

## Safety Data Sheet



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

#### 1.1 Product identifier

- Product Name** • **Bore Scrubber Bore Cleaner Aerosol**
- Synonyms** • BORE SCRUBBER AEROSOL
- Product Code** • 33626; 33635; 33640; BSA10; BSA2; BSA6

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

- Relevant identified use(s)** • For the cleaning of firearm metal parts

#### 1.3 Details of the supplier of the safety data sheet

- Manufacturer** • Birchwood Casey, LLC

### Section 2: Hazards Identification

#### EU/EEC

According to: Regulation (EC) No 1272/2008 (CLP)/REACH 1907/2006 [amended by 453/2010]  
According to: EU Directive 67/548/EEC (DSD) or 1999/45/EC (DPD)

#### 2.1 Classification of the substance or mixture

- CLP**
- Flammable Aerosols 2 - H223
  - Skin Irritation 2 - H315
  - Serious Eye Damage 1 - H318
  - Specific Target Organ Toxicity Repeated Exposure 1 - H372
- DSD/DPD**
- Highly Flammable (F)
  - Toxic (T)
  - Irritant (Xi)
  - R11, R36/38, R48/20, R67

#### 2.2 Label Elements

CLP

**DANGER**



- Hazard statements**
- H223 - Flammable aerosol
  - H315 - Causes skin irritation
  - H318 - Causes serious eye damage
  - H372 - Causes damage to organs - Nervous System, Liver, Kidney through prolonged or repeated exposure via inhalation

### Precautionary statements

- Prevention**
- P210 - Keep away from heat, sparks, open flames and/or hot surfaces. - No smoking.
  - P211 - Do not spray on an open flame or other ignition source.
  - P251 - Pressurized container: Do not pierce or burn, even after use.
  - P260 - Do not breathe mist/vapours/spray.
  - P264 - Wash thoroughly after handling.
  - P270 - Do not eat, drink or smoke when using this product.
  - P280 - Wear protective gloves/protective clothing/eye protection/face protection.
- Response**
- P302+P352 - IF ON SKIN: Wash with plenty of soap and water.
  - P321 - Specific treatment, see supplemental first aid information.
  - P362 - Take off contaminated clothing and wash before reuse.
  - 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.
  - P310 - Immediately call a POISON CENTER or doctor/physician.
  - P314 - Get medical advice/attention if you feel unwell.
- 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.

### DSD/DPD



- Risk phrases**
- R11 - Highly flammable.
  - R36/38 - Irritating to eyes and skin.
  - R48/20 - Harmful: danger of serious damage to health by prolonged exposure through inhalation.
  - R67 - Vapours may cause drowsiness and dizziness.
- Safety phrases**
- S9 - Keep container in a well ventilated place
  - S16 - Keep away from sources of ignition - No Smoking.
  - S26 - In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
  - S45 - In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

## 2.3 Other Hazards

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

- DSD/DPD**
- According to European Directive 1999/45/EC this material is considered dangerous.

## United States (US)

According to: OSHA 29 CFR 1910.1200 HCS

### 2.1 Classification of the substance or mixture

- OSHA HCS 2012**
- Flammable Aerosols 2
  - Skin Irritation 2

Serious Eye Damage 1  
 Reproductive Toxicity 2  
 Specific Target Organ Toxicity Repeated Exposure 1

## 2.2 Label elements

OSHA HCS 2012

### DANGER



- Hazard statements**
- Flammable aerosol
  - Causes skin irritation
  - Causes serious eye damage
  - Suspected of damaging fertility or the unborn child.
  - Causes damage to organs - Nervous System, Liver, Kidney through prolonged or repeated exposure via inhalation

### 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.
  - Wear protective gloves/protective clothing/eye protection/face protection.
- Response**
- IF ON SKIN: Wash with plenty of soap and water.
  - Specific treatment, see supplemental first aid information.
  - Take off contaminated clothing and wash before reuse.
  - 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.
  - Immediately call a POISON CENTER or doctor/physician.
  - 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

OSHA HCS 2012

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

## Canada

According to: WHMIS

### 2.1 Classification of the substance or mixture

WHMIS

- Flammable Aerosols - B5
- Other Toxic Effects - D2B
- Corrosive - E

### 2.2 Label elements

WHMIS



- Flammable Aerosols - B5

Other Toxic Effects - D2B  
Corrosive - E

## 2.3 Other hazards

### WHMIS

- 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 in accordance with Regulation (EC) No 1272/2008.

