, 3/2012). TWA: 100 ppm 8 hours. TWA: 434 mg/m³ 8 hours. STEL: 150 ppm 15 minutes. STEL: 651 mg/m³ 15 minutes.</p> <p>OSHA PEL 1989 (United States, 3/1989). TWA: 100 ppm 8 hours. TWA: 435 mg/m³ 8 hours. STEL: 150 ppm 15 minutes. STEL: 655 mg/m³ 15 minutes.</p> <p>OSHA PEL (United States, 6/2010). TWA: 100 ppm 8 hours. TWA: 435 mg/m³ 8 hours.</p>
heptane	<p>ACGIH TLV (United States, 3/2012). TWA: 400 ppm 8 hours. TWA: 1640 mg/m³ 8 hours. STEL: 500 ppm 15 minutes. STEL: 2050 mg/m³ 15 minutes.</p> <p>OSHA PEL 1989 (United States, 3/1989). TWA: 400 ppm 8 hours. TWA: 1600 mg/m³ 8 hours. STEL: 500 ppm 15 minutes. STEL: 2000 mg/m³ 15 minutes.</p> <p>NIOSH REL (United States, 1/2013). TWA: 85 ppm 10 hours. TWA: 350 mg/m³ 10 hours. CEIL: 440 ppm 15 minutes. CEIL: 1800 mg/m³ 15 minutes.</p> <p>OSHA PEL (United States, 6/2010). TWA: 500 ppm 8 hours. TWA: 2000 mg/m³ 8 hours.</p>

Canada

<u>Occupational exposure limits</u>		TWA (8 hours)			STEL (15 mins)			Ceiling			Notations
Ingredient	List name	ppm	mg/m ³	Other	ppm	mg/m ³	Other	ppm	mg/m ³	Other	
acetone	US ACGIH 3/2012	500	1188	-	750	1782	-	-	-	-	
	AB 4/2009	500	1200	-	750	1800	-	-	-	-	
	BC 4/2012	250	-	-	500	-	-	-	-	-	
	ON 1/2013	500	1188	-	750	1782	-	-	-	-	
	QC 12/2012	500	1190	-	1000	2380	-	-	-	-	
methyl acetate	US ACGIH 3/2012	200	606	-	250	757	-	-	-	-	
	AB 4/2009	200	606	-	250	757	-	-	-	-	
	BC 4/2012	200	-	-	250	-	-	-	-	-	
	ON 1/2013	200	606	-	250	757	-	-	-	-	
	QC 12/2012	200	606	-	250	757	-	-	-	-	
Carbon dioxide	US ACGIH 1/2011	5000	9000	-	30000	54000	-	-	-	-	
	AB 4/2009	5000	9000	-	30000	54000	-	-	-	-	
	BC 9/2011	5000	-	-	15000	-	-	-	-	-	
	ON 7/2010	5000	9000	-	30000	54000	-	-	-	-	
	QC 9/2011	5000	9000	-	30000	54000	-	-	-	-	
xylene	US ACGIH 3/2012	100	434	-	150	651	-	-	-	-	
	AB 4/2009	100	434	-	150	651	-	-	-	-	

8. Exposure controls/personal protection

heptane	BC 4/2012	100	-	-	150	-	-	-	-	-	-
	ON 1/2013	100	434	-	150	651	-	-	-	-	-
	QC 12/2012	100	434	-	150	651	-	-	-	-	-
	US ACGIH 3/2012	400	1640	-	500	2050	-	-	-	-	-
	AB 4/2009	400	1640	-	500	2050	-	-	-	-	-
	BC 4/2012	400	-	-	500	-	-	-	-	-	-
	ON 1/2013	400	1640	-	500	2050	-	-	-	-	-
	QC 12/2012	400	1640	-	500	2050	-	-	-	-	-

