SAFETY DATA SHEET
Alcohol-Enhanced Flux Remover-ProClean, Aerosol

1. Identification

Product identifier
Product name  Alcohol-Enhanced Flux Remover-ProClean, Aerosol
Product number  MCC-PRO16A, MCC-PRO, MCC-PRO101, MCC-PRO125, MCC-PRO12Y
Synonyms; trade names  "PRO-ProClean Flux Remover"

Recommended use of the chemical and restrictions on use
Application  Cleaning agent.
Uses advised against  No specific uses advised against are identified.

Details of the supplier of the safety data sheet
Supplier  MICROCARE CORPORATION
Manufacturer  MICROCARE CORPORATION
595 John Downey Drive
New Britain, CT  06051
United States of America
CAGE: OATV9
Tel:  +1 800 638 0125, +1 860-827-0626
Fax:  +1 860-893-1930
techsupport@microcare.com

Emergency telephone number
Emergency telephone  CHEMTREC 1-800-424-9300 (within the U.S.)
+1 703-741-5970 (from anywhere in the world)

2. Hazard(s) identification

Classification of the substance or mixture
OSHA Regulatory Status  This Product is Hazardous under the OSHA Hazard Communication Standard.
Physical hazards  Flam. Aerosol 1 - H222
Health hazards  Eye Irrit. 2A - H319 Repr. 1B - H360 STOT SE 1 - H370 STOT SE 3 - H336
Environmental hazards  Not Classified

Human health  Splashes in the eyes may cause redness and irritation. Keep out of the reach of children. See Section 11 for additional information on health hazards.
Physicochemical  Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50°C. Do not pierce or burn, even after use.

Label elements
Alcohol-Enhanced Flux Remover-ProClean, Aerosol

**Pictogram**

![Pictogram](image)

**Signal word** Danger

**Hazard statements**

- H222 Extremely flammable aerosol.
- H319 Causes serious eye irritation.
- H360 May damage fertility or the unborn child.
- H370 Causes damage to organs.
- H336 May cause drowsiness or dizziness.

**Precautionary statements**

- P210 Keep away from heat, sparks, open flames and 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.
- P261 Avoid breathing spray.
- P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
- P302+P352 If on skin: Wash with plenty of water.
- P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P314 Get medical advice/ attention if you feel unwell.
- P337+P313 If eye irritation persists: Get medical advice/ attention.
- P410+P412 Protect from sunlight. Do not expose to temperatures exceeding 50°C /122°F.
- P501 Dispose of contents/ container in accordance with national regulations.

**Supplemental label information**

Safety data sheet available on request. For use in industrial installations only.

**Contains**

PROPA-2-OL, METHANOL

### 3. Composition/Information on ingredients

#### Mixtures

<table>
<thead>
<tr>
<th>Mixtures</th>
<th>30-60%</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PROPA-2-OL</strong></td>
<td></td>
</tr>
<tr>
<td>CAS number: 67-63-0</td>
<td></td>
</tr>
<tr>
<td><strong>Classification</strong></td>
<td></td>
</tr>
<tr>
<td>Flam. Liq. 2 - H225</td>
<td></td>
</tr>
<tr>
<td>Eye Irrit. 2A - H319</td>
<td></td>
</tr>
<tr>
<td>STOT SE 3 - H336</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>ETHANOL</strong></th>
<th>30-60%</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAS number: 64-17-5</td>
<td></td>
</tr>
<tr>
<td><strong>Classification</strong></td>
<td></td>
</tr>
<tr>
<td>Flam. Liq. 2 - H225</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>HFC-134a Tetrafluoroethane</strong></th>
<th>10-30%</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAS number: 811-97-2</td>
<td></td>
</tr>
<tr>
<td><strong>Classification</strong></td>
<td></td>
</tr>
<tr>
<td>Press. Gas, Liquefied - H280</td>
<td></td>
</tr>
</tbody>
</table>
# Alcohol-Enhanced Flux Remover-ProClean, Aerosol

