**SECTION 1: Identification of the substance/mixture and of the company/undertaking**

### 1.1. Product identifier

- **Product form**: Mixture
- **Trade name**: AUTOGUARD DE-ICER 12 OZ.
- **Product code**: 701163

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

- **Use of the substance/mixture**: Aerosol De-Icer

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

- **Warren Oil Company, Inc.**
  - 2340 Highway 301 North
  - Dunn, NC 28334
  - T 910-892-6456

### 1.4. Emergency telephone number

- **Emergency number**: CHEMTREC 24 Hour 1-800-424-9300, 1-703-527-3887 (International)

**SECTION 2: Hazards identification**

### 2.1. Classification of the substance or mixture

**GHS-US classification**
- Flammable Aerosol 2: H223
- Compressed gas: H280
- Acute Toxic 1 (Oral): H300
- Eye Dam. 1: H318
- Repr. 1B: H360
- STOT SE 1: H370

Full text of H-phrases: see section 16

### 2.2. Label elements

**GHS-US labeling**

- **Hazard pictograms (GHS-US)**
  - GHS02
  - GHS04
  - GHS05
  - GHS06
  - GHS08

- **Signal word (GHS-US)**: Danger
- **Hazard statements (GHS-US)**
  - H223 - Flammable aerosol
  - H280 - Contains gas under pressure; may explode if heated
  - H300 - Fatal if swallowed
  - H318 - Causes serious eye damage
  - H360 - May damage fertility or the unborn child
  - H370 - Causes damage to organs

- **Precautionary statements (GHS-US)**
  - P201 - Obtain special instructions
  - P202 - Do not handle until all safety precautions have been read and understood
  - P210 - Keep away from heat, sparks, open flames, 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 dust, fumes, gas, mist, vapor spray
  - P264 - Wash affected areas thoroughly after handling
  - P270 - Do not eat, drink or smoke when using this product
  - P280 - Wear protective gloves, protective clothing, eye protection, face protection
  - P301+P310 - If swallowed: Immediately call a poison control center, doctor, physician.
  - P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
  - P307+P311 - If exposed: Call a poison center/doctor
  - P308+P313 - If exposed or concerned: Get medical advice/attention
  - P310 - Immediately call a poison center, doctor, physician
  - P321 - Specific treatment: See section 4.1 on SDS
  - P330 - Rinse mouth
  - P405 - Store locked up
  - P410+P403 - Protect from sunlight. Store in a well-ventilated place
  - P410+P412 - Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F
  - P501 - Dispose of contents/container to appropriate waste disposal facility, in accordance with local, regional, national, international regulations.
2.3. Other hazards

Other hazards not contributing to the classification:  
Contains gas under pressure; may explode if heated. None under normal conditions.

2.4. Unknown acute toxicity (GHS US)

No data available

SECTION 3: Composition/Information on ingredients

3.1. Substance

Not applicable

3.2. Mixture

<table>
<thead>
<tr>
<th>Name</th>
<th>Product identifier</th>
<th>%</th>
<th>GHS-US classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methanol</td>
<td>(CAS No) 67-56-1</td>
<td>50 - 70</td>
<td>Flam. Liq. 2, H225, Acute Tox. 3 (Oral), H301, Acute Tox. 3 (Dermal), H311, Acute Tox. 3 (inhalation:dust,mist), H331, STOT SE 1, H370</td>
</tr>
<tr>
<td>Petroleum Gases, Liquefied, Sweetened</td>
<td>(CAS No) 68476-86-8</td>
<td>10 - 30</td>
<td>Flam. Gas 1, H220, Flam. Liq. 1, H224</td>
</tr>
<tr>
<td>Ethylene Glycol</td>
<td>(CAS No) 107-21-1</td>
<td>10 - 30</td>
<td>Acute Tox. 1 (Oral), H300, Acute Tox. 4 (inhalation: vapour), H332</td>
</tr>
<tr>
<td>2-Propanol</td>
<td>(CAS No) 67-63-0</td>
<td>1 - 5</td>
<td>Flam. Liq. 2, H225, Eye Irrit. 2A, H319, STOT SE 3, H336</td>
</tr>
<tr>
<td>2-Aminoethanol</td>
<td>(CAS No) 141-43-5</td>
<td>&lt;= 0.0714</td>
<td>Acute Tox. 4 (Oral), H302, Acute Tox. 4 (Dermal), H312, Acute Tox. 4 (inhalation), H332, Skin Corr. 1A, H314</td>
</tr>
<tr>
<td>Water</td>
<td>(CAS No) 7732-18-5</td>
<td>0.0392 - 0.0408</td>
<td>Not classified</td>
</tr>
<tr>
<td>Sodium-2(3H)-Benzothiazethione, Conc=50%, Aqueous Solution</td>
<td>(CAS No) 2492-26-4</td>
<td>0.0392 - 0.0408</td>
<td>Skin Corr. 1A, H314</td>
</tr>
<tr>
<td>Proprietary Inhibitor Package</td>
<td>(CAS No) Proprietary</td>
<td>&lt;= 0.0252</td>
<td>Not classified</td>
</tr>
</tbody>
</table>

The exact percentage is a trade secret.