### 3.2 Mixtures

Composition					
Chemical Name	Identifiers	%	LD50/LC50	Classifications According to Regulation/Directive	Comments
Dipropylene glycol monomethyl ether	CAS:34590-94-8 EC Number:252-104-2	< 48%	Ingestion/Oral-Rat LD50 • 5400 µL/kg Skin-Rabbit LD50 • 10 mL/kg	EU DSD/DPD: Not Classified - Criteria not met EU CLP: Not Classified - Criteria not met OSHA HCS 2012: Flam. Liq. 4; Eye Irrit. 2B	NDA
Kerosene	CAS:8008-20-6 EC Number:232-366-4	< 20%	Ingestion/Oral-Rat LD50 • 15 g/kg	EU DSD/DPD: EU CLP, Annex VI, Table 3.2: Xn, R65 EU CLP: Annex VI: Asp. Tox. 1, H304 OSHA HCS 2012: Flam. Liq. 3; Skin Irrit. 2, Eye Irrit. 2A; Asp. Tox. 1	NDA
Propane	CAS:74-98-6 EC Number:200-827-9	< 11%	NDA	EU DSD/DPD: EU CLP, Annex VI, Table 3.2: F+, R12 EU CLP: Annex VI: Flam. Gas 1, H220; Press. Gas - Comp., H280 OSHA HCS 2012: Flam. Gas 1; Press. Gas - Comp.; Simp. Asphyx.	NDA
Oleic acid	CAS:112-80-1 EC Number:204-007-1	< 10%	Ingestion/Oral-Rat LD50 • 25000 mg/kg	EU DSD/DPD: Not Classified - Criteria not met EU CLP: Not Classified - Criteria not met OSHA HCS 2012: Eye Irrit. 2B	NDA
Butane	CAS:106-97-8 EC Number:203-448-7	< 10%	Inhalation-Rat LC50 • 658 g/m <sup>3</sup> 4 Hour(s)	EU DSD/DPD: EU CLP, Annex VI, Table 3.2: F+, R12 EU CLP: Self Classified: Flam. Gas 1, H220; Press. Gas - Comp., H280 OSHA HCS 2012: Flam. Gas 1; Press. Gas - Comp.; Simp. Asphyx.	NDA
1,2-Propanediol	CAS:57-55-6 EC Number:200-338-0	< 6%	Ingestion/Oral-Rat LD50 • 20 g/kg Skin-Rabbit LD50 • 20800 mg/kg	EU DSD/DPD: Self Classified: Xi 38 EU CLP: Self Classified: Skin Irrit. 2, H315 OSHA HCS 2012: Skin Irrit. 2; Eye Irrit. 2B	NDA
Oxygenated Hydrocarbons	NDA	< 4%	NDA	EU DSD/DPD: No data available EU CLP: No data available OSHA HCS 2012: No data available	NDA
	CAS:64742-53-			EU DSD/DPD: EU CLP, Annex VI, Table 3.2:	

Hydrotreated light naphthenic petroleum distillate (highly refined)	6 <b>EC Number:</b> 265-156-6	< 4%	NDA	Carc.Cat.2, R45 <b>EU CLP:</b> EU CLP, Annex VI, Table 3.1: Carc. 1B, H350 <b>OSHA HCS 2012:</b> Skin Irrit. 2	NDA
2-Aminoethanol	<b>CAS:</b> 141-43-5 <b>EC Number:</b> 205-483-3	< 4%	Ingestion/Oral-Rat LD50 • 1720 mg/kg Skin-Rabbit LD50 • 1 mL/kg	<b>EU DSD/DPD:</b> EU CLP, Annex VI, Table 3.2: Xn, R20/21/22; C, R34 <b>EU CLP:</b> Annex VI: Acute Tox. 4, H312; Acute Tox. 4, H332; Acute Tox. 4, H302; Skin Corr. 1B, H314 <b>OSHA HCS 2012:</b> Flam. Liq. 4; Acute Tox. 4 (Oral, Skin); Skin Irrit. 2; Eye Dam. 1; Repr. 2	NDA

See Section 11 for Toxicological Information. See Section 16 for full text of H-statements and R-phrases.

## Section 4 - First Aid Measures

### 4.1 Description of first aid measures

#### Inhalation

- Move victim to fresh air. 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 burns, immediately cool affected skin for as long as possible with cold water. Do not remove clothing if adhering to skin. Wash skin with soap and water. Remove and isolate contaminated clothing. If skin irritation occurs: Get medical advice/attention.

#### 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 victim is conscious, give 1 – 2 glasses of water. Do NOT induce vomiting. Get medical attention immediately.

### 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

- All treatments should be based on observed signs and symptoms of distress in the patient. Consideration should be given to the possibility that overexposure to materials other than this product may have occurred.

## Section 5 - Firefighting Measures

### 5.1 Extinguishing media

**Suitable Extinguishing Media** • Water spray, carbon dioxide, dry chemical.

**Unsuitable Extinguishing Media** • No data available

### 5.2 Special hazards arising from the substance or mixture

#### Unusual Fire and Explosion Hazards

- Containers may explode when heated.  
Vapor explosion hazard indoors, outdoors or in sewers.  
HIGHLY FLAMMABLE: Will be easily ignited by heat, sparks or flames.  
Many liquids are lighter than water.  
Most vapors are heavier than air. They will spread along ground and collect in low or confined areas (sewers, basements, tanks).  
Runoff to sewer may create fire or explosion hazard.  
Vapors may form explosive mixtures with air.  
Vapors may travel to source of ignition and flash back.

#### Hazardous Combustion Products

- No data available

## 5.3 Advice for firefighters

- Structural firefighters' protective clothing will only provide limited protection. Wear positive pressure self-contained breathing apparatus (SCBA). Move containers from fire area if you can do it without risk. LARGE FIRES: Cool containers with flooding quantities of water until well after fire is out.

## Section 6 - Accidental Release Measures

### 6.1 Personal precautions, protective equipment and emergency procedures

#### Personal Precautions

- Do not walk through spilled material. Wear appropriate personal protective equipment, avoid direct contact. Do not breathe fume, mist, vapours and/or spray. Avoid contact with skin, eyes or clothing.

#### Emergency Procedures

- As an immediate precautionary measure, isolate spill or leak area for at least 50 meters (150 feet) in all directions. If tank, rail car or tank truck is involved in a fire, ISOLATE for 800 meters (1/2 mile) in all directions; also, consider initial evacuation for 800 meters (1/2 mile) in all directions. LARGE SPILL: Consider initial downwind evacuation for at least 300 meters (1000 feet) ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Keep unauthorized personnel away. Stay upwind. Keep out of low areas. Ventilate closed spaces before entering.