<table>
<thead>
<tr>
<th>Component</th>
<th>Concentration</th>
<th>CAS Number</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methanol</td>
<td>1-5%</td>
<td>67-56-1</td>
<td>Flam. Liq. 2 - H225, Acute Tox. 3 - H301, Acute Tox. 3 - H311, Acute Tox. 3 - H331, Eye Irrit. 2A - H319, Repr. 1B - H360, STOT SE 1 - H370</td>
</tr>
<tr>
<td>Isobutyl methyl ketone</td>
<td>&lt;1%</td>
<td>108-10-1</td>
<td>Flam. Liq. 2 - H225, Acute Tox. 4 - H332, Eye Irrit. 2A - H319, STOT SE 3 - H335</td>
</tr>
<tr>
<td>Ethyl acetate</td>
<td>&lt;1%</td>
<td>141-78-6</td>
<td>Flam. Liq. 2 - H225, Eye Irrit. 2A - H319, STOT SE 3 - H336</td>
</tr>
</tbody>
</table>

The full text for all hazard statements is displayed in Section 16.

### Composition comments
TSCA: The ingredients of this product are on the TSCA Inventory. The exact percentage (concentration) of composition has been withheld as a trade secret in accordance with paragraph (i) of CFR 1900.1200

### Ingredient notes
Denaturants in Ethanol include Methanol, CAS# 67-56-1; MIBK, CAS# 108-10-1 and Ethyl acetate, CAS# 141-78-6

### Composition

#### 4. First-aid measures

**Description of first aid measures**

**General information**
Get medical attention if any discomfort continues. Show this Safety Data Sheet to the medical personnel.

**Inhalation**
Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Maintain an open airway. Loosen tight clothing such as collar, tie or belt. When breathing is difficult, properly trained personnel may assist affected person by administering oxygen. Get medical attention. Place unconscious person on their side in the recovery position and ensure breathing can take place.
Alcohol-Enhanced Flux Remover-ProClean, Aerosol

Ingestion
Rinse mouth thoroughly with water. Give a few small glasses of water or milk to drink. Stop if the affected person feels sick as vomiting may be dangerous. Never give anything by mouth to an unconscious person. Place unconscious person on their side in the recovery position and ensure breathing can take place. Keep affected person under observation. Get medical attention if symptoms are severe or persist.

Skin Contact
Rinse with water.

Eye contact
Rinse with water. Do not rub eye. Remove any contact lenses and open eyelids wide apart. Get medical attention if any discomfort continues.

Protection of first aiders
First aid personnel should wear appropriate protective equipment during any rescue.

Most important symptoms and effects, both acute and delayed

General information
The severity of the symptoms described will vary dependent on the concentration and the length of exposure.

Inhalation
A single exposure may cause the following adverse effects: Pain or irritation. Intoxication. Narcotic effect. Muscle weakness. Nausea, vomiting. Prolonged or repeated exposure may cause the following adverse effects: May cause cancer.

Ingestion
Due to the physical nature of this product, it is unlikely that ingestion will occur. Prolonged or repeated exposure may cause the following adverse effects: May cause cancer.

Skin contact
A single exposure may cause the following adverse effects: Pain. Prolonged or repeated exposure may cause the following adverse effects: May cause cancer.

Eye contact
Irritating to eyes.

Indication of immediate medical attention and special treatment needed

Notes for the doctor
Treat symptomatically.

5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media
The product is flammable. Extinguish with alcohol-resistant foam, carbon dioxide, dry powder or water fog. Use fire-extinguishing media suitable for the surrounding fire.

Unsuitable extinguishing media
Do not use water jet as an extinguisher, as this will spread the fire.

Special hazards arising from the substance or mixture

Specific hazards
Containers can burst violently or explode when heated, due to excessive pressure build-up. Bursting aerosol containers may be propelled from a fire at high speed. If aerosol cans are ruptured, care should be taken due to the rapid escape of the pressurized contents and propellant. Vapors may form explosive mixtures with air.

Hazardous combustion products
Thermal decomposition or combustion products may include the following substances: Harmful gases or vapors.