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general:  
Never give anything by mouth to an unconscious person. IF exposed or concerned: Get medical advice/attention. Call a POISON CENTER or doctor/physician.

First-aid measures after inhalation:  
Cough. Remove victim to fresh air and keep at rest in a position comfortable for breathing.

First-aid measures after skin contact:  
Rinse skin with water/shower. Remove/Take off immediately all contaminated clothing. Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse.

First-aid measures after eye contact:  
Direct contact with the eyes is likely to be irritating. 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.

First-aid measures after ingestion:  
Rinse mouth. Do NOT induce vomiting. Immediately call a poison center or doctor/physician.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/injuries:  
May damage fertility or the unborn child. Causes damage to organs.

Symptoms/injuries after inhalation:  
Shortness of breath.

Symptoms/injuries after skin contact:  
May cause slight irritation. Itching. Red skin. Skin rash/inflammation.

Symptoms/injuries after eye contact:  
Inflammation/damage of the eye tissue. Irritation of the eye tissue. Redness of the eye tissue. Causes serious eye damage.

Symptoms/injuries after ingestion:  
Fatal if swallowed.

4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:  

Unsuitable extinguishing media:  
Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

Fire hazard:  
Extremely flammable aerosol. Highly flammable liquid and vapor. Flammable aerosol.

Explosion hazard:  
May form flammable/explosive vapor-air mixture. Heat may build pressure, rupturing closed containers, spreading fire and increasing risk of burns and injuries.
SECTION 5. Advice for firefighters

Firefighting instructions: Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering environment. DO NOT fight fire when fire reaches explosives. Evacuate area.

Protection during firefighting: Do not enter fire area without proper protective equipment, including respiratory protection.

Other information: Aerosol Level 2.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures: No open flames. No smoking. Isolate from fire, if possible, without unnecessary risk. Remove ignition sources. Use special care to avoid static electric charges.

6.1.1. For non-emergency personnel

Protective equipment: Gloves. Safety glasses.

Emergency procedures: Evacuate unnecessary personnel.

6.1.2. For emergency responders

Protective equipment: Equip cleanup crew with proper protection. Avoid breathing dust, fume, gas, mist, vapor spray.

Emergency procedures: Ventilate area.

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

For containment: Dam up the liquid spill. Contain released substance, pump into suitable containers. Plug the leak, cut off the supply.

Methods for cleaning up: Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials.

6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Additional hazards when processed: Handle empty containers with care because residual vapors are flammable. Hazardous waste due to potential risk of explosion. Pressurized container: Do not pierce or burn, even after use.

Precautions for safe handling: No open flames. No smoking. Use only non-sparking tools. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapor. Do not spray on an open flame or other ignition source. Do not handle until all safety precautions have been read and understood. Obtain special instructions. Do not breathe dust, fumes, gas, mist, vapor spray.

Hygiene measures: Wash affected areas thoroughly after handling. Do not eat, drink or smoke when using this product. Wash contaminated clothing before reuse. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Contaminated work clothing should not be allowed out of the workplace. Separate working clothes from town clothes. Launder separately. Remove contaminated clothes.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures: Ground/bond container and receiving equipment. Use explosion-proof electrical, ventilating, lighting equipment. Proper grounding procedures to avoid static electricity should be followed.

Storage conditions: Keep container tightly closed. Keep only in the original container in a cool, well ventilated place away from: Keep container closed when not in use. Do not expose to temperatures exceeding 50 °C/ 122 °F. Keep in fireproof place.

Incompatible products: Strong bases. Strong acids.

Incompatible materials: Sources of ignition. Direct sunlight. Heat sources.

Storage area: Store in a well-ventilated place.