### 6.2 Environmental precautions

- Prevent entry into waterways, sewers, basements or confined areas.

### 6.3 Methods and material for containment and cleaning up

#### Containment/Clean-up Measures

- Stop leak if you can do it without risk. Absorb or cover with dry earth, sand or other non-combustible material and transfer to containers. Use clean non-sparking tools to collect absorbed material. A vapor suppressing foam may be used to reduce vapors. All equipment used when handling the product must be grounded. LARGE SPILLS: Dike far ahead of liquid spill for later disposal. LARGE SPILLS: Water spray may reduce vapor; but may not prevent ignition in closed spaces.

### 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

- Avoid contact with heat and ignition sources. Use only with adequate ventilation. Do not breathe fume, mist, vapours and/or spray. Avoid contact with skin, eyes, and clothing. Wear appropriate personal protective equipment, avoid direct contact. Take precautionary measures against static charges. Empty containers may still have product residue and flammable vapors. Do not puncture or incinerate container. Wash thoroughly with soap and water after handling and before eating, drinking, or using tobacco.

### 7.2 Conditions for safe storage, including any incompatibilities

#### Storage

- Store in a cool/low-temperature, well-ventilated place away from heat and ignition sources. Do not store where temperature may exceed 120°F.

### 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 Ontario	Canada Quebec	Europe	NIOSH
2-Aminoethanol (141-43-5)	STELs	6 ppm STEL	6 ppm STEL	6 ppm STEV; 15 mg/m3 STEV	3 ppm STEL; 7.6 mg/m3 STEL	6 ppm STEL; 15 mg/m3 STEL
	TWAs	3 ppm TWA	3 ppm TWA	3 ppm TWAEV; 7.5 mg/m3 TWAEV	1 ppm TWA; 2.5 mg/m3 TWA	3 ppm TWA; 8 mg/m3 TWA
1,2-Propanediol (57-55-6)	TWAs	Not established	10 mg/m3 TWA (for assessing the visibility in a work environment where 1,2-Propylene glycol aerosol is present, aerosol only); 50 ppm TWA (aerosol and vapor); 155 mg/m3 TWA (aerosol and vapor)	Not established	Not established	Not established
Butane (106-97-8)	TWAs	Not established	800 ppm TWA (listed under Aliphatic hydrocarbon gases)	800 ppm TWAEV; 1900 mg/m3 TWAEV	Not established	800 ppm TWA; 1900 mg/m3 TWA
	STELs	1000 ppm STEL	Not established	Not established	Not established	Not established
Propane (74-98-6)	TWAs	1000 ppm TWA (listed under Aliphatic hydrocarbon gases: Alkane C1-4)	1000 ppm TWA	1000 ppm TWAEV; 1800 mg/m3 TWAEV	Not established	1000 ppm TWA; 1800 mg/m3 TWA
Kerosene (8008-20-6)	TWAs	200 mg/m3 TWA (application restricted to conditions in which there are negligible aerosol exposures, total hydrocarbon vapor)	200 mg/m3 TWA (restricted to conditions where there is negligible aerosol exposure, as total hydrocarbon vapour)	Not established	Not established	100 mg/m3 TWA
Dipropylene glycol monomethyl ether (34590-94-8)	STELs	150 ppm STEL	150 ppm STEL	150 ppm STEV; 909 mg/m3 STEV	Not established	150 ppm STEL; 900 mg/m3 STEL
	TWAs	100 ppm TWA	100 ppm TWA	100 ppm TWAEV; 606 mg/m3 TWAEV	Not established	100 ppm TWA; 600 mg/m3 TWA

### Exposure Limits/Guidelines (Con't.)

	Result	OSHA
2-Aminoethanol (141-43-5)	TWAs	3 ppm TWA; 6 mg/m3 TWA
Propane (74-98-6)	TWAs	1000 ppm TWA; 1800 mg/m3 TWA
Dipropylene glycol monomethyl ether (34590-94-8)	TWAs	100 ppm TWA; 600 mg/m3 TWA

## 8.2 Exposure controls

### Engineering Measures/Controls

- Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

**Personal Protective Equipment****Respiratory**

- Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or symptoms are experienced.

**Eye/Face**

- Wear safety goggles.

**Skin/Body**

- Wear appropriate gloves.

**Environmental Exposure Controls**

- Controls should be engineered to prevent release to the environment, including procedures to prevent spills, atmospheric release and release to waterways. Follow best practice for site management and disposal of waste.

**Key to abbreviations**

ACGIH = American Conference of Governmental Industrial Hygiene

NIOSH = National Institute of Occupational Safety and Health

OSHA = Occupational Safety and Health Administration

STEL = Short Term Exposure Limits are based on 15-minute exposures

STEV = Short Term Exposure Value

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 Physical and Chemical Properties****Material Description**

Physical Form	Liquid	Appearance/Description	Yellowish liquid with a kerosene odor.
Color	Yellowish	Odor	Kerosene-like
Odor Threshold	Data lacking		

**General Properties**

Boiling Point	-44 to -208 F(-42.2222 to -133.3333 C)	Melting Point	Data lacking
Decomposition Temperature	Data lacking	pH	Data lacking
Specific Gravity/Relative Density	< 1	Water Solubility	Negligible
Viscosity	Data lacking	Explosive Properties	Not Explosive.
Oxidizing Properties:	Not an oxidizer.		

