SAFETY DATA SHEET
PRO ALCOHOL-ENHANCED FLUX REMOVER - PROCLEAN, AEROSOL

1. IDENTIFICATION

Product Name: PRO ALCOHOL-ENHANCED FLUX REMOVER - PROCLEAN, AEROSOL
Product No.: #MCC-PRO, #MCC-PRO101, #MCC-PRO125, #MCC-PRO12Y
Synonyms, Trade Names: "PRO-ProClean Flux Remover"
Identification No.: UN1950
Identified uses: Cleaning agent.
Supplier: MicroCare Corporation
595 John Downey Drive
New Britain, CT 06019
United States of America
Toll Free: 1-800-638-0125
Tel: 1-860-827-0626
Web: www.MicroCare.com
email: techsupport@microcare.com

Contact Person: techsupport@microcare.com
Web Address: www.MicroCare.com
Emergency Telephone: CHEMTREC (800) 424-9300

2. HAZARD(S) IDENTIFICATION

EMERGENCY OVERVIEW

FLAMMABLE. Aerosol containers can explode when heated, due to excessive pressure build-up. Cool aerosol containers exposed to heat with water spray and remove container, if no risk is involved. Vapors are heavier than air and may travel along the floor and in the bottom of containers.

Appearance: Liquid
Color: Clear Colourless.
Odor: Odor of alcohol.
GHS Pictogram:

Signal Word: Danger
Hazard Statements:
H222 Extremely flammable aerosol.
H319 Causes serious eye irritation.
H336 May cause drowsiness or dizziness.

Precautionary Statements:
P102 Keep out of reach of children.
P251 Pressurized container: Do not pierce or burn, even after use.
P261 Avoid breathing vapour/spray.
P305+351+338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P313 Get medical advice/attention.
PRO ALCOHOL-ENHANCED FLUX REMOVER - PROCLEAN, AEROSOL

P410+412
Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F.
P501
Dispose of contents/container in accordance with local regulations.

GHS Classification

Physical and Chemical Hazards Flam. Aerosol 1 - H222
Human health Eye Irrit. 2 - H319;STOT SE 3 - H336
Environment Not classified.

WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM - WHMIS

Compressed Gas.
Flammable Gas.
Materials Causing Other Toxic Effects.

Canadian WHMIS Classification A B5 D2A D2B WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM (CPR SECTION (33)) This product has been classified according to the hazard criteria of the Controlled Product Regulations, and the MSDS contains all required information.

OSHA Regulatory Status
This Product is Hazardous under the OSHA Hazard Communication Standard.

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.

Inhalation
May cause irritation to the respiratory system. Vapors may cause headache, fatigue, dizziness and nausea. Prolonged inhalation of high concentrations may damage respiratory system.

Skin Contact
Product has a defatting effect on skin. May cause skin irritation/eczema.

Eye Contact
Irritating to eyes.

Other Health Effects
This substance has no evidence of carcinogenic properties.

Physical And Chemical Hazards
Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50°C. Do not pierce or burn, even after use.

3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>ETHANOL</th>
<th>30-60%</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAS No.: 64-17-5</td>
<td>EC No.: 200-578-6</td>
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</table>

| GHS Classification |
| Flam. Liq. 2 - H225 |

<table>
<thead>
<tr>
<th>HFC-134a Tetrafluoroethane</th>
<th>10-30%</th>
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</thead>
<tbody>
<tr>
<td>CAS No.: 811-97-2</td>
<td>EC No.: 212-377-0</td>
</tr>
</tbody>
</table>

| GHS Classification |
| Not classified. |
4. FIRST-AID MEASURES

Description of first aid measures

General Information
Promptly remove any clothing that becomes wet. Move the exposed person to fresh air at once. Get medical attention if any discomfort continues.

Inhalation
Move the exposed person to fresh air at once. When breathing is difficult, properly trained personnel may assist affected person by administering oxygen. Keep the affected person warm and at rest. Get prompt medical attention.

Ingestion
DO NOT INDUCE VOMITING! Immediately rinse mouth and drink plenty of water (200-300 ml). Do not give victim anything to drink if he is unconscious. Consult a physician for specific advice.

Skin Contact
Promptly wash contaminated skin with water. Promptly remove clothing if soaked through and wash the skin with water. Contact physician if irritation continues.