7.3. Specific end use(s)

Follow Label Directions.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Petroleum Gases, Liquefied, Sweetened (68476-86-8)

<table>
<thead>
<tr>
<th>USA ACGIH</th>
<th>ACGIH TWA (ppm)</th>
<th>1000 ppm Listed under Aliphatic hydrocarbon gases alkane C1-C4</th>
</tr>
</thead>
<tbody>
<tr>
<td>USA OSHA</td>
<td>OSHA PEL (TWA) (mg/m³)</td>
<td>1800 mg/m³</td>
</tr>
<tr>
<td>USA OSHA</td>
<td>OSHA PEL (TWA) (ppm)</td>
<td>1000 ppm</td>
</tr>
</tbody>
</table>
### 2-Propanol (67-63-0)

<table>
<thead>
<tr>
<th></th>
<th>ACGIH Ceiling (mg/m³)</th>
<th>Data Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>USA ACGIH</td>
<td></td>
<td>100 mg/m³ (Ethylene glycol; USA; Momentary value; TLV - Adopted Value)</td>
</tr>
</tbody>
</table>

### 2-Aminoethanol (141-43-5)

<table>
<thead>
<tr>
<th></th>
<th>ACGIH Ceiling (mg/m³)</th>
<th>Data Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>USA ACGIH</td>
<td></td>
<td>3 ppm (Ethanolamine; USA; Time-weighted average exposure limit 8 h; TLV - Adopted Value)</td>
</tr>
</tbody>
</table>

### Methanol (67-56-1)

<table>
<thead>
<tr>
<th></th>
<th>ACGIH Ceiling (mg/m³)</th>
<th>Data Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>USA ACGIH</td>
<td></td>
<td>262 mg/m³</td>
</tr>
</tbody>
</table>

### 8.2. Exposure controls

**Appropriate engineering controls**: Local exhaust ventilation, vent hoods. Ensure good ventilation of the work station.

**Personal protective equipment**: Gloves. Safety glasses. Avoid all unnecessary exposure.

**Hand protection**: Wear protective gloves.

**Eye protection**: Chemical goggles or safety glasses.

**Skin and body protection**: Wear suitable protective clothing.

**Respiratory protection**: Where exposure through inhalation may occur from use, respiratory protection equipment is recommended.

**Consumer exposure controls**: Avoid contact during pregnancy/while nursing.

**Other information**: Do not eat, drink or smoke during use.

### SECTION 9: Physical and chemical properties

#### 9.1. Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>Gas</td>
</tr>
<tr>
<td>Appearance</td>
<td>Liquid.</td>
</tr>
<tr>
<td>Color</td>
<td>Colourless to light yellow.</td>
</tr>
<tr>
<td>Odor</td>
<td>Characteristic. Mild.</td>
</tr>
<tr>
<td>Odor threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>pH</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative evaporation rate (butyl acetate=1)</td>
<td>No data available</td>
</tr>
<tr>
<td>Melting point</td>
<td>No data available</td>
</tr>
<tr>
<td>Freezing point</td>
<td>No data available</td>
</tr>
<tr>
<td>Boiling point</td>
<td>No data available</td>
</tr>
<tr>
<td>Flash point</td>
<td>-128 °C (Propellant)</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>63.9 mm Hg (Liquid)</td>
</tr>
<tr>
<td>Relative vapor density at 20 °C</td>
<td>No data available</td>
</tr>
</tbody>
</table>
**AUTOGUARD DE-ICER 12 OZ.**

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Relative density: 0.869
Solubility: Soluble in water.
Log Pow: No data available
Log Kow: No data available
Viscosity, kinematic: No data available
Viscosity, dynamic: No data available
 Explosive properties: No data available
 Oxidizing properties: No data available
 Explosion limits: No data available

9.2. **Other information**

VOC content: 76 %

**SECTION 10: Stability and reactivity**

10.1. **Reactivity**

No additional information available

10.2. **Chemical stability**

Extremely flammable aerosol. Highly flammable liquid and vapor. May form flammable/explosive vapor-air mixture. Flammable aerosol. Contains gas under pressure; may explode if heated. Extreme risk of explosion by shock, friction, fire or other sources of ignition.

10.3. **Possibility of hazardous reactions**

Not established.

10.4. **Conditions to avoid**


10.5. **Incompatible materials**

Strong acids. Strong bases.

10.6. **Hazardous decomposition products**


**SECTION 11: Toxicological information**

11.1. **Information on toxicological effects**

Acute toxicity: Oral: Fatal if swallowed.