**Volatility**

Vapor Pressure	50 psig	Vapor Density	> 1 Air=1
Evaporation Rate	> 1 Ether = 1	Volatiles (Vol.)	90 %

**Flammability**

Flash Point	-156 F(-104.4444 C) CC (Closed Cup) (based on propellant)	UEL	15 %
LEL	1.9 %	Autoignition	Data lacking
Flammability (solid, gas)	Flammable aerosol.		

**Environmental**

Octanol/Water Partition coefficient	Data lacking		
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**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 high temperatures (>120°F) and ignition sources.

## 10.5 Incompatible materials

- Strong oxidizers.

## 10.6 Hazardous decomposition products

- Thermal decomposition may produce carbon monoxide, carbon dioxide, sulfur oxides, aldehydes.

## Section 11 - Toxicological Information

### 11.1 Information on toxicological effects

Components		
Butane (< 10%)	106-97-8	<b>Acute Toxicity:</b> Inhalation-Rat LC50 • 658 g/m <sup>3</sup> 4 Hour(s)
Dipropylene glycol monomethyl ether (< 48%)	34590-94-8	<b>Acute Toxicity:</b> Ingestion/Oral-Rat LD50 • 5.5 mL/kg; Skin-Rabbit LD50 • 10 mL/kg; <b>Irritation:</b> Eye-Rabbit • 500 mg 24 Hour(s) • Mild irritation; Skin-Rabbit • 500 mg-Open • Mild irritation
Kerosene (< 20%)	8008-20-6	<b>Acute Toxicity:</b> Ingestion/Oral-Rat LD50 • 15 g/kg; <i>Skin and Appendages:After topical exposure:</i> <b>Corrosive</b> ; <b>Irritation:</b> Skin-Rabbit • 500 mg • Severe irritation
Oleic acid (< 10%)	112-80-1	<b>Acute Toxicity:</b> Ingestion/Oral-Rat LD50 • 25000 mg/kg; <b>Irritation:</b> Eye-Rabbit • 100 mg • Mild irritation; Skin-Rabbit • 500 mg-Open • Mild irritation
1,2-Propanediol (< 6%)	57-55-6	<b>Acute Toxicity:</b> Ingestion/Oral-Rat LD50 • 20 g/kg; Skin-Rabbit LD50 • 20800 mg/kg; <b>Irritation:</b> Eye-Rabbit • 100 mg • Mild irritation; Skin-Human • 104 mg 3 Day(s)-Intermittent • Moderate irritation
2-Aminoethanol (< 4%)	141-43-5	<b>Acute Toxicity:</b> Ingestion/Oral-Rat LD50 • 1720 mg/kg; Skin-Rabbit LD50 • 1 mL/kg; <b>Irritation:</b> Eye-Rabbit • 250 µg • Severe irritation; Skin-Rabbit • 505 mg-Open • Moderate irritation; <b>Reproductive:</b> Ingestion/Oral-Rat TDLo • 500 mg/kg (6-15D preg); <i>Reproductive Effects:Effects on Embryo or Fetus:Fetotoxicity (except death, e.g., stunted fetus); Reproductive Effects:Effects on Embryo or Fetus:Fetal death; Reproductive Effects:Specific Developmental Abnormalities:Musculoskeletal system</i>

GHS Properties	Classification
<b>Acute toxicity</b>	EU/CLP • Classification criteria not met OSHA HCS 2012 • Classification criteria not met
<b>Aspiration Hazard</b>	EU/CLP • Classification criteria not met OSHA HCS 2012 • Classification criteria not met
<b>Carcinogenicity</b>	EU/CLP • Classification criteria not met OSHA HCS 2012 • Classification criteria not met
<b>Germ Cell Mutagenicity</b>	EU/CLP • Classification criteria not met OSHA HCS 2012 • Classification criteria not met
<b>Skin corrosion/Irritation</b>	EU/CLP • Skin Irritation 2 OSHA HCS 2012 • Skin Irritation 2

<b>Skin sensitization</b>	<b>EU/CLP</b> • Classification criteria not met <b>OSHA HCS 2012</b> • Classification criteria not met
<b>STOT-RE</b>	<b>EU/CLP</b> • Specific Target Organ Toxicity Repeated Exposure 1 <b>OSHA HCS 2012</b> • Specific Target Organ Toxicity Repeated Exposure 1
<b>STOT-SE</b>	<b>EU/CLP</b> • Classification criteria not met <b>OSHA HCS 2012</b> • Classification criteria not met
<b>Toxicity for Reproduction</b>	<b>EU/CLP</b> • Classification criteria not met <b>OSHA HCS 2012</b> • Toxic to Reproduction 2
<b>Respiratory sensitization</b>	<b>EU/CLP</b> • Classification criteria not met <b>OSHA HCS 2012</b> • Classification criteria not met
<b>Serious eye damage/Irritation</b>	<b>EU/CLP</b> • Serious Eye Damage 1 <b>OSHA HCS 2012</b> • Serious Eye Damage 1

**Route(s) of entry/exposure** ● Inhalation, Skin, Eye, Ingestion

## Potential Health Effects

### Inhalation

- Acute (Immediate)** ● May cause irritation. Extremely high vapor concentrations may lead to asphyxiation.
- Chronic (Delayed)** ● No data available.

### Skin

- Acute (Immediate)** ● Causes skin irritation.
- Chronic (Delayed)** ● No data available.

### Eye

- Acute (Immediate)** ● Causes serious eye damage.
- Chronic (Delayed)** ● No data available.

### Ingestion

- Acute (Immediate)** ● May cause irritation to the gastrointestinal tract.
- Chronic (Delayed)** ● No data available.

