

Safety Data Sheet

Firestone Building Products Company

Section 1: Identification of the Substance/Mixture and of the Company/Undertaking

1.1 Product identifier

Product Name • **Spray Adhesive/Primer 7877**

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

Relevant identified use(s) • Construction

1.3 Details of the supplier of the safety data sheet

Manufacturer • Firestone Building Products Company
200 4th Avenue S
Nashville, TN 37201-2208
United States

genflexmsds@bfdp.com

Telephone (General) • 800-428-4442

1.4 Emergency telephone number

Manufacturer • (800) 424-9300 - CHEMTREC

Manufacturer • (703) 527-3887 - CHEMTREC - International

Section 2: Hazards Identification

EU/EEC

According to: Regulation (EC) No 1272/2008 (CLP)/REACH 1907/2006 [amended by 2015/830]

2.1 Classification of the substance or mixture

CLP

- Aerosols 1 - H222,H229
- Aspiration 1 - H304
- Skin Irritation 2 - H315
- Eye Irritation 2 - H319
- Specific Target Organ Toxicity Single Exposure 3: Narcotic Effects - H336
- Reproductive Toxicity 2 - H361fd
- Specific Target Organ Toxicity Repeated Exposure 2 - H373
- Hazardous to the aquatic environment Chronic 2 - H411

2.2 Label Elements

CLP

DANGER

Hazard statements • H222 - Extremely flammable aerosol
H229 - Pressurized container: May burst if heated
H304 - May be fatal if swallowed and enters airways
H315 - Causes skin irritation

H319 - Causes serious eye irritation
 H336 - May cause drowsiness or dizziness
 H361fd - Suspected of damaging fertility. Suspected of damaging the unborn child.
 H373 - May cause damage to organs through prolonged or repeated exposure.
 H411 - Toxic to aquatic life with long lasting effects

Precautionary statements

- Prevention •** P201 - Obtain special instructions before use.
 P202 - Do not handle until all safety precautions have been read and understood.
 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 - Do not pierce or burn, even after use.
 P260 - Do not breathe mist, vapours and/or spray.
 P264 - Wash thoroughly after handling.
 P271 - Use only outdoors or in a well-ventilated area.
 P273 - Avoid release to the environment.
 P280 - Wear protective gloves/protective clothing/eye protection/face protection.

- Response •** P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing.
 P312 - Call a POISON CENTER/doctor if you feel unwell.
 P302+P352 - IF ON SKIN: Wash with plenty of water.
 P362+P364 - Take off contaminated clothing and wash it before reuse.
 P321 - Specific treatment, see supplemental first aid information.
 P332+P313 - If skin irritation occurs: Get medical advice/attention.
 P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P337+P313 - If eye irritation persists: Get medical advice/attention.
 P301+P310 - IF SWALLOWED: Immediately call a POISON CENTER/doctor.
 P331 - Do NOT induce vomiting.
 P308+P313 - IF exposed or concerned: Get medical advice/attention.
 P314 - Get medical advice/attention if you feel unwell.
 P391 - Collect spillage.

- Storage/Disposal •** P403+P233 - Store in a well-ventilated place. Keep container tightly closed.
 P405 - Store locked up.
 P410+P412 - Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F.
 P501 - Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

2.3 Other Hazards

- CLP**
- According to Regulation (EC) No. 1272/2008 (CLP) this material is considered hazardous.

United States (US)

According to: OSHA 29 CFR 1910.1200 HCS

2.1 Classification of the substance or mixture

- OSHA HCS 2012**
- Flammable Aerosols 1
 Aspiration 1
 Skin Irritation 2
 Eye Irritation 2
 Specific Target Organ Toxicity Single Exposure 3: Narcotic Effects
 Germ Cell Mutagenicity 1B
 Reproductive Toxicity 2
 Specific Target Organ Toxicity Repeated Exposure 1

2.2 Label elements

OSHA HCS 2012

DANGER



- Hazard statements** • Extremely flammable aerosol
 May be fatal if swallowed and enters airways
 Causes skin irritation
 Causes serious eye irritation
 May cause drowsiness or dizziness
 May cause genetic defects.
 Suspected of damaging fertility or the unborn child.
 Causes 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.
 Keep away from heat, sparks, open flames and/or 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.
 Do not breathe mist/vapours/spray.
 Wash thoroughly after handling.
 Do not eat, drink or smoke when using this product.
 Use only outdoors or in a well-ventilated area.
 Wear protective gloves/protective clothing/eye protection/face protection.

- Response** • IF INHALED: Remove person to fresh air and keep comfortable for breathing.
 Call a POISON CENTER/doctor if you feel unwell.
 If on skin: Wash with plenty of water.
 Take off contaminated clothing and wash before reuse.
 Specific treatment, see supplemental first aid information.
 If skin irritation occurs: Get medical advice/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 advice/attention.
 IF SWALLOWED: Immediately call a POISON CENTER/doctor.
 Do NOT induce vomiting.
 IF exposed or concerned: Get medical advice/attention.
 Get medical advice/attention if you feel unwell.

- Storage/Disposal** • Store in a well-ventilated place. Keep container tightly closed.
 Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F.
 Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

2.3 Other hazards

OSHA HCS 2012

- Under United States Regulations (29 CFR 1910.1200 - Hazard Communication Standard), this product is considered hazardous.

Canada

According to: WHMIS 2015

2.1 Classification of the substance or mixture

WHMIS 2015

- Flammable Aerosols 1
 Aspiration 1
 Skin Irritation 2
 Eye Irritation 2
 Specific Target Organ Toxicity Single Exposure 3: Narcotic Effects
 Germ Cell Mutagenicity 1B
 Reproductive Toxicity 2
 Specific Target Organ Toxicity Repeated Exposure 1

2.2 Label elements

WHMIS 2015

DANGER

- Hazard statements**
- Extremely flammable aerosol
 - May be fatal if swallowed and enters airways
 - Causes skin irritation
 - Causes serious eye irritation
 - May cause drowsiness or dizziness
 - May cause genetic defects.
 - Suspected of damaging fertility or the unborn child.
 - Causes 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.
 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources.
 - No smoking.
 - Do not spray on an open flame or other ignition source.
 - Do not breathe mist, vapours and/or spray.
 - Wash thoroughly after handling.
 - Do not eat, drink or smoke when using this product.
 - Use only outdoors or in a well-ventilated area.
 - Wear protective gloves/protective clothing/eye protection/face protection.
- Response**
- IF INHALED: Remove person to fresh air and keep comfortable for breathing.
 - Call a POISON CENTER/doctor if you feel unwell.
 - IF ON SKIN: Wash with plenty of water.
 - Take off contaminated clothing and wash it before reuse.
 - Specific treatment, see supplemental first aid information.
 - If skin irritation occurs: Get medical advice/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 advice/attention.
 - IF SWALLOWED: Immediately call a POISON CENTER/doctor.
 - Do NOT induce vomiting.
 - IF exposed or concerned: Get medical advice/attention.
 - Get medical advice/attention if you feel unwell.
- Storage/Disposal**
- Store in a well-ventilated place. Keep container tightly closed.
 - Store locked up.
 - Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F.
 - Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

2.3 Other hazards**WHMIS 2015**

- In Canada, the product mentioned above is considered hazardous under the Workplace Hazardous Materials Information System (WHMIS).

Section 3 - Composition/Information on Ingredients**3.1 Substances**

- Material does not meet the criteria of a substance.