<table>
<thead>
<tr>
<th>Compound</th>
<th>Route</th>
<th>LD50/LC50 (mg/kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-Propanol (67-63-0)</td>
<td>oral</td>
<td>12870 mg/kg (Rabbit; Experimental value; Equivalent or similar to OECD 401; 16.4; Rabbit)</td>
</tr>
<tr>
<td></td>
<td>dermal</td>
<td>12870 mg/kg (Rabbit; Experimental value; Equivalent or similar to OECD 401; 16.4; Rabbit)</td>
</tr>
<tr>
<td></td>
<td>inhalation rat (mg/l)</td>
<td>73 mg/l/4h (Rat)</td>
</tr>
<tr>
<td>Ethylene Glycol (107-21-1)</td>
<td>oral</td>
<td>7712 mg/kg body weight</td>
</tr>
<tr>
<td></td>
<td>dermal</td>
<td>&gt; 3500 mg/kg body weight</td>
</tr>
<tr>
<td></td>
<td>inhalation rat (mg/l)</td>
<td>&gt; 2.5 mg/l 6 Hour by Air</td>
</tr>
<tr>
<td>Sodium-2(3H)-Benzothiazolethione, Conc=50%, Aqueous Solution (2492-26-4)</td>
<td>oral</td>
<td>2000 mg/kg (Rat)</td>
</tr>
<tr>
<td></td>
<td>dermal</td>
<td>2000 mg/kg (Rabbit)</td>
</tr>
<tr>
<td>2-Aminoethanol (141-43-5)</td>
<td>oral</td>
<td>1720 mg/kg (Rat)</td>
</tr>
<tr>
<td></td>
<td>dermal</td>
<td>1018 mg/kg (Rabbit)</td>
</tr>
<tr>
<td>Methanol (67-56-1)</td>
<td>oral</td>
<td>&gt;= 2528 mg/kg body weight application as 50% aqueous solution</td>
</tr>
<tr>
<td></td>
<td>dermal</td>
<td>17100 mg/kg corresponding to 20 ml/kg bw according to the authors</td>
</tr>
<tr>
<td></td>
<td>inhalation rat (mg/l)</td>
<td>128.2 mg/l/4h Air</td>
</tr>
</tbody>
</table>

Skin corrosion/irritation: Not classified
Serious eye damage/irritation: Causes serious eye damage.
Respiratory or skin sensitization: Not classified
Germ cell mutagenicity: Not classified Based on available data, the classification criteria are not met
Carcinogenicity: Not classified

11.2. **Reproductive toxicity**

IARC group: 3
Reproductive toxicity: May damage fertility or the unborn child.
### Specific target organ toxicity (single exposure)
- Causes damage to organs.

### Specific target organ toxicity (repeated exposure)
- Not classified

### Aspiration hazard
- Not classified

### Potential Adverse human health effects and symptoms
#### Symptoms/injuries after inhalation
- Shortness of breath.

#### Symptoms/injuries after skin contact
- May cause slight irritation. Itching. Red skin. Skin rash/inflammation.

#### Symptoms/injuries after eye contact
- Inflammation/damage of the eye tissue. Irritation of the eye tissue. Redness of the eye tissue. Causes serious eye damage.

#### Symptoms/injuries after ingestion
- Fatal if swallowed.

### SECTION 12: Ecological information
#### 12.1. Toxicity

**2-Propanol (67-63-0)**
- LC50 fish 2: 9640 mg/l (LC50; OECD 203: Fish, Acute Toxicity Test; 96 h; Pimephales promelas; Flow-through system; Fresh water; Experimental value)
- EC50 Daphnia 2: 13299 mg/l (EC50; Other; 48 h; Daphnia magna)
- Threshold limit algae 1: > 1000 mg/l (EC50; UBA; 72 h; Scenedesmus subspicatus)

**Ethylene Glycol (107-21-1)**
- EC50 Daphnia 1: > 10000 mg/l (EC50; 24 h)
- LC50 fish 2: 40761 mg/l (LC50; 96 h; Salmo gairdneri)

**2-Aminoethanol (141-43-5)**
- LC50 fish 1: 150 mg/l (LC50; 96 h; Salmo gairdneri)
- EC50 Daphnia 1: 140 mg/l (EC50; 24 h)
- Threshold limit algae 2: 35 mg/l (EC50; 72 h)

**Methanol (67-56-1)**
- LC50 fish 1: 15400 mg/l (LC50; EPA 660/3-75/009; 96 h; Lepomis macrochirus; Flow-through system; Fresh water; Experimental value)
- EC50 Daphnia 1: > 10000 mg/l (EC50; DIN 38412-11; 48 h; Daphnia magna; Static system; Fresh water; Experimental value)
- LC50 fish 2: 10800 mg/l (LC50; 96 h; Salmo gairdneri)