Advice for firefighters

Protective actions during firefighting
Avoid breathing fire gases or vapors. Evacuate area. Keep upwind to avoid inhalation of gases, vapors, fumes and smoke. Ventilate closed spaces before entering them. Cool containers exposed to heat with water spray and remove them from the fire area if it can be done without risk. Cool containers exposed to flames with water until well after the fire is out. If a leak or spill has not ignited, use water spray to disperse vapors and protect men stopping the leak. Control run-off water by containing and keeping it out of sewers and watercourses. If risk of water pollution occurs, notify appropriate authorities.
Alcohol-Enhanced Flux Remover-ProClean, Aerosol

Special protective equipment for firefighters
Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing. Standard Firefighter's clothing including helmets, protective boots and gloves will provide a basic level of protection for chemical incidents.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Personal precautions
Wear protective clothing as described in Section 8 of this safety data sheet. No action shall be taken without appropriate training or involving any personal risk. Do not touch or walk into spilled material. Evacuate area. Risk of explosion. Provide adequate ventilation. No smoking, sparks, flames or other sources of ignition near spillage. Promptly remove any clothing that becomes contaminated.

Environmental precautions

Environmental precautions
Avoid discharge into drains or watercourses or onto the ground. Avoid discharge to the aquatic environment.

Methods and material for containment and cleaning up

Methods for cleaning up
Wear protective clothing as described in Section 8 of this safety data sheet. Clear up spills immediately and dispose of waste safely. Eliminate all ignition sources if safe to do so. No smoking, sparks, flames or other sources of ignition near spillage. Under normal conditions of handling and storage, spillages from aerosol containers are unlikely. If aerosol cans are ruptured, care should be taken due to the rapid escape of the pressurized contents and propellant. Small Spillages: Wipe up with an absorbent cloth and dispose of waste safely. Large Spillages: If the product is soluble in water, dilute the spillage with water and mop it up. Alternatively, or if it is not water-soluble, absorb the spillage with an inert, dry material and place it in a suitable waste disposal container. Flush contaminated area with plenty of water. Wash thoroughly after dealing with a spillage. For waste disposal, see Section 13.

Reference to other sections
For personal protection, see Section 8. See Section 11 for additional information on health hazards. See Section 12 for additional information on ecological hazards. For waste disposal, see Section 13.

7. Handling and storage

Precautions for safe handling

Usage precautions
Read and follow manufacturer's recommendations. Wear protective clothing as described in Section 8 of this safety data sheet. Keep away from food, drink and animal feeding stuffs. Avoid exposing aerosol containers to high temperatures or direct sunlight. The product is flammable. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. May cause cancer. May cause genetic defects. Do not handle until all safety precautions have been read and understood. Do not handle broken packages without protective equipment. Do not reuse empty containers. Do not spray on an open flame or other ignition source. Pressurized container: Do not pierce or burn, even after use. Spray will evaporate and cool rapidly and may cause frostbite or cold burns if in contact with skin. Avoid contact with eyes. Avoid inhalation of vapors and spray/mists.

Advice on general occupational hygiene
Wash promptly if skin becomes contaminated. Take off contaminated clothing and wash before reuse. Wash contaminated clothing before reuse.

Conditions for safe storage, including any incompatibilities

Storage precautions
Store away from incompatible materials (see Section 10). Keep away from oxidizing materials, heat and flames. Keep only in the original container. Keep container tightly closed, in a cool, well ventilated place. Keep containers upright. Protect containers from damage. Protect from sunlight. Do not store near heat sources or expose to high temperatures. Do not expose to temperatures exceeding 50°C/122°F.
Alcohol-Enhanced Flux Remover-ProClean, Aerosol

Storage class
Chemical storage.

Specific end uses(s)
The identified uses for this product are detailed in Section 1.

Reference to other sections
Store away from incompatible materials (see Section 10).

8. Exposure controls/Personal protection

Control parameters

Occupational exposure limits

PROPAN-2-OL
Long-term exposure limit (8-hour TWA): OSHA 400 ppm 980 mg/m³
Long-term exposure limit (8-hour TWA): ACGIH 200 ppm 492 mg/m³
Short-term exposure limit (15-minute): ACGIH 400 ppm 984 mg/m³
A4

ETHANOL
Short-term exposure limit (15-minute): ACGIH 1000 ppm 1880 mg/m³
A3
Long-term exposure limit (8-hour TWA): OSHA 1000 ppm 1900 mg/m³

HFC-134a Tetrafluoroethane
Long-term exposure limit (8-hour TWA): OES 4240 mg/m³

METHANOL
Long-term exposure limit (8-hour TWA): ACGIH 200 ppm 262 mg/m³
Short-term exposure limit (15-minute): ACGIH 250 ppm 328 mg/m³
Sk
Long-term exposure limit (8-hour TWA): OSHA 200 ppm 260 mg/m³