### Other

- Chronic (Delayed)** ● Prolonged or repeated skin exposure may cause dermatitis. Excessive or chronic exposure to this product via inhalation, ingestion or skin absorption may result in liver or kidney effects and nervous system damage.

**Reproductive Effects** ● Repeated and prolonged exposure may cause reproductive effects.

#### Key to abbreviations

LC = Lethal Concentration	MOD = Moderate
LD = Lethal Dose	SEV = Severe
MLD = Mild	TD = Toxic Dose

## Section 12 - Ecological Information

### 12.1 Toxicity

- Material data lacking.

### 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

- No studies have been found.

## 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	2.1	NDA	NDA
TDG	UN1950	AEROSOLS	2.1	NDA	NDA
IMO/IMDG	UN1950	AEROSOLS	2.1	NDA	NDA
IATA/ICAO	UN1950	Aerosols, flammable	2.1	NDA	NDA

#### 14.6 Special precautions for user

- None known.

#### 14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

- Not relevant.

## 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
1,2-Propanediol	57-55-6	No	Yes	Yes
2-Aminoethanol	141-43-5	Yes	Yes	Yes
Butane	106-97-8	Yes	Yes	Yes
Dipropylene glycol monomethyl ether	34590-94-8	Yes	Yes	Yes
Hydrotreated light naphthenic petroleum distillate (highly refined)	64742-53-6	Yes	No	No

Kerosene	8008-20-6	Yes	Yes	Yes
Oleic acid	112-80-1	No	No	Yes
Propane	74-98-6	Yes	Yes	Yes

Inventory						
Component	CAS	Canada DSL	Canada NDSL	EU EINECS	EU ELNICS	TSCA
1,2-Propanediol	57-55-6	Yes	No	Yes	No	Yes
2-Aminoethanol	141-43-5	Yes	No	Yes	No	Yes
Butane	106-97-8	Yes	No	Yes	No	Yes
Dipropylene glycol monomethyl ether	34590-94-8	Yes	No	Yes	No	Yes
Hydrotreated light naphthenic petroleum distillate (highly refined)	64742-53-6	Yes	No	Yes	No	Yes
Kerosene	8008-20-6	Yes	No	Yes	No	Yes
Oleic acid	112-80-1	Yes	No	Yes	No	Yes
Propane	74-98-6	Yes	No	Yes	No	Yes

## Canada

### Labor

#### Canada - WHMIS - Classifications of Substances

• Oleic acid	112-80-1	Uncontrolled product according to WHMIS classification criteria
• Dipropylene glycol monomethyl ether	34590-94-8	B3
• 2-Aminoethanol	141-43-5	B3, E
• 1,2-Propanediol	57-55-6	Uncontrolled product according to WHMIS classification criteria
• Propane	74-98-6	A, B1
• Butane	106-97-8	A, B1
• Hydrotreated light naphthenic petroleum distillate (highly refined)	64742-53-6	Not Listed
• Kerosene	8008-20-6	B3, D2B

#### Canada - WHMIS - Ingredient Disclosure List

• Oleic acid	112-80-1	1 %
• Dipropylene glycol monomethyl ether	34590-94-8	1 %
• 2-Aminoethanol	141-43-5	1 %
• 1,2-Propanediol	57-55-6	1 %
• Propane	74-98-6	Not Listed
• Butane	106-97-8	1 %
• Hydrotreated light naphthenic petroleum distillate (highly refined)	64742-53-6	Not Listed
• Kerosene	8008-20-6	Not Listed

### Environment

#### Canada - 2004 NPRI (National Pollutant Release Inventory)

• Oleic acid	112-80-1	Not Listed
• Dipropylene glycol monomethyl ether	34590-94-8	Not Listed
• 2-Aminoethanol	141-43-5	Not Listed
• 1,2-Propanediol	57-55-6	Not Listed

• Propane	74-98-6	Part 5 Substance
• Butane	106-97-8	Not Listed
• Hydrotreated light naphthenic petroleum distillate (highly refined)	64742-53-6	Not Listed
• Kerosene	8008-20-6	Not Listed

**Canada - 2005 NPRI (National Pollutant Release Inventory)**

• Oleic acid	112-80-1	Not Listed
• Dipropylene glycol monomethyl ether	34590-94-8	Not Listed
• 2-Aminoethanol	141-43-5	Not Listed
• 1,2-Propanediol	57-55-6	Not Listed
• Propane	74-98-6	Part 5 Substance
• Butane	106-97-8	Not Listed
• Hydrotreated light naphthenic petroleum distillate (highly refined)	64742-53-6	Not Listed
• Kerosene	8008-20-6	Not Listed

**Canada - CEPA - Greenhouse Gases Subject to Mandatory Reporting**

• Oleic acid	112-80-1	Not Listed
• Dipropylene glycol monomethyl ether	34590-94-8	Not Listed
• 2-Aminoethanol	141-43-5	Not Listed
• 1,2-Propanediol	57-55-6	Not Listed
• Propane	74-98-6	Not Listed
• Butane	106-97-8	Not Listed
• Hydrotreated light naphthenic petroleum distillate (highly refined)	64742-53-6	Not Listed
• Kerosene	8008-20-6	Not Listed

**Canada - CEPA - Priority Substances List**

• Oleic acid	112-80-1	Not Listed
• Dipropylene glycol monomethyl ether	34590-94-8	Not Listed
• 2-Aminoethanol	141-43-5	Not Listed
• 1,2-Propanediol	57-55-6	Not Listed
• Propane	74-98-6	Not Listed
• Butane	106-97-8	Not Listed
• Hydrotreated light naphthenic petroleum distillate (highly refined)	64742-53-6	Not Listed
• Kerosene	8008-20-6	Not Listed