#### 12.2. Persistence and degradability

**AUTOGUARD DE-ICER 12 OZ.**
- Persistence and degradability: Not established.

**Petroleum Gases, Liquefied, Sweetened (68476-86-8)**
- Persistence and degradability: Not established.

**2-Propanol (67-63-0)**
- Persistence and degradability: Readily biodegradable in water. Biodegradable in the soil under anaerobic conditions. No (test)data on mobility of the substance available.
- Biochemical oxygen demand (BOD): 1.19 g O₂ /g substance
- Chemical oxygen demand (COD): 2.23 g O₂ /g substance
- ThOD: 2.40 g O₂ /g substance

**Ethylene Glycol (107-21-1)**
- Persistence and degradability: Readily biodegradable in water. Biodegradable in the soil.
- Biochemical oxygen demand (BOD): 0.47 g O₂ /g substance
- Chemical oxygen demand (COD): 1.24 g O₂ /g substance
- ThOD: 1.29 g O₂ /g substance
- BOD (% of ThOD): 0.36

**Water (7732-18-5)**
- Persistence and degradability: Not established.

**Sodium-2(3H)-Benzoazolethione, Conc=50%, Aqueous Solution (2492-26-4)**
- Persistence and degradability: No (test)data on mobility of the components available.

**2-Aminoethanol (141-43-5)**
- Biochemical oxygen demand (BOD): 0.80 g O₂ /g substance
- Chemical oxygen demand (COD): 1.34 g O₂ /g substance
- ThOD: 2.49 g O₂ /g substance
### 2-Aminoethanol (141-43-5)

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>BOD (% of ThOD)</td>
<td>0.32</td>
</tr>
</tbody>
</table>

#### Proprietary Inhibitor Package (Proprietary)

Persistence and degradability: Not established.

#### Methanol (67-56-1)


Biochemical oxygen demand (BOD): 0.6 - 1.12 g O₂/g substance

Chemical oxygen demand (COD): 1.42 g O₂/g substance

ThOD: 1.5 g O₂/g substance

BOD (% of ThOD): 0.8 (Literature study)

#### Bioaccumulative potential

**AUTOGUARD DE-ICER 12 OZ.**

Bioaccumulative potential: Not established.

**Ethylene Glycol (107-21-1)**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>BCF fish 1</td>
<td>10 (BCF; 72 h)</td>
</tr>
<tr>
<td>BCF other aquatic organisms 1</td>
<td>0.21 - 0.6 (BCF)</td>
</tr>
<tr>
<td>BCF other aquatic organisms 2</td>
<td>190 (BCF; 24 h)</td>
</tr>
<tr>
<td>Log Pow</td>
<td>-1.34 (Experimental value)</td>
</tr>
</tbody>
</table>

Bioaccumulative potential: Low potential for bioaccumulation (BCF < 500).

**Water (7732-18-5)**

Bioaccumulative potential: Not established.

**Sodium-(2(3H))-Benzothiazolethione, Conc=50%, Aqueous Solution (2492-26-4)**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Log Pow</td>
<td>-0.46</td>
</tr>
</tbody>
</table>

Bioaccumulative potential: Bioaccumulation: not applicable.

**2-Aminoethanol (141-43-5)**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Log Pow</td>
<td>-1.91</td>
</tr>
</tbody>
</table>

Bioaccumulative potential: Bioaccumulation: not applicable. Not established.

**Proprietary Inhibitor Package (Proprietary)**

Bioaccumulative potential: Not established.

**Methanol (67-56-1)**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>BCF fish 1</td>
<td>&lt; 10 (BCF; 72 h; Leuciscus idus)</td>
</tr>
<tr>
<td>Log Pow</td>
<td>-0.77 (Experimental value; Other)</td>
</tr>
</tbody>
</table>

Bioaccumulative potential: Low potential for bioaccumulation (BCF < 500).

#### Mobility in soil

**2-Propanol (67-63-0)**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surface tension</td>
<td>0.021 N/m (25 °C)</td>
</tr>
</tbody>
</table>

**Ethylene Glycol (107-21-1)**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surface tension</td>
<td>0.048 N/m (20 °C)</td>
</tr>
</tbody>
</table>

**2-Aminoethanol (141-43-5)**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surface tension</td>
<td>0.050 N/m</td>
</tr>
</tbody>
</table>

**Methanol (67-56-1)**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surface tension</td>
<td>0.023 N/m (20 °C)</td>
</tr>
<tr>
<td>Log Koc</td>
<td>Koc.PCKOCWIN v1.66; 1; Calculated value</td>
</tr>
</tbody>
</table>

#### Other adverse effects

Other information: Avoid release to the environment.

### SECTION 13: Disposal considerations

#### Waste treatment methods

Waste disposal recommendations: Dispose in a safe manner in accordance with local/national regulations. Container under pressure. Do not drill or burn even after use. Dispose of contents/container to appropriate waste disposal facility, in accordance with local, regional, national, international regulations.
Additional information: Handle empty containers with care because residual vapors are flammable. Flammable vapors may accumulate in the container.