ISOBUTYL METHYL KETONE
Long-term exposure limit (8-hour TWA): ACGIH 20 ppm 82 mg/m³
Short-term exposure limit (15-minute): ACGIH 75 ppm 307 mg/m³
A3
Long-term exposure limit (8-hour TWA): OSHA 100 ppm 410 mg/m³

ETHYL ACETATE
Long-term exposure limit (8-hour TWA): ACGIH 400 ppm 1440 mg/m³
Long-term exposure limit (8-hour TWA): OSHA 400 ppm 1400 mg/m³
OSHA = Occupational Safety and Health Administration.
ACGIH = American Conference of Governmental Industrial Hygienists.

A3 = Confirmed Animal Carcinogen with Unknown Relevance to Humans.
Sk = Danger of cutaneous absorption.
A4 = Not Classifiable as a Human Carcinogen.

Additional Occupational Exposure Limits

WEL = Workplace Exposure Limits

Biological limit values

ETHANOL (CAS: 64-17-5)

Ingredient comments

METHANOL (CAS: 67-56-1)

Biological limit values
15 mg/l

Exposure controls
Alcohol-Enhanced Flux Remover-ProClean, Aerosol

Protective equipment

Appropriate engineering controls
Provide adequate general and local exhaust ventilation. Ensure the ventilation system is regularly maintained and tested. Good general ventilation should be adequate to control worker exposure to airborne contaminants. Observe any occupational exposure limits for the product or ingredients.

Eye/face protection
Wear tight-fitting, chemical splash goggles or face shield. If inhalation hazards exist, a full-face respirator may be required instead.

Hand protection
Wear protective gloves. The most suitable glove should be chosen in consultation with the glove supplier/manufacturer, who can provide information about the breakthrough time of the glove material. To protect hands from chemicals, gloves should comply with OSHA 1910.138 and be demonstrated to be impervious to the chemical and resist degradation. Considering the data specified by the glove manufacturer, check during use that the gloves are retaining their protective properties and change them as soon as any deterioration is detected. Frequent changes are recommended.

Other skin and body protection
Wear appropriate clothing to prevent any possibility of skin contact.

Hygiene measures
Wash after use and before eating, smoking and using the toilet. Do not eat, drink or smoke when using this product.

Respiratory protection
Ensure all respiratory protective equipment is suitable for its intended use and is NIOSH approved. Check that the respirator fits tightly and the filter is changed regularly. Gas and combination filter cartridges should comply with OSHA 1910.134. Full face mask respirators with replaceable filter cartridges should comply with OSHA 1910.134. Half mask and quarter mask respirators with replaceable filter cartridges should comply with OSHA 1910.134.

Environmental exposure controls
Keep container tightly sealed when not in use. Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

9. Physical and chemical properties

Information on basic physical and chemical properties

Appearance
Liquid.

Color
Clear liquid. Colorless.

Odor
Alcoholic.

Odor threshold
No information available.

pH
No information available.

Melting point
No information available.

Initial boiling point and range
77.6°C/172°F @ 101.3 kPa

Flash point
17°C/62.6°F Tag open cup.

Evaporation rate
No information available.

Evaporation factor
No information available.

Flammability (solid, gas)
No information available.
Alcohol-Enhanced Flux Remover-ProClean, Aerosol

**Upper/lower flammability or explosive limits**
Upper flammable/explosive limit: 12.7 %(V) Lower flammable/explosive limit: 2.0 %(V)

**Other flammability**
No information available.

**Vapor pressure**
5.2 kPa @ 20°C

**Vapor density**
1.82

**Relative density**
0.79

**Bulk density**
No information available.

**Solubility(ies)**
Completely soluble in water.

**Partition coefficient**
No information available.

**Auto-ignition temperature**
No information available.

**Decomposition Temperature**
No information available.

**Viscosity**
No information available.

**Explosive properties**
No information available.

**Oxidizing properties**
There are no chemical groups present in the product that are associated with oxidizing properties.