3.2 Mixtures

Composition					
Chemical Name	Identifiers	%	LD50/LC50	Classifications According to Regulation/Directive	Comments
Acetone	CAS: 67-64-1 EC Number: 200-662-2 EU Index: 606-001-00-8	20% TO 40%	Ingestion/Oral-Rat LD50 • 5800 mg/kg Inhalation-Rat LC50 • 50100 mg/m ³ 8 Hour (s)	EU CLP: Annex VI, Table 3.1: Flam. Liq. 2, H225; Eye Irrit. 2, H319; STOT SE 3: Narc., H336; EUH066 OSHA HCS 2012: Flam. Liq. 2; Eye Irrit. 2; Repr. 2 (Inhl); STOT SE 3: Narc. WHMIS 2015: Flam. Liq. 2; Eye Irrit. 2; Repr. 2 (Inhl); STOT SE 3: Narc.	NDA
Propane	CAS: 74-98-6 EC Number: 200-827-9 EU Index: 601-003-00-5	10% TO 20%	Inhalation-Rat LC50 • >20 mg/L 4 Hour(s)	EU CLP: Annex VI, Table 3.1: Flam. Gas 1, H220; Press. Gas , H280 OSHA HCS 2012: Flam. Gas 1; Press. Gas; Simp. Asphyx. WHMIS 2015: Flam. Gas 1; Press. Gas; Simp. Asphyx. 1	NDA
Other components below reportable levels	NDA	10% TO 20%	NDA	EU CLP: Not Classified OSHA HCS 2012: Not Classified WHMIS 2015: Not Classified	NDA
Methyl ether	CAS: 115-10-6 EC Number: 204-065-8 EU Index: 603-019-00-8	10% TO 20%	Inhalation-Rat LC50 • 309 g/m ³ 4 Hour(s)	EU CLP: Annex VI, Table 3.1: Flam. Gas 1, H220; Press. Gas - Liq., H280 OSHA HCS 2012: Flam. Gas 1; Press. Gas - Liq.; STOT SE 3: Narc. WHMIS 2015: Flam. Gas 1; Press. Gas - Liq.; STOT SE 3: Narc.	NDA
Hexane	CAS: 110-54-3 EC Number: 203-777-6 EU Index: 601-037-00-0	10% TO 20%	Ingestion/Oral-Rat LD50 • 15840 mg/kg Inhalation-Rat LC50 • 48000 ppm 4 Hour (s)	EU CLP: Annex VI, Table 3.1: Flam. Liq. 2, H225; Skin Irrit. 2, H315; Repr. 2, H361f; STOT SE 3: Narc., H336; STOT RE 2, H373; Asp. Tox. 1, H304; Aquatic Chronic 2, H411 OSHA HCS 2012: Flam. Liq. 2; Eye Irrit. 2; Repr. 2 (Inhl); STOT SE 3: Narc.; STOT RE 1 (CNS/Inhl, PNS/Inhl); Asp. Tox. 1 WHMIS 2015: Flam. Liq. 2; Eye Irrit. 2; Repr. 2 (Inhl); STOT SE 3: Narc.; STOT RE 1 (CNS/Inhl, PNS/Inhl); Asp. Tox. 1	NDA
Toluene	CAS: 108-88-3 EC Number: 203-625-9 EU Index: 601-021-00-3	2.5% TO 10%	Ingestion/Oral-Rat LD50 • 636 mg/kg Skin-Rabbit LD50 • 14100 µL/kg Inhalation-Rat LC50 • 49 g/m ³ 4 Hour(s)	EU CLP: Annex VI, Table 3.1: Flam. Liq. 2, H225; Skin Irrit. 2, H315; Repr. 2, H361d; STOT SE 3: Narc., H336; STOT RE 2, H373; Asp. Tox. 1, H304 OSHA HCS 2012: Flam. Liq. 2; Acute Tox. 4 (Orl); Skin Irrit. 2; Eye Irrit. 2; Muta. 1B; Repr. 2; STOT SE 3: Narc.; STOT RE 1 (CNS/Inhl); Asp. Tox. 1 WHMIS 2015: Flam. Liq. 2; Acute Tox. 4 (Orl); Skin Irrit. 2; Eye Irrit. 2; Muta. 1B; Repr. 2; STOT SE 3: Narc.; STOT RE 1 (CNS/Inhl); Asp. Tox. 1	NDA
Modified rosin	CAS: 65997-05-9	2.5% TO 10%	NDA	EU CLP: Not Classified OSHA HCS 2012: Not Classified WHMIS 2015: Not Classified	NDA
C12-C14 Isoalkanes	CAS: 68551-19-9 EINECS: 271-369-5	2.5% TO 10%	NDA	EU CLP: Not Classified OSHA HCS 2012: Not Classified WHMIS 2015: Not Classified	NDA
2-Methylpentane	CAS: 107-83-5 EC Number: 203-523-4 EU Index: 601-007-00-7	2.5% TO 10%	NDA	EU CLP: Annex VI, Table 3.1: Flam. Liq. 2, H225; Skin Irrit. 2, H315; STOT SE 3: Narc., H336; Asp. Tox. 1, H304; Aquatic Chronic 2, H411 OSHA HCS 2012: Flam. Liq. 2 WHMIS 2015: Flam. Liq. 2	NDA
	CAS: 110-82-7 EC		Ingestion/Oral-Rat	EU CLP: Annex VI, Table 3.1: Flam. Liq. 2, H225; Skin Irrit. 2, H315; STOT SE 3: Narc., H336 (Inhalation); Asp. Tox. 1, H304; Aquatic Acute 1,	

Cyclohexane	Number: 203-806-2 EU Index: 601-017-00-1	1% TO 2.5%	LD50 • 6240 mg/kg Skin-Rabbit LD50 • >2000 mg/kg	H400; Aquatic Chronic 1, H410 OSHA HCS 2012: Flam. Liq. 2; Eye Irrit. 2; STOT SE 3: Narc. (Inhl); Asp. Tox. 1 WHMIS 2015: Flam. Liq. 2; Eye Irrit. 2; STOT SE 3: Narc. (Inhl); Asp. Tox. 1	NDA
3-Methylpentane	CAS: 96-14-0 EC Number: 202-481-4 EU Index: 601-007-00-7	1% TO 2.5%	NDA	EU CLP: Annex VI, Table 3.1: Flam. Liq. 2, H225; Asp. Tox. 1, H304; Skin Irrit.2, H315; STOT SE 3: Resp. Irrit., H336; Aquatic Chronic 2, H411 OSHA HCS 2012: Flam. Liq. 2 WHMIS 2015: Flam. Liq. 2	NDA
2,3-Dimethylbutane	CAS: 79-29-8 EC Number: 201-193-6 EU Index: 601-007-00-7	1% TO 2.5%	NDA	EU CLP: Annex VI, Table 3.1: Flam. Liq. 2, H225; Skin Irrit. 2, H315; STOT SE 3: Narc., H336; Asp. Tox. 1, H304; Aquatic Chronic 2, H411 OSHA HCS 2012: Flam. Liq. 2 WHMIS 2015: Flam. Liq. 2	NDA

Section 4 - First Aid Measures

4.1 Description of first aid measures

Inhalation

- IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Administer oxygen if breathing is difficult. Give artificial respiration if victim is not breathing. If signs/symptoms continue, get medical attention.

Skin

- In case of skin contact, clean with rubbing alcohol, mineral oil, baby oil or makeup remover first to remove sticky resin, followed immediately by washing affected area with soap and water.

Eye

- In case of contact with substance, immediately flush eyes with running water for at least 20 minutes. If eye irritation persists: Get medical advice/attention.

Ingestion

- If swallowed, DO NOT induce vomiting. Give plenty of water to drink. Do not give anything by mouth to an unconscious person. Get medical attention.

4.2 Most important symptoms and effects, both acute and delayed

- Refer to Section 11 - Toxicological Information.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to Physician

- In case of ingesting large amount of the product- seek medical advice.

See Section 2 for Potential Health Effects.

Section 5 - Firefighting Measures

5.1 Extinguishing media

Suitable Extinguishing Media • Water, foam, dry chemical, carbon dioxide (CO₂).

Unsuitable Extinguishing Media • No data available

5.2 Special hazards arising from the substance or mixture

Unusual Fire and Explosion Hazards

- Extremely Flammable Aerosol.
Toxic fumes and vapors may be produced.
Containers may explode when heated.
This product is volatile and gives off invisible vapors.
Vapors may form explosive mixtures with air.
Most vapors are heavier than air. They will spread along ground and collect in low or confined areas (sewers, basements, tanks).

Hazardous Combustion Products

Vapors may travel to source of ignition and flash back.