Ecology - waste materials: Avoid release to the environment. Hazardous waste due to toxicity.

SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

US DOT (ground): UN1950, Aerosols, 2.1, Limited Quantity
ICAO/IATA (air): UN1950, Aerosols, 2.1 (6.1), Limited Quantity
IMO/IMDG (water): UN1950, Aerosols, 2.1 (6.1), Limited Quantity

Special Provisions: N82 - See 173.306 of this subchapter for classification criteria for flammable aerosols.

14.2. UN proper shipping name

Proper Shipping Name (DOT): Aerosols
Transport hazard class(es) (DOT): 2.1 - Class 2.1 - Flammable gas 49 CFR 173.115
Hazard labels (DOT): 2.1 - Flammable gas

DOT Special Provisions (49 CFR 172.102): N82 - See 173.306 of this subchapter for classification criteria for flammable aerosols.
DOT Packaging Exceptions (49 CFR 173.xxx): 306
DOT Packaging Non Bulk (49 CFR 173.xxx): None
DOT Packaging Bulk (49 CFR 173.xxx): None

14.3. Additional information

Other information: No supplementary information available.

Overland transport
No additional information available

Transport by sea

DOT Vessel Stowage Location: A - The material may be stowed “on deck” or “under deck” on a cargo vessel and on a passenger vessel.
DOT Vessel Stowage Other: 48 - Stow “away from” sources of heat, 87 - Stow “separated from” Class 1 (explosives) except Division 14, 126 - Segregation same as for Class 9, miscellaneous hazardous materials
Subsidiary risks (IMDG): 6.1

Air transport

DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27): 75 kg
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75): 150 kg
Subsidiary risks (IATA): 6.1

SECTION 15: Regulatory information

15.1. US Federal regulations

<table>
<thead>
<tr>
<th>AUTOGUARD DE-ICER 12 OZ.</th>
<th>Delayed (chronic) health hazard</th>
<th>Fire hazard</th>
<th>Immediate (acute) health hazard</th>
<th>Sudden release of pressure hazard</th>
</tr>
</thead>
<tbody>
<tr>
<td>SARA Section 311/312 Hazard Classes</td>
<td>Petroleum Gases, Liquefied, Sweetened (68476-86-8)</td>
<td>Immediate (acute) health hazard</td>
<td>Fire hazard</td>
<td>Sudden release of pressure hazard</td>
</tr>
<tr>
<td>2-Propanol (67-63-0)</td>
<td>Listed on the United States TSCA (Toxic Substances Control Act) inventory</td>
<td>Immediate (acute) health hazard</td>
<td>Fire hazard</td>
<td></td>
</tr>
</tbody>
</table>
## Ethylene Glycol (107-21-1)

- Listed on the United States TSCA (Toxic Substances Control Act) inventory
- Subject to reporting requirements of United States SARA Section 313
- SARA Section 311/312 Hazard Classes: Immediate (acute) health hazard
- SARA Section 313 - Emission Reporting: 100 %

## Sodium-(2H)-Benzothiazolethione, Conc=50%, Aqueous Solution (2492-26-4)

- SARA Section 311/312 Hazard Classes: Immediate (acute) health hazard
- Delayed (chronic) health hazard

## 2-Aminoethanol (141-43-5)

- SARA Section 311/312 Hazard Classes: Immediate (acute) health hazard

## Methanol (67-56-1)

- Subject to reporting requirements of United States SARA Section 313
- Listed on the United States TSCA (Toxic Substances Control Act) inventory
- Listed on the United States SARA Section 302
- Listed on the United States SARA Section 355

## 15.2. International regulations

### CANADA

**WHMIS Classification**

- **AutoGuard DE-ICER 12 OZ.**
- Class B Division 5 - Flammable Aerosol

### EU-Regulations

- **2-Propanol (67-63-0)**
- Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

### Classification according to Regulation (EC) No. 1272/2008 [CLP]

- **Ethylene Glycol (107-21-1)**
- **Methanol (67-56-1)**

### Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD]

- Carc.Cat.1; R45
- Mutat.Cat.2; R46
- F+; R12
- T; R23/24/25
- T; R38/20/25
- Xi; R36

Full text of R-phrases: see section 16

### 15.2. National regulations

- **2-Propanol (67-63-0)**
  - Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)
  - Listed on the AICS (Australian Inventory of Chemical Substances)
  - Listed on the Japanese ENC (Existing & New Chemical Substances) inventory
  - Listed on KECI (Korean Existing Chemicals Inventory)
  - Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)