**Comments**
Aerosol.

**Refractive index**
No information available.

**Particle size**
Not applicable.

**Molecular weight**
Not applicable.

**Volatile**
100%

**Saturation concentration**
No information available.

**Critical temperature**
No information available.

**Volatile organic compound**
This product contains a maximum VOC content of 785 g/litre.

**Flammability**
Flammable aerosol

### 10. Stability and reactivity

**Reactivity**
See the other subsections of this section for further details.

**Stability**
Stable at normal ambient temperatures and when used as recommended. Stable under the prescribed storage conditions.

**Possibility of hazardous reactions**
The following materials may react strongly with the product: Oxidizing agents.

**Conditions to avoid**
Avoid exposing aerosol containers to high temperatures or direct sunlight. Pressurised container: may burst if heated

**Materials to avoid**
No specific material or group of materials is likely to react with the product to produce a hazardous situation.

**Hazardous decomposition products**
Does not decompose when used and stored as recommended. Thermal decomposition or combustion products may include the following substances: Harmful gases or vapors.
Alcohol-Enhanced Flux Remover-ProClean, Aerosol

11. Toxicological information

Information on toxicological effects

Acute toxicity - oral
Notes (oral LD₅₀) Based on available data the classification criteria are not met.
ATE oral (mg/kg) 6,274.51

Acute toxicity - dermal
Notes (dermal LD₅₀) Based on available data the classification criteria are not met.
ATE dermal (mg/kg) 18,823.53

Acute toxicity - inhalation
Notes (inhalation LC₅₀) Based on available data the classification criteria are not met.
ATE inhalation (vapours mg/l) 188.24
ATE Inhalation (dusts/mists mg/l) 31.37

Skin corrosion/irritation
Animal data Based on available data the classification criteria are not met.

Serious eye damage/irritation
Serious eye damage/irritation Causes serious eye irritation.

Respiratory sensitization
Respiratory sensitization Based on available data the classification criteria are not met.

Skin sensitization
Skin sensitization Based on available data the classification criteria are not met.

Germ cell mutagenicity
Genotoxicity - in vitro May cause genetic defects.

Carcinogenicity
Carcinogenicity May cause cancer.
IARC carcinogenicity Contains a substance/a group of substances which may cause cancer. IARC Group 1 Carcinogenic to humans.

Reproductive toxicity
Reproductive toxicity - fertility Based on available data the classification criteria are not met.
Reproductive toxicity - development Based on available data the classification criteria are not met.

Specific target organ toxicity - single exposure
STOT - single exposure STOT SE 3 - H336 May cause drowsiness or dizziness. STOT SE 2 - H371 May cause damage to organs.
Target organs Central nervous system

Specific target organ toxicity - repeated exposure
STOT - repeated exposure Not classified as a specific target organ toxicant after repeated exposure.

Aspiration hazard
Aspiration hazard Based on available data the classification criteria are not met.
Alcohol-Enhanced Flux Remover-ProClean, Aerosol

General information
May cause cancer after repeated exposure. Risk of cancer depends on duration and level of exposure. May cause genetic defects. The severity of the symptoms described will vary dependent on the concentration and the length of exposure.

Inhalation
A single exposure may cause the following adverse effects: Pain or irritation. Intoxication. Narcotic effect. Muscle weakness. Nausea, vomiting.

Ingestion
Due to the physical nature of this product, it is unlikely that ingestion will occur.

Skin Contact
A single exposure may cause the following adverse effects: Pain.

Eye contact
Irritating to eyes.

Route of exposure
Ingestion Inhalation Skin and/or eye contact

Target Organs
Central nervous system

Toxicological information on ingredients.

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Acute toxicity - Inhalation</th>
<th>Acute toxicity inhalation (LC₅₀ vapours mg/l)</th>
<th>ATE inhalation (vapours mg/l)</th>
<th>Carcinogenicity</th>
</tr>
</thead>
<tbody>
<tr>
<td>PROPAN-2-OL</td>
<td></td>
<td>16,000.0</td>
<td>16,000.0</td>
<td>IARC Group 3</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Not classifiable as to its carcinogenicity to humans.</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>NTP carcinogenicity Not listed.</td>
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<td></td>
<td></td>
<td>OSHA Carcinogenicity Not listed.</td>
</tr>
<tr>
<td>ETHANOL</td>
<td></td>
<td>20,000.0</td>
<td>20,000.0</td>
<td>IARC Group 1</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Carcinogenic to humans.</td>
</tr>
</tbody>
</table>

HFC-134a Tetrafluoroethane
There is no evidence that the product can cause cancer.
Alcohol-Enhanced Flux Remover-ProClean, Aerosol

Inhalation
Vapors irritate the respiratory system. May cause coughing and difficulties in breathing.