Mexico

Occupational exposure limits

Ingredient	Exposure limits
acetone	NOM-010-STPS (Mexico, 9/2000). LMPE-PPT: 1000 ppm 8 hours. LMPE-PPT: 2400 mg/m ³ 8 hours. LMPE-CT: 3000 mg/m ³ 15 minutes. LMPE-CT: 1260 ppm 15 minutes.
methyl acetate	NOM-010-STPS (Mexico, 9/2000). LMPE-PPT: 200 ppm 8 hours. LMPE-PPT: 610 mg/m ³ 8 hours. LMPE-CT: 760 mg/m ³ 15 minutes. LMPE-CT: 250 ppm 15 minutes.
Carbon dioxide	NOM-010-STPS (Mexico, 9/2000). LMPE-PPT: 5000 ppm 8 hours. LMPE-PPT: 9000 mg/m ³ 8 hours. LMPE-CT: 27000 mg/m ³ 15 minutes. LMPE-CT: 15000 ppm 15 minutes.
xylene	NOM-010-STPS (Mexico, 9/2000). LMPE-PPT: 100 ppm 8 hours. LMPE-PPT: 435 mg/m ³ 8 hours. LMPE-CT: 655 mg/m ³ 15 minutes. LMPE-CT: 150 ppm 15 minutes.
heptane	NOM-010-STPS (Mexico, 9/2000). Absorbed through skin. LMPE-PPT: 400 ppm 8 hours. LMPE-PPT: 1600 mg/m ³ 8 hours. LMPE-CT: 2000 mg/m ³ 15 minutes. LMPE-CT: 500 ppm 15 minutes.

Consult local authorities for acceptable exposure limits.

Recommended monitoring procedures : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to appropriate monitoring standards. Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

Engineering measures : 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.

8. Exposure controls/personal protection

- 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.
- Personal protection**
- Respiratory** : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. 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.
- Hands** : 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.
- Eyes** : 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 or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.
- Skin** : 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.
- 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.

9. Physical and chemical properties

- Physical state** : Liquid [Aerosol.]
- Flash point** : Closed cup: -20°C (-4°F)
- Auto-ignition temperature** : 455 to 527°C (851 to 980.6°F)
- Flammable limits** : Lower: 1%
Upper: 16%
- Color** : Colorless
- Odor** : Lemon-like.
- pH** : Not applicable.
- Boiling/condensation point** : 57 to 143°C (134.6 to 289.4°F)
- Melting/freezing point** : Not available.
- Density** : 0.84 to 0.88 g/cm³
- Vapor pressure** : Not available.
- Vapor density** : >1 [Air = 1]
- Volatility** : 10% (w/w)
- Evaporation rate** : >1 (butyl acetate = 1)

9. Physical and chemical properties

Viscosity	: Not available.
Dispersibility properties	: Not available.
Solubility	: Insoluble in the following materials: cold water.
<u>Aerosol product</u>	
Type of aerosol	: Spray
Heat of combustion	: 24.85 kJ/g

10. Stability and reactivity

Chemical stability	: The product is stable.
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.
Possibility of hazardous reactions	: Under normal conditions of storage and use, hazardous reactions will not occur.

11. Toxicological information

United States

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
acetone	LD50 Oral	Rat	5800 mg/kg	-
methyl acetate	LD50 Dermal	Rabbit	>5 g/kg	-
	LD50 Oral	Rat	>5 g/kg	-
xylene	LC50 Inhalation Gas.	Rat	5000 ppm	4 hours
	LD50 Oral	Rat	4300 mg/kg	-
heptane	LC50 Inhalation Gas.	Rat	48000 ppm	4 hours
	LC50 Inhalation Vapor	Rat	103 g/m ³	4 hours

Conclusion/Summary : No known significant effects or critical hazards.

Chronic toxicity

Conclusion/Summary : Contains material that may cause target organ damage, based on animal data.

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
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	-
	Skin - Mild irritant	Rabbit	-	395 milligrams	-
methyl acetate	Eyes - Moderate irritant	Rabbit	-	24 hours 100 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams	-

11. Toxicological information

xylene	Skin - Moderate irritant	Rabbit	-	24 hours 20 milligrams	-
	Eyes - Mild irritant	Rabbit	-	87 milligrams	-
	Eyes - Severe irritant	Rabbit	-	24 hours 5 milligrams	-
	Skin - Mild irritant	Rat	-	8 hours 60 microliters	-
	Skin - Moderate irritant	Rabbit	-	24 hours 500 milligrams	-
	Skin - Moderate irritant	Rabbit	-	100 Percent	-

Conclusion/Summary

- Skin** : Moderately irritating to the skin. Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis.
- Eyes** : Causes eye irritation. Risk of serious damage to eyes.
- Respiratory** : Repeated or prolonged inhalation of vapors may lead to chronic respiratory irritation. Vapors may cause drowsiness and dizziness.