- Carbon dioxide, carbon monoxide, various hydrocarbons, carboxylic acid, acrid smoke and irritating fumes.

5.3 Advice for firefighters

- Structural firefighters' protective clothing provides limited protection in fire situations ONLY; it is not effective in spill situations where direct contact with the substance is possible.
Wear chemical protective clothing that is specifically recommended by the manufacturer. It may provide little or no thermal protection.
Wear positive pressure self-contained breathing apparatus (SCBA).
Move fire exposed containers if safe to do so. Cool fire exposed containers with water spray. Dike contaminated fire-control water for later disposal.
Use fine water spray to reduce vapors; do not put water directly on point of material release from container.

Section 6 - Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal Precautions

- Do not touch or walk through spilled material. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Minimize breathing vapors. Minimize skin contact. Ventilate enclosed areas.

Emergency Procedures

- ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). As an immediate precautionary measure, isolate spill or leak area for at least 50 meters (150 feet) in all directions. Keep unauthorized personnel away. Stay upwind. Ventilate closed spaces before entering. Keep out of low areas. Continue to observe precautions for volatile, flammable vapors from absorbed material.

6.2 Environmental precautions

- Keep product clear of sewers, water, or extensive land areas. Assure conformity with applicable government regulations.

6.3 Methods and material for containment and cleaning up

Containment/Clean-up Measures

- Stop leak if you can do it without risk.
For small liquid spills: wipe up liquid with paper towels and clean any sticky residue with rubbing alcohol, mineral oil, baby oil or makeup remover. For larger liquid spills: Absorb or cover with dry earth, sand or other non-combustible material and transfer to containers for later disposal. Clean any sticky residue with rubbing alcohol, mineral oil, baby oil or makeup remover.
All equipment used when handling the product must be grounded.
Spent aerosol containers should be disposed of according to appropriate regulations.

6.4 Reference to other sections

- Refer to Section 8 - Exposure Controls/Personal Protection and Section 13 - Disposal Considerations.

Section 7 - Handling and Storage

7.1 Precautions for safe handling

Handling

- Keep away from heat and ignition sources – No Smoking. Keep containers closed. Vapors of this material are heavier than air and will collect in low or confined areas. Containers, even those that have been emptied, can contain explosive vapors. Do not cut, drill, grind, weld or perform similar operations near containers. Take precautionary measures against static charges. All equipment used when handling the product must be grounded. Use good safety and industrial hygiene practices. Do not breathe (dust, vapor or spray mist) Use only with adequate ventilation. Avoid contact with eyes, skin and clothing. Do not eat, drink or smoke when using this product. After handling wash hands thoroughly.

7.2 Conditions for safe storage, including any incompatibilities

Storage

- Do not store above 120° F. Do not store in direct sunlight. Protect containers from mechanical damage. Keep container/package tightly closed in a cool, well-ventilated place.

7.3 Specific end use(s)

- Refer to Section 1.2 - Relevant identified uses.

Section 8 - Exposure Controls/Personal Protection**8.1 Control parameters**

Exposure Limits/Guidelines						
	Result	ACGIH	Canada Alberta	Canada British Columbia	Canada Manitoba	Canada New Brunswick
Cyclohexane (110-82-7)	TWAs	100 ppm TWA	100 ppm TWA; 344 mg/m ³ TWA	100 ppm TWA	100 ppm TWA	300 ppm TWA; 1030 mg/m ³ TWA
3-Methylpentane (96-14-0)	STELs	1000 ppm STEL (listed under Hexane isomers other than n-hexane)	1000 ppm STEL; 3500 mg/m ³ STEL	Not established	1000 ppm STEL (listed under Hexane isomers other than n-Hexane)	Not established
	TWAs	500 ppm TWA (listed under Hexane isomers other than n-hexane)	500 ppm TWA (listed under Hexane (all isomers except n-Hexane)); 1760 mg/m ³ TWA (listed under Hexane (all isomers except n-Hexane))	Not established	500 ppm TWA (listed under Hexane isomers other than n-Hexane)	Not established
2,3-Dimethylbutane (79-29-8)	STELs	1000 ppm STEL (listed under Hexane isomers other than n-hexane)	1000 ppm STEL (listed under Hexane (all isomers except n-Hexane)); 3500 mg/m ³ STEL (listed under Hexane (all isomers except n-Hexane))	Not established	1000 ppm STEL (listed under Hexane isomers other than n-Hexane)	Not established
	TWAs	500 ppm TWA (listed under Hexane isomers other than n-hexane)	500 ppm TWA; 1760 mg/m ³ TWA	Not established	500 ppm TWA (listed under Hexane isomers other than n-Hexane)	Not established
Toluene (108-88-3)	TWAs	20 ppm TWA	50 ppm TWA; 188 mg/m ³ TWA	20 ppm TWA	20 ppm TWA	50 ppm TWA; 188 mg/m ³ TWA
2-Methylpentane (107-83-5)	STELs	1000 ppm STEL (listed under Hexane isomers other than n-hexane)	1000 ppm STEL (listed under Hexane (all isomers except n-Hexane)); 3500 mg/m ³ STEL (listed under Hexane (all isomers except n-Hexane))	Not established	1000 ppm STEL (listed under Hexane isomers other than n-Hexane)	Not established
	TWAs	500 ppm TWA (listed under Hexane isomers other than n-hexane)	500 ppm TWA (listed under Hexane (all isomers except n-Hexane)); 1760 mg/m ³ TWA (listed under Hexane (all isomers except n-Hexane))	Not established	500 ppm TWA (listed under Hexane isomers other than n-Hexane)	Not established

			isomers except n-Hexane))			
Hexane (110-54-3)	TWAs	50 ppm TWA	50 ppm TWA; 176 mg/m3 TWA	20 ppm TWA	50 ppm TWA	50 ppm TWA; 176 mg/m3 TWA
Propane (74-98-6)	TWAs	See Appendix F: Minimal Oxygen Content	1000 ppm TWA	1000 ppm TWA	See Appendix F: Minimal Oxygen Content	Not established
Methyl ether (115-10-6)	TWAs	Not established	Not established	1000 ppm TWA	Not established	Not established
Acetone (67-64-1)	STELs	500 ppm STEL	750 ppm STEL; 1800 mg/m3 STEL	500 ppm STEL	500 ppm STEL	750 ppm STEL; 1782 mg/m3 STEL
	TWAs	250 ppm TWA	500 ppm TWA; 1200 mg/m3 TWA	250 ppm TWA	250 ppm TWA	500 ppm TWA; 1188 mg/m3 TWA
Exposure Limits/Guidelines (Con't.)						
	Result	Canada Northwest Territories	Canada Nova Scotia	Canada Nunavut	Canada Ontario	Canada Quebec
Cyclohexane (110-82-7)	STELs	150 ppm STEL	Not established	150 ppm STEL	Not established	Not established
	TWAs	100 ppm TWA	100 ppm TWA	100 ppm TWA	100 ppm TWA	300 ppm TWAEV; 1030 mg/m3 TWAEV
3-Methylpentane (96-14-0)	STELs	Not established	1000 ppm STEL (listed under Hexane isomers other than n-Hexane)	Not established	1000 ppm STEL (listed under Hexane, isomers, other than n-Hexane)	Not established
	TWAs	Not established	500 ppm TWA (listed under Hexane isomers other than n-Hexane)	Not established	500 ppm TWA (listed under Hexane, isomers, other than n-Hexane)	Not established
2,3-Dimethylbutane (79-29-8)	STELs	Not established	1000 ppm STEL (listed under Hexane isomers other than n-Hexane)	Not established	1000 ppm STEL (listed under Hexane, isomers, other than n-Hexane)	Not established
	TWAs	Not established	500 ppm TWA (listed under Hexane isomers other than n-Hexane)	Not established	500 ppm TWA (listed under Hexane, isomers, other than n-Hexane)	Not established
Toluene (108-88-3)	STELs	60 ppm STEL	Not established	60 ppm STEL	Not established	Not established
	TWAs	50 ppm TWA	20 ppm TWA	50 ppm TWA	20 ppm TWA	50 ppm TWAEV; 188 mg/m3 TWAEV
2-Methylpentane (107-83-5)	STELs	Not established	1000 ppm STEL (listed under Hexane isomers other than n-Hexane)	Not established	1000 ppm STEL (listed under Hexane, isomers, other than n-Hexane)	Not established
	TWAs	Not established	500 ppm TWA (listed under Hexane isomers other than n-Hexane)	Not established	500 ppm TWA (listed under Hexane, isomers, other than n-Hexane)	Not established
Hexane (110-54-3)	STELs	62.5 ppm STEL	Not established	62.5 ppm STEL	Not established	Not established
	TWAs	50 ppm TWA	50 ppm TWA	50 ppm TWA	50 ppm TWA	50 ppm TWAEV; 176 mg/m3 TWAEV
	STELs	1250 ppm STEL	Not established	1250 ppm STEL	Not established	Not established