Ingestion
May cause stomach pain or vomiting. May cause nausea, headache, dizziness and intoxication.

Skin Contact
May cause allergic contact eczema. Contact with liquid form may cause frostbite.

Eye contact
May cause temporary eye irritation.

METHANOL

Acute toxicity - oral
Notes (oral LD₅₀) Acute Tox. 3 - H301 Toxic if swallowed.
ATE oral (mg/kg) 100.0

Acute toxicity - dermal
Notes (dermal LD₅₀) Acute Tox. 3 - H311 Toxic in contact with skin.
ATE dermal (mg/kg) 300.0

Acute toxicity - inhalation
Notes (inhalation LC₅₀) Acute Tox. 3 - H331 Toxic if inhaled.
ATE inhalation (vapours mg/l) 3.0
ATE inhalation (dusts/mists mg/l) 0.5

Skin corrosion/irritation
Animal data Based on available data the classification criteria are not met.

Serious eye damage/irritation
Serious eye damage/irritation Based on available data the classification criteria are not met.

Respiratory sensitization
Respiratory sensitization Based on available data the classification criteria are not met.

Skin sensitization
Skin sensitization Based on available data the classification criteria are not met.

Germ cell mutagenicity
Genotoxicity - in vitro Based on available data the classification criteria are not met.

Carcinogenicity
Carcinogenicity Based on available data the classification criteria are not met.

IARC carcinogenicity None of the ingredients are listed or exempt.

Reproductive toxicity
Reproductive toxicity - fertility Based on available data the classification criteria are not met.
Reproductive toxicity - development Based on available data the classification criteria are not met.
Alcohol-Enhanced Flux Remover-ProClean, Aerosol

Specific target organ toxicity - single exposure
STOT - single exposure  STOT SE 1 - H370 Causes damage to organs.

Specific target organ toxicity - repeated exposure
STOT - repeated exposure  Not classified as a specific target organ toxicant after repeated exposure.

Aspiration hazard
Aspiration hazard  Based on available data the classification criteria are not met.

General information
The severity of the symptoms described will vary dependent on the concentration and the length of exposure.

Inhalation
A single exposure may cause the following adverse effects: Drowsiness, dizziness, disorientation, vertigo. Unconsciousness. High concentrations may be fatal.

Ingestion
May cause stomach pain or vomiting. May cause severe internal injury.

Skin Contact
A single exposure may cause the following adverse effects: Pain.

Eye contact
No specific symptoms known.

Route of exposure
Ingestion Inhalation Skin and/or eye contact

Target Organs
No specific target organs known.

ISOBUTYL METHYL KETONE

Acute toxicity - Inhalation
ATE inhalation (vapours mg/l)  11.0
ATE inhalation (dusts/mists mg/l)  1.5

Carcinogenicity
IARC carcinogenicity  IARC Group 2B  Possibly carcinogenic to humans.

12. Ecological information

Ecotoxicity
Not regarded as dangerous for the environment. However, large or frequent spills may have hazardous effects on the environment.

Ecological information on ingredients.

METHANOL

Ecotoxicity
Not regarded as dangerous for the environment. However, large or frequent spills may have hazardous effects on the environment.

Toxicity
Based on available data the classification criteria are not met.

Ecological information on ingredients.