Sensitizer

Conclusion/Summary

- Skin** : No specific information is available in our database regarding the skin sensitizing properties of this product. Sensitization not suspected for humans.
- Respiratory** : Sensitization not suspected for humans.

Carcinogenicity

- Conclusion/Summary** : There are no data available on the mixture itself. Carcinogenicity not suspected for humans.

Classification

Product/ingredient name	ACGIH	IARC	EPA	NIOSH	NTP	OSHA
acetone	A4	-	-	-	-	-
xylene	A4	3	-	-	-	-

Mutagenicity

- Conclusion/Summary** : There are no data available on the mixture itself. Mutagenicity not suspected for humans.

Teratogenicity

- Conclusion/Summary** : There are no data available on the mixture itself. Teratogenicity not suspected for humans.

Reproductive toxicity

- Conclusion/Summary** : There are no data available on the mixture itself. Not considered to be dangerous to humans, according to our database.

Canada

Acute toxicity

11. Toxicological information

Product/ingredient name	Result	Species	Dose	Exposure
acetone	LD50 Oral	Rat	5800 mg/kg	-
methyl acetate	LD50 Dermal	Rabbit	>5 g/kg	-
	LD50 Oral	Rat	>5 g/kg	-
xylene	LC50 Inhalation Gas.	Rat	5000 ppm	4 hours
	LD50 Oral	Rat	4300 mg/kg	-
heptane	LC50 Inhalation Gas.	Rat	48000 ppm	4 hours
	LC50 Inhalation Vapor	Rat	103 g/m ³	4 hours

Conclusion/Summary : No known significant effects or critical hazards.

Chronic toxicity

Conclusion/Summary : Contains material that may cause target organ damage, based on animal data.

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
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	-
methyl acetate	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Skin - Mild irritant	Rabbit	-	395 milligrams	-
	Eyes - Moderate irritant	Rabbit	-	24 hours 100 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
xylene	Skin - Moderate irritant	Rabbit	-	24 hours 20 milligrams	-
	Eyes - Mild irritant	Rabbit	-	87 milligrams	-
	Eyes - Severe irritant	Rabbit	-	24 hours 5 milligrams	-
	Skin - Mild irritant	Rat	-	8 hours 60 microliters	-
	Skin - Moderate irritant	Rabbit	-	24 hours 500 milligrams	-
	Skin - Moderate irritant	Rabbit	-	100 Percent	-

Conclusion/Summary

Skin : Moderately irritating to the skin. Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis.

Eyes : Causes eye irritation. Risk of serious damage to eyes.

Respiratory : Repeated or prolonged inhalation of vapors may lead to chronic respiratory irritation. Vapors may cause drowsiness and dizziness.

Sensitizer

Conclusion/Summary

Skin : No specific information is available in our database regarding the skin sensitizing properties of this product. Sensitization not suspected for humans.

Respiratory : Sensitization not suspected for humans.

11. Toxicological information

Carcinogenicity

Conclusion/Summary : There are no data available on the mixture itself. Carcinogenicity not suspected for humans.

Classification

Product/ingredient name	ACGIH	IARC	EPA	NIOSH	NTP	OSHA
acetone	A4	-	-	-	-	-
xylene	A4	3	-	-	-	-

Mutagenicity

Conclusion/Summary : There are no data available on the mixture itself. Mutagenicity not suspected for humans.

Teratogenicity

Conclusion/Summary : There are no data available on the mixture itself. Teratogenicity not suspected for humans.

Reproductive toxicity

Conclusion/Summary : There are no data available on the mixture itself. Not considered to be dangerous to humans, according to our database.

Mexico

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
acetone	LD50 Oral	Rat	5800 mg/kg	-
methyl acetate	LD50 Dermal	Rabbit	>5 g/kg	-
	LD50 Oral	Rat	>5 g/kg	-
xylene	LC50 Inhalation Gas.	Rat	5000 ppm	4 hours
	LD50 Oral	Rat	4300 mg/kg	-
heptane	LC50 Inhalation Gas.	Rat	48000 ppm	4 hours
	LC50 Inhalation Vapor	Rat	103 g/m ³	4 hours

Conclusion/Summary : No known significant effects or critical hazards.