Propane (74-98-6)	TWAs	1000 ppm TWA	See Appendix F: Minimal Oxygen Content	1000 ppm TWA	See Appendix F: Minimal Oxygen Content	1000 ppm TWAEV; 1800 mg/m3 TWAEV
Acetone (67-64-1)	STELs	750 ppm STEL	500 ppm STEL	750 ppm STEL	750 ppm STEL	1000 ppm STEV; 2380 mg/m3 STEV
	TWAs	500 ppm TWA	250 ppm TWA	500 ppm TWA	500 ppm TWA	500 ppm TWAEV; 1190 mg/m3 TWAEV

Exposure Limits/Guidelines (Con't.)

	Result	Canada Saskatchewan	Canada Yukon	Europe	NIOSH	OSHA
Cyclohexane (110-82-7)	TWAs	100 ppm TWA	300 ppm TWA; 1050 mg/m3 TWA	200 ppm TWA; 700 mg/m3 TWA	300 ppm TWA; 1050 mg/m3 TWA	300 ppm TWA; 1050 mg/m3 TWA
	STELs	Not established	375 ppm STEL; 1300 mg/m3 STEL	Not established	Not established	Not established
Toluene (108-88-3)	STELs	Not established	150 ppm STEL; 560 mg/m3 STEL	100 ppm STEL; 384 mg/m3 STEL	150 ppm STEL; 560 mg/m3 STEL	Not established
	TWAs	50 ppm TWA	100 ppm TWA; 375 mg/m3 TWA	50 ppm TWA; 192 mg/m3 TWA	100 ppm TWA; 375 mg/m3 TWA	200 ppm TWA
	Ceilings	Not established	Not established	Not established	Not established	300 ppm Ceiling
Hexane (110-54-3)	TWAs	50 ppm TWA	100 ppm TWA; 360 mg/m3 TWA	20 ppm TWA; 72 mg/m3 TWA	50 ppm TWA; 180 mg/m3 TWA	500 ppm TWA; 1800 mg/m3 TWA
	STELs	Not established	125 ppm STEL; 450 mg/m3 STEL	Not established	Not established	Not established
Propane (74-98-6)	TWAs	1000 ppm TWA	Not established	Not established	1000 ppm TWA; 1800 mg/m3 TWA	1000 ppm TWA; 1800 mg/m3 TWA
Acetone (67-64-1)	TWAs	500 ppm TWA	1000 ppm TWA; 2400 mg/m3 TWA	Not established	250 ppm TWA; 590 mg/m3 TWA	1000 ppm TWA; 2400 mg/m3 TWA
	STELs	Not established	1250 ppm STEL; 3000 mg/m3 STEL	Not established	Not established	Not established

8.2 Exposure controls

Engineering Measures/Controls

- Adequate ventilation systems as needed to control concentrations of airborne contaminants below applicable threshold limit values. Use explosion-proof electrical/ventilating/lighting/equipment.

Personal Protective Equipment

Respiratory

- Use with ventilation sufficient to prevent exceeding recommended exposure limits or build up of explosive concentrations of vapor in air. If personal exposure concentrations cannot be maintained below the appropriate exposure limits using engineering controls, a NIOSH approved respirator may be appropriate based on employer-determined exposure levels.

Eye/Face

- Safety glasses with side shields should be worn at a minimum.

Skin/Body

- Wear polyvinyl alcohol, nitrile rubber, or neoprene glove when handling this product to avoid prolonged skin contact.

General Industrial Hygiene Considerations

- Wash exposed skin prior to eating, drinking or smoking and at the end of each shift. Wash contaminated clothing prior to reuse.

Environmental Exposure Controls

- Controls should be engineered to prevent release to the environment, including procedures to prevent spills, atmospheric release and release to waterways.

Key to abbreviations

ACGIH = American Conference of Governmental Industrial Hygiene
 NIOSH = National Institute of Occupational Safety and Health
 OSHA = Occupational Safety and Health Administration
 STEV = Short Term Exposure Value

STEL = Short Term Exposure Limits are based on 15-minute exposures
 TWAEV = Time-Weighted Average Exposure Value
 TWA = Time-Weighted Averages are based on 8h/day, 40h/week exposures

Section 9 - Physical and Chemical Properties

9.1 Information on Basic Physical and Chemical Properties

Material Description			
Physical Form	Aerosol	Appearance/Description	Aerosol
Color	Data lacking	Odor	Data lacking
Odor Threshold	Data lacking		
General Properties			
Boiling Point	99.77 °F(37.65 °C)	Melting Point/Freezing Point	Data lacking
Decomposition Temperature	Data lacking	pH	Data lacking
Specific Gravity/Relative Density	Data lacking	Water Solubility	Data lacking
Viscosity	Data lacking	Explosive Properties	vapours may form explosive mixtures with air.
Oxidizing Properties:	No oxidizing properties.		
Volatility			
Vapor Pressure	Data lacking	Vapor Density	Data lacking
Evaporation Rate	Data lacking		
Flammability			
Flash Point	-156 °F(-104.4444 °C)	UEL	10.1 %
LEL	2.3 %	Autoignition	Data lacking
Flammability (solid, gas)	Extremely flammable.		
Environmental			
Octanol/Water Partition coefficient	Data lacking		

9.2 Other Information

- No additional physical and chemical parameters noted.

Section 10: Stability and Reactivity

10.1 Reactivity

- No dangerous reaction known under conditions of normal use.

10.2 Chemical stability

- Stable under normal temperatures and pressures.

10.3 Possibility of hazardous reactions

- Hazardous polymerization will not occur.

10.4 Conditions to avoid

- Avoid flames, sparks, or other sources of ignition.

10.5 Incompatible materials

- Incompatible with acids, oxidizers, aldehydes, reducing agents.

10.6 Hazardous decomposition products

- Carbon monoxide and carbon dioxide, various hydrocarbons and carboxylic acids.