PROPAN-2-OL

Acute aquatic toxicity
Acute toxicity - fish  LC₅₀, 96 hours: 9,640 mg/l, Fish
Alcohol-Enhanced Flux Remover-ProClean, Aerosol

Acute toxicity - aquatic invertebrates
EC₅₀, 48 hours: 5102 mg/l, Daphnia magna

Acute toxicity - aquatic plants
IC₅₀, 72 hours: >2,000 mg/l, Algae

**ETHANOL**

Acute aquatic toxicity

Acute toxicity - fish
LC₅₀, 96 hours: >10,000 mg/l, Fish

Acute toxicity - aquatic invertebrates
EC₅₀, 48 hours: 7,800 mg/l, Daphnia magna

Acute toxicity - aquatic plants
, 96 hours: 1000 mg/l, Freshwater algae

**HFC-134a Tetrafluoroethane**

Acute aquatic toxicity

Acute toxicity - fish
LC₅₀, 96 hours: 450 mg/l, Fish

Acute toxicity - aquatic invertebrates
EC₅₀, 48 hours: 980 mg/l, Daphnia magna

**METHANOL**

Toxicity
Based on available data the classification criteria are not met.

Acute aquatic toxicity

Acute toxicity - fish
LC₅₀, 96 hours: >100 mg/l, Pimephales promelas (Fat-head Minnow)

Acute toxicity - aquatic invertebrates
EC₅₀, 48 hours: >10000 mg/l, Daphnia magna

Persistence and degradability

Persistence and degradability
The degradability of the product is not known.

Ecological information on ingredients.

**ETHANOL**

Persistence and degradability
The product is expected to be biodegradable.

**METHANOL**

Persistence and degradability
The degradability of the product is not known.

Bioaccumulative potential

Bio-Accumulative Potential
No data available on bioaccumulation.

Partition coefficient
No information available.

Ecological information on ingredients.

**PROPAN-2-OL**
Alcohol-Enhanced Flux Remover-ProClean, Aerosol

Partition coefficient : 0.05

**ETHANOL**

Bio-Accumulative Potential Bioaccumulation is unlikely.
Partition coefficient No information available.

**HFC-134a Tetrafluoroethane**
Partition coefficient Pow: 1.06

**METHANOL**

Bio-Accumulative Potential No data available on bioaccumulation.
Partition coefficient : -0.77

Mobility in soil

**Mobility**
The product contains volatile organic compounds (VOCs) which will evaporate easily from all surfaces.

Ecological information on ingredients.

**ETHANOL**

Mobility The product is soluble in water.

**METHANOL**

Mobility No data available.

Other adverse effects

Other adverse effects None known.

Ecological information on ingredients.

**METHANOL**

Other adverse effects None known.

13. Disposal considerations

Waste treatment methods

**General information**
The generation of waste should be minimized or avoided wherever possible. Reuse or recycle products wherever possible. This material and its container must be disposed of in a safe way. When handling waste, the safety precautions applying to handling of the product should be considered. Care should be taken when handling emptied containers that have not been thoroughly cleaned or rinsed out. Empty containers or liners may retain some product residues and hence be potentially hazardous.

**Disposal methods**
Do not empty into drains. Empty containers must not be punctured or incinerated because of the risk of an explosion. Dispose of surplus products and those that cannot be recycled via a licensed waste disposal contractor. Waste, residues, empty containers, discarded work clothes and contaminated cleaning materials should be collected in designated containers, labeled with their contents.

14. Transport information
Alcohol-Enhanced Flux Remover-ProClean, Aerosol

**UN Number**
- UN No. (IMDG) 1950
- UN No. (ICAO) 1950

**UN proper shipping name**
- Proper shipping name (TDG) LIMITED QUANTITY
- Proper shipping name (IMDG) UN1950, AEROSOLS, FLAMMABLE, 2.1, LIMITED QUANTITY
- Proper shipping name (ICAO) UN1950, AEROSOLS, FLAMMABLE, 2.1, LIMITED QUANTITY
- Proper shipping name (DOT) LIMITED QUANTITY

**Transport hazard class(es)**
- IMDG Class 2.1 LIMITED QUANTITY
- ICAO class/division 2.1 LIMITED QUANTITY

**Packing group**
- TDG Packing Group N/A
- IMDG packing group N/A
- ICAO packing group N/A
- DOT packing group N/A

**Environmental hazards**
- Environmentally Hazardous Substance No.

**Special precautions for user**
- EmS F-D, S-U

**Transport in bulk according to**
- Annex II of MARPOL 73/78 and the IBC Code
- Not applicable

### 15. Regulatory information

**US Federal Regulations**
- **SARA Section 302 Extremely Hazardous Substances Tier II Threshold Planning Quantities**
  None of the ingredients are listed or exempt.