- **Ethylene Glycol (107-21-1)**
  - Listed on the Canadian IDL (Ingredient Disclosure List)

- **Methanol (67-56-1)**
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## 15.3. US State regulations

<table>
<thead>
<tr>
<th></th>
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<td>No</td>
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<td>Non-significant risk level (NSRL)</td>
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<table>
<thead>
<tr>
<th>2-Propanol (67-63-0)</th>
<th>U.S. - California - Proposition 65 - Carcinogens List</th>
<th>U.S. - California - Proposition 65 - Developmental Toxicity</th>
<th>U.S. - California - Proposition 65 - Reproductive Toxicity - Female</th>
<th>U.S. - California - Proposition 65 - Reproductive Toxicity - Male</th>
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<th>ETHYLENE GLYCOL (107-21-1)</th>
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<table>
<thead>
<tr>
<th>SODIUM-2(3H)-BENZOTHIAZOLETHIONE, CONC=50%, AQUEOUS SOLUTION (2492-26-4)</th>
<th>U.S. - California - Proposition 65 - Carcinogens List</th>
<th>U.S. - California - Proposition 65 - Developmental Toxicity</th>
<th>U.S. - California - Proposition 65 - Reproductive Toxicity - Female</th>
<th>U.S. - California - Proposition 65 - Reproductive Toxicity - Male</th>
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</tbody>
</table>

<table>
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<tr>
<th>2-AMINOETHANOL (141-43-5)</th>
<th>U.S. - California - Proposition 65 - Carcinogens List</th>
<th>U.S. - California - Proposition 65 - Developmental Toxicity</th>
<th>U.S. - California - Proposition 65 - Reproductive Toxicity - Female</th>
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<td>Non-significant risk level (NSRL)</td>
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</table>

<table>
<thead>
<tr>
<th>PROPRIETARY INHIBITOR PACKAGE (Proprietary)</th>
<th>U.S. - California - Proposition 65 - Carcinogens List</th>
<th>U.S. - California - Proposition 65 - Developmental Toxicity</th>
<th>U.S. - California - Proposition 65 - Reproductive Toxicity - Female</th>
<th>U.S. - California - Proposition 65 - Reproductive Toxicity - Male</th>
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### AUTOGUARD DE-ICER 12 OZ.
Safety Data Sheet

**Petroleum Gases, Liquefied, Sweetened (68476-86-8)**

**State or local regulations**

- New Jersey Right-to-Know
- Minnesota Right-to-Know
- Rhode Island Right to Know
- U.S. - Pennsylvania - RTK (Right to Know) List
- U.S. - Massachusetts - Right To Know List

**2-Propanol (67-63-0)**

**State or local regulations**

- U.S. - New Jersey - Right to Know Hazardous Substance List
- U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List

**Methanol (67-56-1)**

**State or local regulations**

- U.S. - California - Proposition 65 - Maximum Allowable Dose Levels (MADL)
- New Jersey Right-to-Know
- Florida Right to Know
- U.S. - Massachusetts - Right To Know List
- U.S. - Pennsylvania - RTK (Right to Know) List