**Canada - DWQ (Drinking Water Quality) - IMACs**

• Oleic acid	112-80-1	Not Listed
• Dipropylene glycol monomethyl ether	34590-94-8	Not Listed
• 2-Aminoethanol	141-43-5	Not Listed
• 1,2-Propanediol	57-55-6	Not Listed
• Propane	74-98-6	Not Listed
• Butane	106-97-8	Not Listed
• Hydrotreated light naphthenic petroleum distillate (highly refined)	64742-53-6	Not Listed
• Kerosene	8008-20-6	Not Listed

**Other****Canada - Accelerated Reduction/Elimination of Toxics (ARET)**

• Oleic acid	112-80-1	Not Listed
• Dipropylene glycol monomethyl ether	34590-94-8	Not Listed
• 2-Aminoethanol	141-43-5	Not Listed
• 1,2-Propanediol	57-55-6	Not Listed
• Propane	74-98-6	Not Listed
• Butane	106-97-8	Not Listed
• Hydrotreated light naphthenic petroleum distillate (highly refined)	64742-53-6	Not Listed

• Kerosene	8008-20-6	Not Listed
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## Canada New Brunswick

### Environment

#### Canada - New Brunswick - Ozone Depleting Substances - Schedule A

• Oleic acid	112-80-1	Not Listed
• Dipropylene glycol monomethyl ether	34590-94-8	Not Listed
• 2-Aminoethanol	141-43-5	Not Listed
• 1,2-Propanediol	57-55-6	Not Listed
• Propane	74-98-6	Not Listed
• Butane	106-97-8	Not Listed
• Hydrotreated light naphthenic petroleum distillate (highly refined)	64742-53-6	Not Listed
• Kerosene	8008-20-6	Not Listed

#### Canada - New Brunswick - Ozone Depleting Substances - Schedule B

• Oleic acid	112-80-1	Not Listed
• Dipropylene glycol monomethyl ether	34590-94-8	Not Listed
• 2-Aminoethanol	141-43-5	Not Listed
• 1,2-Propanediol	57-55-6	Not Listed
• Propane	74-98-6	Not Listed
• Butane	106-97-8	Not Listed
• Hydrotreated light naphthenic petroleum distillate (highly refined)	64742-53-6	Not Listed
• Kerosene	8008-20-6	Not Listed

## Europe

### Other

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

• Oleic acid	112-80-1	Not Listed
• Dipropylene glycol monomethyl ether	34590-94-8	Not Listed
• 2-Aminoethanol	141-43-5	Xn; R20/21/22 C; R34
• 1,2-Propanediol	57-55-6	Not Listed
• Propane	74-98-6	F+; R12
• Butane	106-97-8	F+; R12
• Hydrotreated light naphthenic petroleum distillate (highly refined)	64742-53-6	Carc.Cat.2; R45
• Kerosene	8008-20-6	Xn; R65

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

• Oleic acid	112-80-1	Not Listed
• Dipropylene glycol monomethyl ether	34590-94-8	Not Listed
• 2-Aminoethanol	141-43-5	10%≤C: C; R:34 5% ≤C<10%: Xi; R:36/37/38
• 1,2-Propanediol	57-55-6	Not Listed
• Propane	74-98-6	Not Listed
• Butane	106-97-8	Not Listed
• Hydrotreated light naphthenic petroleum distillate (highly refined)	64742-53-6	Not Listed
• Kerosene	8008-20-6	Not Listed

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

• Oleic acid	112-80-1	Not Listed
• Dipropylene glycol monomethyl ether	34590-94-8	Not Listed
• 2-Aminoethanol	141-43-5	C R:20/21/22-34 S:(1/2)-26- 36/37/39-45
• 1,2-Propanediol	57-55-6	Not Listed

• Propane	74-98-6	F+ R:12 S:(2)-9-16
• Butane	106-97-8	F+ R:12 S:(2)-9-16
• Hydrotreated light naphthenic petroleum distillate (highly refined)	64742-53-6	T R:45 S:53-45
• Kerosene	8008-20-6	Xn R:65 S:(2)-23-24-62

**EU - CLP (1272/2008) - Annex VI - Table 3.2 - Notes - Substances and Preparations**

• Oleic acid	112-80-1	Not Listed
• Dipropylene glycol monomethyl ether	34590-94-8	Not Listed
• 2-Aminoethanol	141-43-5	Not Listed
• 1,2-Propanediol	57-55-6	Not Listed
• Propane	74-98-6	Not Listed
• Butane	106-97-8	C
• Hydrotreated light naphthenic petroleum distillate (highly refined)	64742-53-6	L
• Kerosene	8008-20-6	Not Listed

**EU - CLP (1272/2008) - Annex VI - Table 3.2 - Safety Phrases**

• Oleic acid	112-80-1	Not Listed
• Dipropylene glycol monomethyl ether	34590-94-8	Not Listed
• 2-Aminoethanol	141-43-5	S:(1/2)-26-36/37/39-45
• 1,2-Propanediol	57-55-6	Not Listed
• Propane	74-98-6	S:(2)-9-16
• Butane	106-97-8	S:(2)-9-16
• Hydrotreated light naphthenic petroleum distillate (highly refined)	64742-53-6	S:53-45
• Kerosene	8008-20-6	S:(2)-23-24-62