Section 11 - Toxicological Information

11.1 Information on toxicological effects

Components		
Acetone (20% TO 40%)	67-64-1	<p>Acute Toxicity: Ingestion/Oral-Rat LD50 • 5800 mg/kg; Inhalation-Rat LC50 • 50100 mg/m³ 8 Hour(s); Skin-Guinea Pig LD50 • >9400 µL/kg;</p> <p>Irritation: Eye-Rabbit • 20 mg 24 Hour(s) • Moderate irritation; Skin-Rabbit • 500 mg 24 Hour(s) • Mild irritation;</p> <p>Mutagen: Sex chromosome loss & nondisjunction • Inhalation-Mouse • 12 g/L; Cytogenetic analysis • Unreported Route-Hamster • Fibroblast (Somatic cell) • 40 g/L;</p> <p>Reproductive: Ingestion/Oral-Rat TDLo • 273 g/kg (13W male); <i>Reproductive Effects:Paternal Effects:Spermatogenesis</i>; Inhalation-Mouse TCLo • 6600 ppm (6-17D preg); <i>Reproductive Effects:Effects on Embryo or Fetus:Fetotoxicity (except death, e.g., stunted fetus)</i>; <i>Reproductive Effects:Effects on Fertility:Post-implantation mortality</i>; Inhalation-Rat TCLo • 30 mg/m³ (1-13D preg); <i>Reproductive Effects:Effects on Fertility:Pre-implantation mortality</i>; <i>Reproductive Effects:Effects on Fertility:Post-implantation mortality</i>; <i>Reproductive Effects:Effects on Embryo or Fetus:Fetal death</i>; Inhalation-Rat TCLo • 11000 ppm (6-19D preg); <i>Reproductive Effects:Specific Developmental Abnormalities:Other developmental abnormalities</i></p>
Propane (10% TO 20%)	74-98-6	<p>Acute Toxicity: Inhalation-Rat LC50 • >800000 ppm 15 Minute(s); <i>Behavioral:General anesthetic</i>; <i>Behavioral:Ataxia</i>; <i>Lungs, Thorax, or Respiration:Respiratory depression</i></p>
Hexane (10% TO 20%)	110-54-3	<p>Acute Toxicity: Ingestion/Oral-Rat LD50 • 15840 mg/kg; Ingestion/Oral-Rat LD50 • 29700 mg/kg; <i>Behavioral:Somnolence (general depressed activity)</i>; <i>Gastrointestinal:Changes in structure or function of salivary glands</i>; <i>Gastrointestinal:Hypermotility, diarrhea</i>; Ingestion/Oral-Rat TDLo • 20000 mg/kg; <i>Reproductive Effects:Paternal Effects:Spermatogenesis</i>; <i>Reproductive Effects:Paternal Effects:Prostate, seminal vesicle, Cowper's gland, accessory glands</i>; Inhalation-Rat LC50 • 48000 ppm 4 Hour(s);</p> <p>Irritation: Eye-Rabbit • 10 mg • Mild irritation;</p> <p>Multi-dose Toxicity: Inhalation-Human TCLo • 190 mg/m³ 6 Year(s)-Intermittent; <i>Peripheral Nerve and Sensation:Paresthesia</i>; Inhalation-Human TCLo • 190 mg/m³ 6 Year(s)-Intermittent; <i>Peripheral Nerve and Sensation:Paresthesia</i>;</p> <p>Reproductive: Inhalation-Rat TCLo • 5000 ppm (6-19D preg); <i>Reproductive Effects:Specific Developmental Abnormalities:Musculoskeletal system</i>; <i>Reproductive Effects:Specific Developmental Abnormalities:Urogenital system</i></p>
Methyl ether (10% TO 20%)	115-10-6	<p>Acute Toxicity: Inhalation-Human TCLo • 50000 ppm 60 Minute(s); <i>Behavioral:Somnolence (general depressed activity)</i>; Inhalation-Human TCLo • 50000 ppm 60 Minute(s); <i>Behavioral:Somnolence (general depressed activity)</i>;</p> <p>Multi-dose Toxicity: Inhalation-Rat TCLo • 25000 ppm 0.5 Year(s)-Intermittent; <i>Blood:Other hemolysis with or without anemia</i>; <i>Blood:Changes in erythrocyte (RBC) count</i>; <i>Related to Chronic Data:Death in the Other Multiple Dose data type field</i>; Inhalation-Rat TCLo • 25000 ppm 0.5 Year(s)-Intermittent; <i>Blood:Other hemolysis with or without anemia</i>; <i>Blood:Changes in erythrocyte (RBC) count</i>; <i>Related to Chronic Data:Death in the Other Multiple Dose data type field</i>;</p> <p>Reproductive: Inhalation-Rat TCLo • 20000 ppm (6-15D preg); <i>Reproductive Effects:Maternal Effects:Other effects</i>; <i>Reproductive Effects:Effects on Embryo or Fetus:Fetotoxicity (except death, e.g., stunted fetus)</i></p>
Toluene (2.5% TO 10%)	108-88-3	<p>Acute Toxicity: Ingestion/Oral-Rat LD50 • 636 mg/kg; Inhalation-Rat LC50 • 49 g/m³ 4 Hour(s); Inhalation-Human TCLo • 200 ppm; <i>Brain and Coverings:Recordings from specific areas of CNS</i>; <i>Behavioral:Antipsychotic</i>; <i>Blood:Changes in bone marrow not included above</i>; Inhalation-Human TCLo • 1500 mg/m³ 8 Hour(s); <i>Sense Organs and Special Senses:Eye:Lacrimation</i>; <i>Sense Organs and Special Senses:Eye:Conjunctive irritation</i>; <i>Behavioral:Ataxia</i>; Inhalation-Man TCLo • 50 ppm; <i>Kidney, Ureter, and Bladder:Other changes in urine composition</i>; Skin-Rabbit LD50 • 14100 µL/kg;</p> <p>Irritation: Eye-Rabbit • 100 mg 30 Second(s)-Rinse • Mild irritation; Skin-Rabbit • 435 mg • Mild irritation;</p> <p>Multi-dose Toxicity: Inhalation-Mouse TCLo • 250 ppm 4 Day(s)-Continuous; <i>Behavioral:Convulsions or effect on seizure threshold</i>; <i>Behavioral:Abuse</i>; Inhalation-Mouse TCLo • 50 ppm 12 Week(s)-Intermittent; <i>Brain and Coverings:Other degenerative changes</i>; Inhalation-Rat TCLo • 10 ppm 6 Hour(s) 13 Week(s)-Intermittent; <i>Brain and Coverings:Other degenerative changes</i>; <i>Biochemical:Enzyme inhibition, induction, or change in blood or tissue levels:Multiple enzyme effects</i>;</p> <p>Mutagen: Micronucleus test • Ingestion/Oral-Mouse • 200 mg/kg; Sister chromatid exchange • Inhalation-Human • 252 µg/L 19 Year(s); Cytogenetic analysis • Inhalation-Rat • 5400 µg/m³ 16 Week(s)-Intermittent;</p> <p>Reproductive: Inhalation-Mouse TCLo • 500 mg/m³ 24 Hour(s)(6-13D preg); <i>Reproductive Effects:Effects on Embryo or Fetus:Fetotoxicity (except death, e.g., stunted fetus)</i>; Inhalation-Mouse TCLo • 200 ppm 7 Hour(s)(7-16D preg); <i>Reproductive Effects:Specific Developmental Abnormalities:Urogenital system</i>; Inhalation-Rat TCLo • 1500 ppm (7-20D preg); <i>Reproductive Effects:Specific Developmental Abnormalities:Central nervous system</i>; <i>Reproductive Effects:Effects on Newborn:Growth statistics (e.g., reduced weight gain)</i>; <i>Reproductive Effects:Effects on Newborn:Biochemical and metabolic</i></p>
		<p>Acute Toxicity: Ingestion/Oral-Rat LD50 • 6240 mg/kg; <i>Behavioral:Somnolence (general depressed activity)</i>;</p>