### SECTION 16: Other information

<table>
<thead>
<tr>
<th>Full text of H-phrases</th>
<th>Other information</th>
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<tbody>
<tr>
<td>Acute Tox. 1 (Oral)</td>
<td>Acute toxicity (oral) Category 1</td>
</tr>
<tr>
<td>Acute Tox. 3 (Dermal)</td>
<td>Acute toxicity (dermal) Category 3</td>
</tr>
<tr>
<td>Acute Tox. 3 (Inhalation:dust,mist)</td>
<td>Acute toxicity (inhalation:dust,mist) Category 3</td>
</tr>
<tr>
<td>Acute Tox. 3 (Oral)</td>
<td>Acute toxicity (oral) Category 3</td>
</tr>
<tr>
<td>Acute Tox. 4 (Dermal)</td>
<td>Acute toxicity (dermal) Category 4</td>
</tr>
<tr>
<td>Acute Tox. 4 (Inhalation)</td>
<td>Acute toxicity (inhalation) Category 4</td>
</tr>
<tr>
<td>Acute Tox. 4 (Inhalation:vapour)</td>
<td>Acute toxicity (inhalation:vapour) Category 4</td>
</tr>
<tr>
<td>Acute Tox. 4 (Oral)</td>
<td>Acute toxicity (oral) Category 4</td>
</tr>
<tr>
<td>Compressed gas</td>
<td>Gases under pressure Compressed gas</td>
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<tr>
<td>Eye Dam. 1</td>
<td>Serious eye damage/eye irritation Category 1</td>
</tr>
<tr>
<td>Eye Irrit. 2A</td>
<td>Serious eye damage/eye irritation Category 2A</td>
</tr>
<tr>
<td>Flam. Aerosol 2</td>
<td>Flammable aerosol Category 2</td>
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<tr>
<td>Flam. Gas 1</td>
<td>Flammable gases Category 1</td>
</tr>
<tr>
<td>Flam. Liq. 1</td>
<td>Flammable liquids Category 1</td>
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<tr>
<td>Flam. Liq. 2</td>
<td>Flammable liquids Category 2</td>
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<tr>
<td>Repr. 1B</td>
<td>Reproductive toxicity Category 1B</td>
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<tr>
<td>Skin Corr. 1A</td>
<td>Skin corrosion/irritation Category 1A</td>
</tr>
<tr>
<td>STOT SE 1</td>
<td>Specific target organ toxicity (single exposure) Category 1</td>
</tr>
<tr>
<td>STOT SE 3</td>
<td>Specific target organ toxicity (single exposure) Category 3</td>
</tr>
<tr>
<td>H220</td>
<td>Extremely flammable gas</td>
</tr>
<tr>
<td>H223</td>
<td>Flammable aerosol</td>
</tr>
<tr>
<td>H224</td>
<td>Extremely flammable liquid and vapor</td>
</tr>
<tr>
<td>H225</td>
<td>Highly flammable liquid and vapor</td>
</tr>
<tr>
<td>H280</td>
<td>Contains gas under pressure; may explode if heated</td>
</tr>
<tr>
<td>H300</td>
<td>Fatal if swallowed</td>
</tr>
<tr>
<td>H301</td>
<td>Toxic if swallowed</td>
</tr>
<tr>
<td>H302</td>
<td>Harmful if swallowed</td>
</tr>
<tr>
<td>H311</td>
<td>Toxic in contact with skin</td>
</tr>
<tr>
<td>H312</td>
<td>Harmful in contact with skin</td>
</tr>
<tr>
<td>H314</td>
<td>Causes severe skin burns and eye damage</td>
</tr>
<tr>
<td>H318</td>
<td>Causes serious eye damage</td>
</tr>
<tr>
<td>H319</td>
<td>Causes serious eye irritation</td>
</tr>
<tr>
<td>H331</td>
<td>Toxic if inhaled</td>
</tr>
<tr>
<td>H332</td>
<td>Harmful if inhaled</td>
</tr>
<tr>
<td>H336</td>
<td>May cause drowsiness or dizziness</td>
</tr>
<tr>
<td>H360</td>
<td>May damage fertility or the unborn child</td>
</tr>
<tr>
<td>H370</td>
<td>Causes damage to organs</td>
</tr>
</tbody>
</table>
AUTOGUARD DE-ICER 12 OZ.
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according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

<table>
<thead>
<tr>
<th>NFPA health hazard</th>
<th>2 - Intense or continued exposure could cause temporary incapacitation or possible residual injury unless prompt medical attention is given.</th>
</tr>
</thead>
<tbody>
<tr>
<td>NFPA fire hazard</td>
<td>3 - Liquids and solids that can be ignited under almost all ambient conditions.</td>
</tr>
<tr>
<td>NFPA reactivity</td>
<td>0 - Normally stable, even under fire exposure conditions, and are not reactive with water.</td>
</tr>
</tbody>
</table>

**NFPA health hazard**: 2 - Intense or continued exposure could cause temporary incapacitation or possible residual injury unless prompt medical attention is given.

**NFPA fire hazard**: 3 - Liquids and solids that can be ignited under almost all ambient conditions.

**NFPA reactivity**: 0 - Normally stable, even under fire exposure conditions, and are not reactive with water.

**HMIS III Rating**
- **Health**: 2 Moderate Hazard - Temporary or minor injury may occur
- **Flammability**: 3 Serious Hazard
- **Physical**: 1 Slight Hazard
- **Personal Protection**: B

**SDS US (GHS HazCom 2012) - TCC**

The Supplier identified in Section 1 of this MSDS has evaluated this product and certifies it to be labeled and packaged in compliance with the applicable provisions of the Federal Hazardous Substance Act as stated in 16 CFR 1500 and enforced by the Consumer Product Safety Commission, and where applicable the products that require Child Resistant Closures are packaged in accordance with the Poison Prevention Packaging Act as stated in 16 CFR 1700 and enforced by the Consumer Product Safety Commission. All closures have been tested in accordance with the latest protocols. No other testing is required to certify compliance with the above. The date of manufacture is stamped on the product.

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