**CERCLA/Superfund, Hazardous Substances/Reportable Quantities (EPA)**
- The following ingredients are listed or exempt:
  - **ISOBUTYL METHYL KETONE**
    - Final CERCLA RQ: 5000(2270) pounds (Kilograms)
  - **METHANOL**
    - Final CERCLA RQ: 5000(2270) pounds (Kilograms)

**SARA Extremely Hazardous Substances EPCRA Reportable Quantities**
- None of the ingredients are listed or exempt.

**SARA 313 Emission Reporting**
- The following ingredients are listed or exempt:
Alcohol-Enhanced Flux Remover-ProClean, Aerosol

**ISOBUTYL METHYL KETONE**
1.0 %

**METHANOL**
1.0 %

**CAA Accidental Release Prevention**
None of the ingredients are listed or exempt.

**FDA - Essential Chemical**
None of the ingredients are listed or exempt.

**FDA - Precursor Chemical**
None of the ingredients are listed or exempt.

**SARA (311/312) Hazard Categories**
None of the ingredients are listed or exempt.

**OSHA Highly Hazardous Chemicals**
None of the ingredients are listed or exempt.

**US State Regulations**

**California Proposition 65 Carcinogens and Reproductive Toxins**
The following ingredients are listed or exempt:

**ISOBUTYL METHYL KETONE**
Carcinogen and developmental toxin.

**METHANOL**
Developmental toxin.

**California Air Toxics "Hot Spots" (A-I)**
The following ingredients are listed or exempt:

**ISOBUTYL METHYL KETONE**

**METHANOL**

**PROPAN-2-OL**

**California Air Toxics "Hot Spots" (A-II)**
None of the ingredients are listed or exempt.

**California Directors List of Hazardous Substances**
The following ingredients are listed or exempt:

**ISOBUTYL METHYL KETONE**

**METHANOL**

**ETHANOL**

**PROPAN-2-OL**

**Massachusetts "Right To Know" List**
The following ingredients are listed or exempt:

**ISOBUTYL METHYL KETONE**

**METHANOL**

**ETHANOL**

**PROPAN-2-OL**
Alcohol-Enhanced Flux Remover-ProClean, Aerosol

Rhode Island “Right To Know” List
The following ingredients are listed or exempt:
- ISOBUTYL METHYL KETONE
- METHANOL
- ETHANOL
- PROPan-2-OL

Minnesota “Right To Know” List
The following ingredients are listed or exempt:
- ISOBUTYL METHYL KETONE
- METHANOL
- ETHANOL
- PROPan-2-OL
- HFC-134a Tetrafluoroethane

New Jersey “Right To Know” List
The following ingredients are listed or exempt:
- ISOBUTYL METHYL KETONE
- METHANOL
- ETHANOL
- PROPan-2-OL

Pennsylvania “Right To Know” List
The following ingredients are listed or exempt:
- ISOBUTYL METHYL KETONE
- METHANOL
- ETHANOL
- PROPan-2-OL

Inventories
- Canada - DSL/NDSL
  - DSL
- US - TSCA
  - Present.
- US - TSCA 12(b) Export Notification
  - Not listed.

Philippines - PICCS
- PROPan-2-OL
  - Yes

16. Other information
Alcohol-Enhanced Flux Remover-ProClean, Aerosol

Classification abbreviations and acronyms
- Aerosol = Aerosol
- Carc. = Carcinogenicity
- Eye Irrit. = Eye irritation
- Muta. = Germ cell mutagenicity
- STOT SE = Specific target organ toxicity-single exposure

Training advice
- Only trained personnel should use this material.

Revision comments
- NOTE: Lines within the margin indicate significant changes from the previous revision.

Hazard statements in full
- H222 Extremely flammable aerosol.
- H225 Highly flammable liquid and vapor.
- H280 Contains gas under pressure; may explode if heated.
- H301 Toxic if swallowed.
- H311 Toxic in contact with skin.
- H319 Causes serious eye irritation.
- H331 Toxic if inhaled.
- H332 Harmful if inhaled.
- H335 May cause respiratory irritation.
- H336 May cause drowsiness or dizziness.
- H360 May damage fertility or the unborn child.
- H370 Causes damage to organs.

This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty, guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.