Chronic toxicity

Conclusion/Summary : Contains material that may cause target organ damage, based on animal data.

Irritation/Corrosion

Product/ingredient name	Result	Score	Score	Exposure	Observation
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	-
methyl acetate	Skin - Mild irritant	Rabbit	-	395 milligrams	-
	Eyes - Moderate irritant	Rabbit	-	24 hours 100 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Skin - Moderate irritant	Rabbit	-	24 hours 20 milligrams	-

11. Toxicological information

xylene	Eyes - Mild irritant	Rabbit	-	87 milligrams	-
	Eyes - Severe irritant	Rabbit	-	24 hours 5 milligrams	-
	Skin - Mild irritant	Rat	-	8 hours 60 microliters	-
	Skin - Moderate irritant	Rabbit	-	24 hours 500 milligrams	-
	Skin - Moderate irritant	Rabbit	-	100 Percent	-

Conclusion/Summary

- Skin** : Moderately irritating to the skin. Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis.
- Eyes** : Causes eye irritation. Risk of serious damage to eyes.
- Respiratory** : Repeated or prolonged inhalation of vapors may lead to chronic respiratory irritation. Vapors may cause drowsiness and dizziness.

Sensitizer

Conclusion/Summary

- Skin** : No specific information is available in our database regarding the skin sensitizing properties of this product. Sensitization not suspected for humans.
- Respiratory** : Sensitization not suspected for humans.

Carcinogenicity

Conclusion/Summary

- : There are no data available on the mixture itself. Carcinogenicity not suspected for humans.

Classification

Product/ingredient name	ACGIH	IARC	EPA	NIOSH	NTP	OSHA
acetone	A4	-	-	-	-	-
xylene	A4	3	-	-	-	-

Mutagenicity

Conclusion/Summary

- : There are no data available on the mixture itself. Mutagenicity not suspected for humans.

Teratogenicity

Conclusion/Summary

- : There are no data available on the mixture itself. Teratogenicity not suspected for humans.

Reproductive toxicity

Conclusion/Summary

- : There are no data available on the mixture itself. Not considered to be dangerous to humans, according to our database.

12. Ecological information

Ecotoxicity

- : No known significant effects or critical hazards.

United States

Aquatic ecotoxicity

12. Ecological information

Product/ingredient name	Result	Species	Exposure
acetone	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 100 mg/l Fresh water	Fish - Pimephales promelas - Juvenile (Fledgling, Hatchling, Weanling)	96 hours
	Chronic NOEC 4.95 mg/l Marine water	Algae - Ulva pertusa	96 hours
	Chronic NOEC 0.016 ml/L Fresh water	Crustaceans - Daphniidae	21 days
methyl acetate	Acute LC50 320000 µg/l Fresh water	Daphnia - Daphnia magna - Neonate	21 days
	Acute LC50 8500 µg/l Marine water	Fish - Pimephales promelas	96 hours
xylene	Acute LC50 320000 µg/l Fresh water	Crustaceans - Palaemonetes pugio	48 hours
	Acute LC50 8500 µg/l Marine water	Fish - Pimephales promelas	96 hours
heptane	Acute LC50 13400 µg/l Fresh water	Fish - Oreochromis mossambicus	96 hours
	Acute LC50 375000 µg/l Fresh water	Fish - Oreochromis mossambicus	96 hours

Conclusion/Summary : There are no data available on the mixture itself.

Persistence/degradability

Conclusion/Summary : This product has not been tested for biodegradation. Expected to be biodegradable. This product is not expected to bioaccumulate through food chains in the environment.

Canada

Aquatic ecotoxicity

Product/ingredient name	Result	Species	Exposure
acetone	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 100 mg/l Fresh water	Fish - Pimephales promelas - Juvenile (Fledgling, Hatchling, Weanling)	96 hours
	Chronic NOEC 4.95 mg/l Marine water	Algae - Ulva pertusa	96 hours
	Chronic NOEC 0.016 ml/L Fresh water	Crustaceans - Daphniidae	21 days
methyl acetate	Chronic NOEC 0.1 ml/L Fresh water	Daphnia - Daphnia magna - Neonate	21 days
	Acute LC50 320000 µg/l Fresh water	Fish - Pimephales promelas	96 hours
xylene	Acute LC50 320000 µg/l Fresh water	Crustaceans - Palaemonetes pugio	48 hours
	Acute LC50 8500 µg/l Marine water	Fish - Pimephales promelas	96 hours
heptane	Acute LC50 13400 µg/l Fresh water	Fish - Pimephales promelas	96 hours
	Acute LC50 375000 µg/l Fresh water	Fish - Oreochromis mossambicus	96 hours

Conclusion/Summary : There are no data available on the mixture itself.