Cyclohexane (1% TO 2.5%)	110 -82- 7	<p>Gastrointestinal:Changes in structure or function of salivary glands; Gastrointestinal:Hypermotility, diarrhea; Inhalation-Rat LC50 • >9500 ppm 4 Hour(s); Behavioral:Somnolence (general depressed activity); Behavioral:Tremor; Lungs, Thorax, or Respiration:Respiratory depression; Inhalation-Cat TClO • 62500 mg/m³ 15 Minute(s); Behavioral:Convulsions or effect on seizure threshold; Vascular:BP lowering not characterized in autonomic section; Skin-Rabbit LD50 • >2000 mg/kg;</p> <p>Multi-dose Toxicity: Inhalation-Mouse TClO • 2000 ppm 90 Day(s)-Intermittent; Behavioral:Somnolence (general depressed activity); Behavioral:Changes in motor activity (specific assay); Inhalation-Rat TClO • 500 ppm 13 Week (s)-Intermittent; Behavioral:Somnolence (general depressed activity); Inhalation-Rat TClO • 300 ppm 6 Hour(s) 2 Week (s)-Intermittent; Brain and Coverings:Other degenerative changes; Biochemical:Enzyme inhibition, induction, or change in blood or tissue levels:Other oxidoreductases</p>
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GHS Properties	Classification
Acute toxicity	EU/CLP • Classification criteria not met OSHA HCS 2012 • Classification criteria not met WHMIS 2015 • Classification criteria not met
Skin corrosion/Irritation	EU/CLP • Skin Irritation 2 OSHA HCS 2012 • Skin Irritation 2 WHMIS 2015 • Skin Irritation 2
Serious eye damage/Irritation	EU/CLP • Eye Irritation 2 OSHA HCS 2012 • Eye Irritation 2 WHMIS 2015 • Eye Irritation 2
Skin sensitization	EU/CLP • Classification criteria not met OSHA HCS 2012 • Classification criteria not met WHMIS 2015 • Classification criteria not met
Respiratory sensitization	EU/CLP • Classification criteria not met OSHA HCS 2012 • Classification criteria not met WHMIS 2015 • Classification criteria not met
Aspiration Hazard	EU/CLP • Aspiration 1 OSHA HCS 2012 • Aspiration 1 WHMIS 2015 • Aspiration 1
Carcinogenicity	EU/CLP • Classification criteria not met OSHA HCS 2012 • Classification criteria not met WHMIS 2015 • Classification criteria not met
Germ Cell Mutagenicity	EU/CLP • Classification criteria not met OSHA HCS 2012 • Germ Cell Mutagenicity 1B WHMIS 2015 • Germ Cell Mutagenicity 1B
Toxicity for Reproduction	EU/CLP • Toxic to Reproduction 2 OSHA HCS 2012 • Toxic to Reproduction 2 WHMIS 2015 • Toxic to Reproduction 2
STOT-SE	EU/CLP • Specific Target Organ Toxicity Single Exposure 3: Narcotic Effects OSHA HCS 2012 • Specific Target Organ Toxicity Single Exposure 3: Narcotic Effects WHMIS 2015 • Specific Target Organ Toxicity Single Exposure 3: Narcotic Effects
STOT-RE	EU/CLP • Specific Target Organ Toxicity Repeated Exposure 2 OSHA HCS 2012 • Specific Target Organ Toxicity Repeated Exposure 1 WHMIS 2015 • Specific Target Organ Toxicity Repeated Exposure 1

- Target Organs** • Nervous System, Central Nervous System (CNS)
- Route(s) of entry/exposure** • Inhalation, Skin, Eye
- Potential Health Effects**

Inhalation**Acute (Immediate)**

- May cause respiratory irritation. May affect the central nervous system. Symptoms may include dizziness, drowsiness, lethargy, coma and death.

Chronic (Delayed)

- No data available.

Skin**Acute (Immediate)**

- Causes mild skin irritation. May cause skin sensitization. Symptoms include redness, and skin rash.

Chronic (Delayed)

- Prolonged or repeated contact can cause moderate irritation defatting, dermatitis.

Eye**Acute (Immediate)**

- Causes serious eye irritation.

Chronic (Delayed)

- No data available.

Ingestion**Acute (Immediate)**

- No data available.

Chronic (Delayed)

- No data available.

Other**Chronic (Delayed)**

- Chronic exposure to hexane may produce peripheral neuropathy (motor sensory) and CNS abnormalities.

Carcinogenic Effects

- The ingredients of this product are not classified as carcinogenic by ACGIH or IARC, not regulated as carcinogens by OSHA, and not listed as carcinogens by NTP.

Reproductive Effects

- Repeated or prolonged exposure to toluene may cause reproductive effects.

Key to abbreviations

LC = Lethal Concentration

MOD = Moderate

LD = Lethal Dose

TC = Toxic Concentration

MLD = Mild

Section 12 - Ecological Information**12.1 Toxicity**

Components		
Hexane (10% TO 20%)	110-54-3	Aquatic Toxicity-Fish: 96 Hour(s) LC50 <i>Pimephales promelas</i> (Fathead minnow) 2.1-2.98 mg/L
Cyclohexane (1% TO 2.5%)	110-82-7	Aquatic Toxicity-Fish: 96 Hour(s) LC50 <i>Pimephales promelas</i> (Fathead minnow) 23.03-42.07 mg/L [Static]

12.2 Persistence and degradability

- Material data lacking.

12.3 Bioaccumulative potential

- Material data lacking.

12.4 Mobility in Soil

- Material data lacking.

12.5 Results of PBT and vPvB assessment

- No PBT and vPvB assessment has been conducted.

12.6 Other adverse effects**Potential Environmental Effects**

- According to Annex VI to Regulation (EC) No 1272/2008 Table 3.1 and Table 3.2 the hexane and cyclohexane components of this material may cause adverse effects to the environment.

Section 13 - Disposal Considerations

13.1 Waste treatment methods

Product waste

- Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

Packaging waste

- Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

Section 14 - Transport Information

	14.1 UN number	14.2 UN proper shipping name	14.3 Transport hazard class(es)	14.4 Packing group	14.5 Environmental hazards
DOT	UN1950	Aerosols, flammable, (each not exceeding 1 L capacity)	2.1	Not relevant	NDA
TDG	UN1950	AEROSOLS, Flammable	2.1	Not relevant	NDA
IMO/IMDG	UN1950	AEROSOLS, flammable	2.1	Not relevant	NDA
IATA/ICAO	UN1950	Aerosols, Flammable	2.1	Not relevant	NDA

14.6 Special precautions for user

- None specified.

14.7 Transport in bulk according to Annex II of Marpol and the IBC Code

- Data lacking.

Section 15 - Regulatory Information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

SARA Hazard Classifications • Acute, Chronic, Fire, Pressure(Sudden Release of)

State Right To Know				
Component	CAS	MA	NJ	PA
Acetone	67-64-1	Yes	Yes	Yes
C12-C14 Isoalkanes	68551-19-9	No	No	No
Cyclohexane	110-82-7	Yes	Yes	Yes
Hexane	110-54-3	Yes	Yes	Yes
Methyl ether	115-10-6	Yes	Yes	Yes
Propane	74-98-6	Yes	Yes	Yes
Toluene	108-88-3	Yes	Yes	Yes

Inventory						
Component	CAS	Canada DSL	Canada NDSL	EU EINECS	EU ELNICS	TSCA
Acetone	67-64-1	Yes	No	Yes	No	Yes
C12-C14 Isoalkanes	68551-19-9	Yes	No	Yes	No	Yes
Cyclohexane	110-82-7	Yes	No	Yes	No	Yes
Hexane	110-54-3	Yes	No	Yes	No	Yes
Methyl ether	115-10-6	Yes	No	Yes	No	Yes

Propane	74-98-6	Yes	No	Yes	No	Yes
Toluene	108-88-3	Yes	No	Yes	No	Yes

Canada

Labor

Canada - WHMIS - Classifications of Substances

• C12-C14 Isoalkanes	68551-19-9	Not Listed
• Acetone	67-64-1	B2, D2B
• Cyclohexane	110-82-7	B2, D2B
• Propane	74-98-6	A, B1
• Toluene	108-88-3	B2, D2A, D2B
• Hexane	110-54-3	B2, D2A, D2B
• Methyl ether	115-10-6	Not Listed

Canada - WHMIS - Ingredient Disclosure List

• C12-C14 Isoalkanes	68551-19-9	Not Listed
• Acetone	67-64-1	1 %
• Cyclohexane	110-82-7	1 %
• Propane	74-98-6	Not Listed
• Toluene	108-88-3	1 %
• Hexane	110-54-3	1 %
• Methyl ether	115-10-6	Not Listed

Environment

Canada - CEPA - Priority Substances List

• C12-C14 Isoalkanes	68551-19-9	Not Listed
• Acetone	67-64-1	Not Listed
• Cyclohexane	110-82-7	Not Listed
• Propane	74-98-6	Not Listed
• Toluene	108-88-3	Priority Substance List 1 (substance not considered toxic)
• Hexane	110-54-3	Not Listed
• Methyl ether	115-10-6	Not Listed