**Mexico****Other****Mexico - Hazard Classifications**

• Oleic acid	112-80-1	Not Listed
• Dipropylene glycol monomethyl ether	34590-94-8	Not Listed
• 2-Aminoethanol	141-43-5	Hazard Class = 8 PG = III UN2491
• 1,2-Propanediol	57-55-6	Not Listed
• Propane	74-98-6	Hazard Class = 2.1 UN1978
• Butane	106-97-8	Hazard Class = 2.1 UN1011
• Hydrotreated light naphthenic petroleum distillate (highly refined)	64742-53-6	Not Listed
• Kerosene	8008-20-6	Hazard Class = 3 PG = III UN1223

**Mexico - Regulated Substances**

• Oleic acid	112-80-1	Not Listed
• Dipropylene glycol monomethyl ether	34590-94-8	Not Listed
• 2-Aminoethanol	141-43-5	UN2491
• 1,2-Propanediol	57-55-6	Not Listed
• Propane	74-98-6	UN1978
• Butane	106-97-8	UN1011
• Hydrotreated light naphthenic petroleum distillate (highly refined)	64742-53-6	Not Listed
• Kerosene	8008-20-6	UN1223

**United States****Labor****U.S. - OSHA - Process Safety Management - Highly Hazardous Chemicals**

• Oleic acid	112-80-1	Not Listed
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• Dipropylene glycol monomethyl ether	34590-94-8	Not Listed
• 2-Aminoethanol	141-43-5	Not Listed
• 1,2-Propanediol	57-55-6	Not Listed
• Propane	74-98-6	Not Listed
• Butane	106-97-8	Not Listed
• Hydrotreated light naphthenic petroleum distillate (highly refined)	64742-53-6	Not Listed
• Kerosene	8008-20-6	Not Listed

**U.S. - OSHA - Specifically Regulated Chemicals**

• Oleic acid	112-80-1	Not Listed
• Dipropylene glycol monomethyl ether	34590-94-8	Not Listed
• 2-Aminoethanol	141-43-5	Not Listed
• 1,2-Propanediol	57-55-6	Not Listed
• Propane	74-98-6	Not Listed
• Butane	106-97-8	Not Listed
• Hydrotreated light naphthenic petroleum distillate (highly refined)	64742-53-6	Not Listed
• Kerosene	8008-20-6	Not Listed

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

• Oleic acid	112-80-1	Not Listed
• Dipropylene glycol monomethyl ether	34590-94-8	Not Listed
• 2-Aminoethanol	141-43-5	Not Listed
• 1,2-Propanediol	57-55-6	Not Listed
• Propane	74-98-6	Not Listed
• Butane	106-97-8	Not Listed
• Hydrotreated light naphthenic petroleum distillate (highly refined)	64742-53-6	Not Listed
• Kerosene	8008-20-6	Not Listed

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

• Oleic acid	112-80-1	Not Listed
• Dipropylene glycol monomethyl ether	34590-94-8	Not Listed
• 2-Aminoethanol	141-43-5	Not Listed
• 1,2-Propanediol	57-55-6	Not Listed
• Propane	74-98-6	Not Listed
• Butane	106-97-8	Not Listed
• Hydrotreated light naphthenic petroleum distillate (highly refined)	64742-53-6	Not Listed
• Kerosene	8008-20-6	Not Listed

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

• Oleic acid	112-80-1	Not Listed
• Dipropylene glycol monomethyl ether	34590-94-8	Not Listed
• 2-Aminoethanol	141-43-5	Not Listed
• 1,2-Propanediol	57-55-6	Not Listed
• Propane	74-98-6	Not Listed
• Butane	106-97-8	Not Listed
• Hydrotreated light naphthenic petroleum distillate (highly refined)	64742-53-6	Not Listed
• Kerosene	8008-20-6	Not Listed

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

• Oleic acid	112-80-1	Not Listed
• Dipropylene glycol monomethyl ether	34590-94-8	Not Listed
• 2-Aminoethanol	141-43-5	Not Listed
• 1,2-Propanediol	57-55-6	Not Listed



• Propane	74-98-6	Not Listed
• Butane	106-97-8	Not Listed
• Hydrotreated light naphthenic petroleum distillate (highly refined)	64742-53-6	Not Listed
• Kerosene	8008-20-6	Not Listed

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

• Oleic acid	112-80-1	Not Listed
• Dipropylene glycol monomethyl ether	34590-94-8	Not Listed
• 2-Aminoethanol	141-43-5	Not Listed
• 1,2-Propanediol	57-55-6	Not Listed
• Propane	74-98-6	Not Listed
• Butane	106-97-8	Not Listed
• Hydrotreated light naphthenic petroleum distillate (highly refined)	64742-53-6	Not Listed
• Kerosene	8008-20-6	Not Listed

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

• Oleic acid	112-80-1	Not Listed
• Dipropylene glycol monomethyl ether	34590-94-8	Not Listed
• 2-Aminoethanol	141-43-5	Not Listed
• 1,2-Propanediol	57-55-6	Not Listed
• Propane	74-98-6	Not Listed
• Butane	106-97-8	Not Listed
• Hydrotreated light naphthenic petroleum distillate (highly refined)	64742-53-6	Not Listed
• Kerosene	8008-20-6	Not Listed