Persistence/degradability

Conclusion/Summary : This product has not been tested for biodegradation. Expected to be biodegradable. This product is not expected to bioaccumulate through food chains in the environment.

Mexico

Aquatic ecotoxicity

12. Ecological information

Product/ingredient name	Result	Species	Exposure
acetone	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 100 mg/l Fresh water	Fish - Pimephales promelas - Juvenile (Fledgling, Hatchling, Weanling)	96 hours
	Chronic NOEC 4.95 mg/l Marine water	Algae - Ulva pertusa	96 hours
	Chronic NOEC 0.016 ml/L Fresh water	Crustaceans - Daphniidae	21 days
methyl acetate	Chronic NOEC 0.1 ml/L Fresh water	Daphnia - Daphnia magna - Neonate	21 days
	Acute LC50 320000 µg/l Fresh water	Fish - Pimephales promelas	96 hours
xylene	Acute LC50 8500 µg/l Marine water	Crustaceans - Palaemonetes pugio	48 hours
	Acute LC50 13400 µg/l Fresh water	Fish - Pimephales promelas	96 hours
heptane	Acute LC50 375000 µg/l Fresh water	Fish - Oreochromis mossambicus	96 hours

Conclusion/Summary : There are no data available on the mixture itself.

Persistence/degradability

Conclusion/Summary : This product has not been tested for biodegradation. Expected to be biodegradable. This product is not expected to bioaccumulate through food chains in the environment.

13. Disposal considerations

Waste disposal : 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.





Disposal should be in accordance with applicable regional, national and local laws and regulations.

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees.



14. Transport information

Regulatory information	UN number	Proper shipping name	Classes	PG*	Label	Additional information

14. Transport information

DOT Classification	UN1950	Aerosols RQ (xylene, acetone)	2.1	-		<p>Reportable quantity 2155.2 lbs / 978.45 kg [300.56 gal / 1137.7 L] Package sizes shipped in quantities less than the product reportable quantity are not subject to the RQ (reportable quantity) transportation requirements.</p> <p>Packaging instruction Passenger aircraft Quantity limitation: 75 kg</p> <p>Cargo aircraft Quantity limitation: 150 kg</p> <p>Special provisions 153, N82</p>
TDG Classification	UN1950	AEROSOLS	2.1	-		<p>Explosive Limit and Limited Quantity Index 1</p> <p>Passenger Carrying Road or Rail Index 75</p>
Mexico Classification	UN1950	AEROSOLS	2.1	-		<p>Special provisions 63, 190, 277</p>
ADR/RID Class	UN1950	AEROSOLS	2	-		<p>Limited quantity 1 L</p> <p>Special provisions 190 327 625 344</p> <p>Tunnel code (D)</p>

14. Transport information

IMDG Class	UN1950	AEROSOLS	2.1	-		Emergency schedules (EmS) F-D, S-U Special provisions 63, 190, 277, 327, 959, 344
IATA-DGR Class	UN1950	Aerosols, flammable	2.1	-		Passenger and Cargo Aircraft Quantity limitation: 75 kg Packaging instructions: 203 Cargo Aircraft Only Quantity limitation: 150 kg Packaging instructions: 203 Limited Quantities - Passenger Aircraft Quantity limitation: 30 kg Packaging instructions: Y203 Special provisions A145, A167

PG* : Packing group

15. Regulatory information

United States

- HCS Classification** : Flammable aerosol
Irritating material
Target organ effects
- U.S. Federal regulations** : **TSCA 8(a) PAIR**: methyl acetate; heptane
TSCA 8(a) CDR Exempt/Partial exemption: Not determined
TSCA 12(b) one-time export: heptane
United States inventory (TSCA 8b): All components are listed or exempted.
SARA 302/304: No products were found.
SARA 311/312 Hazards identification: Fire hazard, Immediate (acute) health hazard, Delayed (chronic) health hazard
Clean Water Act (CWA) 311: xylene
- Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs)** : Listed
- Clean Air Act Section 602 Class I Substances** : Not listed