Europe

Other

EU - CLP (1272/2008) - Annex VI - Table 3.2 - Classification

• C12-C14 Isoalkanes	68551-19-9	Not Listed
• Acetone	67-64-1	F; R11 Xi; R36 R66 R67
• Cyclohexane	110-82-7	F; R11 Xi; R38 N; R50-53 Xn; R65 R67
• Propane	74-98-6	F+; R12
• Toluene	108-88-3	F; R11 Xi; R38 Xn; R48/20-65 Repr.Cat.3; R63 R67
• Hexane	110-54-3	F; R11 Xi; R38 N; R51-53 Repr.Cat.3; R62 Xn; R65-48/20 R67
• Methyl ether	115-10-6	F+; R12

EU - CLP (1272/2008) - Annex VI - Table 3.2 - Concentration Limits

• C12-C14 Isoalkanes	68551-19-9	Not Listed
• Acetone	67-64-1	Not Listed
• Cyclohexane	110-82-7	Not Listed

• Propane	74-98-6	Not Listed
• Toluene	108-88-3	Not Listed
• Hexane	110-54-3	5%<=C: Xn; R48/20
• Methyl ether	115-10-6	Not Listed
EU - CLP (1272/2008) - Annex VI - Table 3.2 - Labelling		
• C12-C14 Isoalkanes	68551-19-9	Not Listed
• Acetone	67-64-1	F Xi R:11-36-66-67 S:(2)-9-16-26
• Cyclohexane	110-82-7	F Xn N R:11-38-65-67-50/53 S:(2)-9-16-25-33-60-61-62
• Propane	74-98-6	F+ R:12 S:(2)-9-16
• Toluene	108-88-3	F Xn R:11-38-48/20-63-65-67 S:(2)-36/37-46-62
• Hexane	110-54-3	F Xn N R:11-38-48/20-62-65-67-51/53 S:(2)-9-16-29-33-36/37-61-62
• Methyl ether	115-10-6	F+ R:12 S:(2)-9-16-33
EU - CLP (1272/2008) - Annex VI - Table 3.2 - Notes - Substances and Preparations		
• C12-C14 Isoalkanes	68551-19-9	Not Listed
• Acetone	67-64-1	Not Listed
• Cyclohexane	110-82-7	Not Listed
• Propane	74-98-6	Not Listed
• Toluene	108-88-3	Not Listed
• Hexane	110-54-3	Not Listed
• Methyl ether	115-10-6	Not Listed
EU - CLP (1272/2008) - Annex VI - Table 3.2 - Safety Phrases		
• C12-C14 Isoalkanes	68551-19-9	Not Listed
• Acetone	67-64-1	S:(2)-9-16-26
• Cyclohexane	110-82-7	S:(2)-9-16-25-33-60-61-62
• Propane	74-98-6	S:(2)-9-16
• Toluene	108-88-3	S:(2)-36/37-46-62
• Hexane	110-54-3	S:(2)-9-16-29-33-36/37-61-62
• Methyl ether	115-10-6	S:(2)-9-16-33

United States

Labor

U.S. - OSHA - Process Safety Management - Highly Hazardous Chemicals

• C12-C14 Isoalkanes	68551-19-9	Not Listed
• Acetone	67-64-1	Not Listed
• Cyclohexane	110-82-7	Not Listed
• Propane	74-98-6	Not Listed
• Toluene	108-88-3	Not Listed
• Hexane	110-54-3	Not Listed
• Methyl ether	115-10-6	Not Listed

U.S. - OSHA - Specifically Regulated Chemicals

• C12-C14 Isoalkanes	68551-19-9	Not Listed
• Acetone	67-64-1	Not Listed
• Cyclohexane	110-82-7	Not Listed
• Propane	74-98-6	Not Listed
• Toluene	108-88-3	Not Listed
• Hexane	110-54-3	Not Listed

• Methyl ether	115-10-6	Not Listed
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Environment

U.S. - CAA (Clean Air Act) - 1990 Hazardous Air Pollutants

• C12-C14 Isoalkanes	68551-19-9	Not Listed
• Acetone	67-64-1	Not Listed
• Cyclohexane	110-82-7	Not Listed
• Propane	74-98-6	Not Listed
• Toluene	108-88-3	
• Hexane	110-54-3	
• Methyl ether	115-10-6	Not Listed

U.S. - CERCLA/SARA - Hazardous Substances and their Reportable Quantities

• C12-C14 Isoalkanes	68551-19-9	Not Listed
• Acetone	67-64-1	5000 lb final RQ; 2270 kg final RQ
• Cyclohexane	110-82-7	1000 lb final RQ; 454 kg final RQ
• Propane	74-98-6	Not Listed
• Toluene	108-88-3	1000 lb final RQ; 454 kg final RQ
• Hexane	110-54-3	5000 lb final RQ; 2270 kg final RQ
• Methyl ether	115-10-6	Not Listed

U.S. - CERCLA/SARA - Radionuclides and Their Reportable Quantities

• C12-C14 Isoalkanes	68551-19-9	Not Listed
• Acetone	67-64-1	Not Listed
• Cyclohexane	110-82-7	Not Listed
• Propane	74-98-6	Not Listed
• Toluene	108-88-3	Not Listed
• Hexane	110-54-3	Not Listed
• Methyl ether	115-10-6	Not Listed

U.S. - CERCLA/SARA - Section 302 Extremely Hazardous Substances EPCRA RQs

• C12-C14 Isoalkanes	68551-19-9	Not Listed
• Acetone	67-64-1	Not Listed
• Cyclohexane	110-82-7	Not Listed
• Propane	74-98-6	Not Listed
• Toluene	108-88-3	Not Listed
• Hexane	110-54-3	Not Listed
• Methyl ether	115-10-6	Not Listed

U.S. - CERCLA/SARA - Section 302 Extremely Hazardous Substances TPQs

• C12-C14 Isoalkanes	68551-19-9	Not Listed
• Acetone	67-64-1	Not Listed
• Cyclohexane	110-82-7	Not Listed
• Propane	74-98-6	Not Listed
• Toluene	108-88-3	Not Listed
• Hexane	110-54-3	Not Listed
• Methyl ether	115-10-6	Not Listed

U.S. - CERCLA/SARA - Section 313 - Emission Reporting

• C12-C14 Isoalkanes	68551-19-9	Not Listed
• Acetone	67-64-1	Not Listed

• Cyclohexane	110-82-7	1.0 % de minimis concentration
• Propane	74-98-6	Not Listed
• Toluene	108-88-3	1.0 % de minimis concentration
• Hexane	110-54-3	1.0 % de minimis concentration
• Methyl ether	115-10-6	Not Listed
U.S. - CERCLA/SARA - Section 313 - PBT Chemical Listing		
• C12-C14 Isoalkanes	68551-19-9	Not Listed
• Acetone	67-64-1	Not Listed
• Cyclohexane	110-82-7	Not Listed
• Propane	74-98-6	Not Listed
• Toluene	108-88-3	Not Listed
• Hexane	110-54-3	Not Listed
• Methyl ether	115-10-6	Not Listed
U.S. - RCRA (Resource Conservation & Recovery Act) - Basis for Listing - Appendix VII		
• C12-C14 Isoalkanes	68551-19-9	Not Listed
• Acetone	67-64-1	Included in waste stream: F039
• Cyclohexane	110-82-7	Not Listed
• Propane	74-98-6	Not Listed
• Toluene	108-88-3	Included in waste streams: F005, F024, F025, F039, K015, K036, K037, K149, K151
• Hexane	110-54-3	Not Listed
• Methyl ether	115-10-6	Not Listed
U.S. - RCRA (Resource Conservation & Recovery Act) - Constituents for Detection Monitoring		
• C12-C14 Isoalkanes	68551-19-9	Not Listed
• Acetone	67-64-1	
• Cyclohexane	110-82-7	Not Listed
• Propane	74-98-6	Not Listed
• Toluene	108-88-3	
• Hexane	110-54-3	Not Listed
• Methyl ether	115-10-6	Not Listed
U.S. - RCRA (Resource Conservation & Recovery Act) - D Series Wastes - Max Conc of Contaminants for the Tox Characteristic		
• C12-C14 Isoalkanes	68551-19-9	Not Listed
• Acetone	67-64-1	Not Listed
• Cyclohexane	110-82-7	Not Listed
• Propane	74-98-6	Not Listed
• Toluene	108-88-3	Not Listed
• Hexane	110-54-3	Not Listed
• Methyl ether	115-10-6	Not Listed
U.S. - RCRA (Resource Conservation & Recovery Act) - Hazardous Constituents - Appendix VIII to 40 CFR 261		
• C12-C14 Isoalkanes	68551-19-9	Not Listed
• Acetone	67-64-1	Not Listed
• Cyclohexane	110-82-7	Not Listed
• Propane	74-98-6	Not Listed
• Toluene	108-88-3	waste number U220
• Hexane	110-54-3	Not Listed