**U.S. - CERCLA/SARA - Section 313 - PBT Chemical Listing**

• Oleic acid	112-80-1	Not Listed
• Dipropylene glycol monomethyl ether	34590-94-8	Not Listed
• 2-Aminoethanol	141-43-5	Not Listed
• 1,2-Propanediol	57-55-6	Not Listed
• Propane	74-98-6	Not Listed
• Butane	106-97-8	Not Listed
• Hydrotreated light naphthenic petroleum distillate (highly refined)	64742-53-6	Not Listed
• Kerosene	8008-20-6	Not Listed

**United States - California****Environment****U.S. - California - Proposition 65 - Carcinogens List**

• Oleic acid	112-80-1	Not Listed
• Dipropylene glycol monomethyl ether	34590-94-8	Not Listed
• 2-Aminoethanol	141-43-5	Not Listed
• 1,2-Propanediol	57-55-6	Not Listed
• Propane	74-98-6	Not Listed
• Butane	106-97-8	Not Listed
• Hydrotreated light naphthenic petroleum distillate (highly refined)	64742-53-6	Not Listed
• Kerosene	8008-20-6	Not Listed

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

• Oleic acid	112-80-1	Not Listed
• Dipropylene glycol monomethyl ether	34590-94-8	Not Listed
• 2-Aminoethanol	141-43-5	Not Listed
• 1,2-Propanediol	57-55-6	Not Listed
• Propane	74-98-6	Not Listed
• Butane	106-97-8	Not Listed

• Hydrotreated light naphthenic petroleum distillate (highly refined)	64742-53-6	Not Listed
• Kerosene	8008-20-6	Not Listed

**U.S. - California - Proposition 65 - Maximum Allowable Dose Levels (MADL)**

• Oleic acid	112-80-1	Not Listed
• Dipropylene glycol monomethyl ether	34590-94-8	Not Listed
• 2-Aminoethanol	141-43-5	Not Listed
• 1,2-Propanediol	57-55-6	Not Listed
• Propane	74-98-6	Not Listed
• Butane	106-97-8	Not Listed
• Hydrotreated light naphthenic petroleum distillate (highly refined)	64742-53-6	Not Listed
• Kerosene	8008-20-6	Not Listed

**U.S. - California - Proposition 65 - No Significant Risk Levels (NSRL)**

• Oleic acid	112-80-1	Not Listed
• Dipropylene glycol monomethyl ether	34590-94-8	Not Listed
• 2-Aminoethanol	141-43-5	Not Listed
• 1,2-Propanediol	57-55-6	Not Listed
• Propane	74-98-6	Not Listed
• Butane	106-97-8	Not Listed
• Hydrotreated light naphthenic petroleum distillate (highly refined)	64742-53-6	Not Listed
• Kerosene	8008-20-6	Not Listed

**U.S. - California - Proposition 65 - Reproductive Toxicity - Female**

• Oleic acid	112-80-1	Not Listed
• Dipropylene glycol monomethyl ether	34590-94-8	Not Listed
• 2-Aminoethanol	141-43-5	Not Listed
• 1,2-Propanediol	57-55-6	Not Listed
• Propane	74-98-6	Not Listed
• Butane	106-97-8	Not Listed
• Hydrotreated light naphthenic petroleum distillate (highly refined)	64742-53-6	Not Listed
• Kerosene	8008-20-6	Not Listed

**U.S. - California - Proposition 65 - Reproductive Toxicity - Male**

• Oleic acid	112-80-1	Not Listed
• Dipropylene glycol monomethyl ether	34590-94-8	Not Listed
• 2-Aminoethanol	141-43-5	Not Listed
• 1,2-Propanediol	57-55-6	Not Listed
• Propane	74-98-6	Not Listed
• Butane	106-97-8	Not Listed
• Hydrotreated light naphthenic petroleum distillate (highly refined)	64742-53-6	Not Listed
• Kerosene	8008-20-6	Not Listed

**United States - Pennsylvania****Labor****U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List**

• Oleic acid	112-80-1	Not Listed
• Dipropylene glycol monomethyl ether	34590-94-8	Not Listed
• 2-Aminoethanol	141-43-5	Not Listed
• 1,2-Propanediol	57-55-6	Not Listed
• Propane	74-98-6	Not Listed
• Butane	106-97-8	Not Listed
• Hydrotreated light naphthenic petroleum distillate (highly refined)	64742-53-6	Not Listed

• Kerosene	8008-20-6	Not Listed
<b>U.S. - Pennsylvania - RTK (Right to Know) - Special Hazardous Substances</b>		
• Oleic acid	112-80-1	Not Listed
• Dipropylene glycol monomethyl ether	34590-94-8	Not Listed
• 2-Aminoethanol	141-43-5	Not Listed
• 1,2-Propanediol	57-55-6	Not Listed
• Propane	74-98-6	Not Listed
• Butane	106-97-8	Not Listed
• Hydrotreated light naphthenic petroleum distillate (highly refined)	64742-53-6	Not Listed
• Kerosene	8008-20-6	Not Listed

## 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
- H280 - Contains gas under pressure; may explode if heated
- H302 - Harmful if swallowed
- H304 - May be fatal if swallowed and enters airways
- H312 - Harmful in contact with skin
- H314 - Causes severe skin burns and eye damage.
- H332 - Harmful if inhaled
- H350 - May cause cancer.
- R12 - Extremely flammable.
- R20/21/22 - Harmful by inhalation, in contact with skin and if swallowed.
- R34 - Causes burns.
- R38 - Irritating to skin.
- R45 - May cause cancer.
- R65 - Harmful: may cause lung damage if swallowed.

### Last Revision Date

- 05/March/2015

### Preparation Date

- 05/March/2015

### Disclaimer/Statement of Liability

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### Key to abbreviations

NDA = No data available