15. Regulatory information

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 313

	Product name	CAS number	Concentration
Form R - Reporting requirements	: xylene	1330-20-7	3-7
Supplier notification	: xylene	1330-20-7	3-7

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

State regulations

- Connecticut Carcinogen Reporting** : None of the components are listed.
- Connecticut Hazardous Material Survey** : None of the components are listed.
- Florida substances** : None of the components are listed.
- Illinois Chemical Safety Act** : None of the components are listed.
- Illinois Toxic Substances Disclosure to Employee Act** : None of the components are listed.
- Louisiana Reporting** : None of the components are listed.
- Louisiana Spill** : None of the components are listed.
- Massachusetts Spill** : None of the components are listed.
- Massachusetts Substances** : The following components are listed: ACETONE; METHYL ACETATE; CARBON DIOXIDE; XYLENE; HEPTANE (N-HEPTANE)
- Michigan Critical Material** : None of the components are listed.
- Minnesota Hazardous Substances** : None of the components are listed.
- New Jersey Spill** : None of the components are listed.
- New Jersey Toxic Catastrophe Prevention Act** : None of the components are listed.
- New Jersey Hazardous Substances** : The following components are listed: ACETONE; 2-PROPANONE; METHYL ACETATE; ACETIC ACID, METHYL ESTER; CARBON DIOXIDE; CARBONIC ACID GAS; XYLENES; BENZENE, DIMETHYL-; n-HEPTANE; HEPTANE
- New York Acutely Hazardous Substances** : The following components are listed: Acetone; 2-Propanone; Xylene (mixed)
- New York Toxic Chemical Release Reporting** : None of the components are listed.
- Pennsylvania RTK Hazardous Substances** : The following components are listed: 2-PROPANONE; ACETIC ACID, METHYL ESTER; CARBON DIOXIDE; BENZENE, DIMETHYL-; HEPTANE
- Rhode Island Hazardous Substances** : None of the components are listed.

California Prop. 65

None of the components are listed.

15. Regulatory information

United States inventory (TSCA 8b) : All components are listed or exempted.

Canada

WHMIS (Canada) : Class B-2: Flammable liquid
Class B-5: Flammable aerosol.
Class D-2A: Material causing other toxic effects (Very toxic).
Class D-2B: Material causing other toxic effects (Toxic).

Canadian lists

Canadian NPRI : The following components are listed: Volatile organic compounds; Xylene (all isomers); Heptane (all isomers)

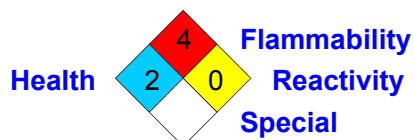
CEPA Toxic substances : The following components are listed: Volatile organic compounds; Carbon dioxide

Canada inventory; DSL/ NDSL : All components are listed or exempted.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

Mexico

Classification :



International regulations

International lists :

- Australia inventory (AICS)**: All components are listed or exempted.
- China inventory (IECSC)**: All components are listed or exempted.
- Japan inventory**: All components are listed or exempted.
- Korea inventory**: All components are listed or exempted.
- Malaysia Inventory (EHS Register)**: Not determined.
- New Zealand Inventory of Chemicals (NZIoC)**: All components are listed or exempted.
- Philippines inventory (PICCS)**: All components are listed or exempted.
- Taiwan inventory (CSNN)**: Not determined.
- Europe inventory** : All components are listed or exempted.

Chemical Weapons Convention List Schedule I Chemicals : Not listed

Chemical Weapons Convention List Schedule II Chemicals : Not listed

Chemical Weapons Convention List Schedule III Chemicals : Not listed

16. Other information

Label requirements : EXTREMELY FLAMMABLE AEROSOL. CAUSES EYE IRRITATION. MAY CAUSE SKIN IRRITATION.

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

Health	*	2
Flammability		4
Physical hazards		0
		B

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 are not required on MSDSs 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 mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material.

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



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Date of issue : 9/26/2013.

Date of previous issue : 9/26/2013.

Version : 1.01

Prepared by : Regulatory Department, Chemtool Inc.

▣ Indicates information that has changed from previously issued version.

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