• Methyl ether	115-10-6	Not Listed
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U.S. - RCRA (Resource Conservation & Recovery Act) - List for Hazardous Constituents

• C12-C14 Isoalkanes	68551-19-9	Not Listed
• Acetone	67-64-1	
• Cyclohexane	110-82-7	Not Listed
• Propane	74-98-6	Not Listed
• Toluene	108-88-3	
• Hexane	110-54-3	Not Listed
• Methyl ether	115-10-6	Not Listed

U.S. - RCRA (Resource Conservation & Recovery Act) - Phase 4 LDR Rule - Universal Treatment Standards

• C12-C14 Isoalkanes	68551-19-9	Not Listed
• Acetone	67-64-1	0.28 mg/L (wastewater); 160 mg/kg (nonwastewater)
• Cyclohexane	110-82-7	Not Listed
• Propane	74-98-6	Not Listed
• Toluene	108-88-3	0.080 mg/L (wastewater); 10 mg/kg (nonwastewater)
• Hexane	110-54-3	Not Listed
• Methyl ether	115-10-6	Not Listed

U.S. - RCRA (Resource Conservation & Recovery Act) - TSD Facilities Ground Water Monitoring

• C12-C14 Isoalkanes	68551-19-9	Not Listed
• Acetone	67-64-1	
• Cyclohexane	110-82-7	Not Listed
• Propane	74-98-6	Not Listed
• Toluene	108-88-3	
• Hexane	110-54-3	Not Listed
• Methyl ether	115-10-6	Not Listed

U.S. - RCRA (Resource Conservation & Recovery Act) - U Series Wastes - Acutely Toxic Wastes & Other Hazardous Characteristics

• C12-C14 Isoalkanes	68551-19-9	Not Listed
• Acetone	67-64-1	waste number U002 (Ignitable waste)
• Cyclohexane	110-82-7	waste number U056 (Ignitable waste)
• Propane	74-98-6	Not Listed
• Toluene	108-88-3	waste number U220
• Hexane	110-54-3	Not Listed
• Methyl ether	115-10-6	Not Listed

United States - California

Environment

U.S. - California - Proposition 65 - Carcinogens List

• C12-C14 Isoalkanes	68551-19-9	Not Listed
• Acetone	67-64-1	Not Listed
• Cyclohexane	110-82-7	Not Listed
• Propane	74-98-6	Not Listed
• Toluene	108-88-3	Not Listed
• Hexane	110-54-3	Not Listed
• Methyl ether	115-10-6	Not Listed

U.S. - California - Proposition 65 - Developmental Toxicity

• C12-C14 Isoalkanes	68551-19-9	Not Listed
• Acetone	67-64-1	Not Listed
• Cyclohexane	110-82-7	Not Listed
• Propane	74-98-6	Not Listed
• Toluene	108-88-3	developmental toxicity, initial date 1/1/91
• Hexane	110-54-3	Not Listed
• Methyl ether	115-10-6	Not Listed
U.S. - California - Proposition 65 - Maximum Allowable Dose Levels (MADL)		
• C12-C14 Isoalkanes	68551-19-9	Not Listed
• Acetone	67-64-1	Not Listed
• Cyclohexane	110-82-7	Not Listed
• Propane	74-98-6	Not Listed
• Toluene	108-88-3	7000 µg/day MADL (level represents absorbed dose)
• Hexane	110-54-3	Not Listed
• Methyl ether	115-10-6	Not Listed
U.S. - California - Proposition 65 - No Significant Risk Levels (NSRL)		
• C12-C14 Isoalkanes	68551-19-9	Not Listed
• Acetone	67-64-1	Not Listed
• Cyclohexane	110-82-7	Not Listed
• Propane	74-98-6	Not Listed
• Toluene	108-88-3	Not Listed
• Hexane	110-54-3	Not Listed
• Methyl ether	115-10-6	Not Listed
U.S. - California - Proposition 65 - Reproductive Toxicity - Female		
• C12-C14 Isoalkanes	68551-19-9	Not Listed
• Acetone	67-64-1	Not Listed
• Cyclohexane	110-82-7	Not Listed
• Propane	74-98-6	Not Listed
• Toluene	108-88-3	female reproductive toxicity, initial date 8/7/09
• Hexane	110-54-3	Not Listed
• Methyl ether	115-10-6	Not Listed
U.S. - California - Proposition 65 - Reproductive Toxicity - Male		
• C12-C14 Isoalkanes	68551-19-9	Not Listed
• Acetone	67-64-1	Not Listed
• Cyclohexane	110-82-7	Not Listed
• Propane	74-98-6	Not Listed
• Toluene	108-88-3	Not Listed
• Hexane	110-54-3	Not Listed
• Methyl ether	115-10-6	Not Listed

United States - Pennsylvania

Labor		
U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List		
• C12-C14 Isoalkanes	68551-19-9	Not Listed
• Acetone	67-64-1	
• Cyclohexane	110-82-7	
• Propane	74-98-6	Not Listed
• Toluene	108-88-3	

• Hexane	110-54-3	Not Listed
• Methyl ether	115-10-6	Not Listed

U.S. - Pennsylvania - RTK (Right to Know) - Special Hazardous Substances

• C12-C14 Isoalkanes	68551-19-9	Not Listed
• Acetone	67-64-1	Not Listed
• Cyclohexane	110-82-7	Not Listed
• Propane	74-98-6	Not Listed
• Toluene	108-88-3	Not Listed
• Hexane	110-54-3	Not Listed
• Methyl ether	115-10-6	Not Listed

United States - Rhode Island**Labor****U.S. - Rhode Island - Hazardous Substance List**

• C12-C14 Isoalkanes	68551-19-9	Not Listed
• Acetone	67-64-1	Toxic; Flammable
• Cyclohexane	110-82-7	Toxic; Flammable
• Propane	74-98-6	Toxic; Flammable
• Toluene	108-88-3	Toxic (skin); Flammable (skin)
• Hexane	110-54-3	Toxic; Flammable
• Methyl ether	115-10-6	Flammable

15.2 Chemical Safety Assessment

- No Chemical Safety Assessment has been carried out.

Section 16 - Other Information**Relevant Phrases (code & full text)**

- H220 - Extremely flammable gas
- H225 - Highly flammable liquid and vapour
- H280 - Contains gas under pressure; may explode if heated
- H304 - May be fatal if swallowed and enters airways
- H361f - Suspected of damaging fertility.
- H361d - Suspected of damaging the unborn child.
- H410 - Very toxic to aquatic life with long lasting effects
- H411 - Toxic to aquatic life with long lasting effects
- R11 - Highly flammable.
- R36 - Irritating to eyes.
- R38 - Irritating to skin.
- R48/20 - Harmful: danger of serious damage to health by prolonged exposure through inhalation.
- R62 - Possible risk of impaired fertility.
- R63 - Possible risk of harm to the unborn child.
- R65 - Harmful: may cause lung damage if swallowed.
- R66 - Repeated exposure may cause skin dryness or cracking.
- R50 - Very toxic to aquatic organisms.

Revision Date

- 05/March/2018

Preparation Date

- 02/March/2009

Other Information

- Changes to this revision: Updated mailing address.

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Key to abbreviations

NDA = No data available