Eye Contact
Make sure to remove any contact lenses from the eyes before rinsing. Promptly wash eyes with plenty of water while lifting the eye lids. Continue to rinse for at least 15 minutes. Get medical attention if any discomfort continues.

Most important symptoms and effects, both acute and delayed

General Information
The severity of the symptoms described will vary dependant of the concentration and the length of exposure.

Inhalation
Vapors may cause headache, fatigue, dizziness and nausea.

Ingestion
May cause stomach pain or vomiting. Headache.

Skin Contact
Prolonged or repeated contact with skin may cause redness, itching, irritation and eczema/chapping.

Eye Contact
Irritating and may cause redness and pain. Irritation and redness followed by blurred vision.

Indication of any immediate medical attention and special treatment needed

Notes To The Physician
No recommendation given, but first aid may still be required in case of accidental exposure, inhalation or ingestion of this chemical. If in doubt, GET MEDICAL ATTENTION PROMPTLY!

5. FIRE-FIGHTING MEASURES

Flammability Limit - Lower(%) 2.0
Flammability Limit - Upper(%) 12.7
Flash point (°C) 17 TOC (Tag open cup).
PRO ALCOHOL-ENHANCED FLUX REMOVER - PROCLEAN, AEROSOL

Extinguishing Media
Use: Powder. Dry chemicals, sand, dolomite etc. Water spray, fog or mist.

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

Hazardous combustion products
Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapors. During fire, toxic gases (CO, CO2) are formed.

Unusual Fire & Explosion Hazards
Aerosol cans may explode in a fire. Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapors.

Specific Hazards
Aerosol containers can explode when heated, due to excessive pressure build-up.

Special Fire Fighting Procedures
Containers close to fire should be removed or cooled with water. Use water to keep fire exposed containers cool and disperse vapors.

Protective Equipment For Fire-Fighters
Self contained breathing apparatus and full protective clothing must be worn in case of fire.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions
Wear approved, tight fitting safety glasses where splashing is probable.

Environmental Precautions
Do not discharge into drains, water courses or onto the ground.

Spill Clean Up Methods
Wear necessary protective equipment. If leakage cannot be stopped, evacuate area. Extinguish all ignition sources. Avoid sparks, flames, heat and smoking. Ventilate. Absorb in vermiculite, dry sand or earth and place into containers.

7. HANDLING AND STORAGE

Handling
Keep away from heat, sparks and open flame. Avoid spilling, skin and eye contact. Ventilate well, avoid breathing vapors. Use approved respirator if air contamination is above accepted level. Keep out of the reach of children.

Storage
Aerosol cans: Must not be exposed to direct sunlight or temperatures above 50°C.

Specific end use(s)
Cleaning agent.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

<table>
<thead>
<tr>
<th>COMPONENT</th>
<th>STD</th>
<th>TWA (8-hrs)</th>
<th>STEL (15 min)</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>ETHANOL</td>
<td>ACGIH</td>
<td>1000 ppm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ETHANOL</td>
<td>PEL</td>
<td>1000 ppm</td>
<td>1900 mg/m3</td>
<td></td>
</tr>
<tr>
<td>METHANOL</td>
<td>ACGIH</td>
<td>200 ppm</td>
<td>250 ppm</td>
<td>Skin</td>
</tr>
<tr>
<td>METHANOL</td>
<td>PEL</td>
<td>200 ppm</td>
<td>260 mg/m3</td>
<td></td>
</tr>
<tr>
<td>PROPAN-2-OL</td>
<td>ACGIH</td>
<td>200 ppm</td>
<td>400 ppm</td>
<td>A4</td>
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<tr>
<td>PROPAN-2-OL</td>
<td>PEL</td>
<td>400 ppm</td>
<td>980 mg/m3</td>
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<table>
<thead>
<tr>
<th>COMPONENT</th>
<th>IDLH</th>
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<tbody>
<tr>
<td>ETHANOL</td>
<td>3300 ppm</td>
</tr>
<tr>
<td>METHANOL</td>
<td>6000 ppm</td>
</tr>
<tr>
<td>PROPAN-2-OL</td>
<td>2000 ppm</td>
</tr>
</tbody>
</table>

ACGIH=American Conference of Governmental Industrial Hygienists.
Skin: Danger of cutaneous absorption. (ACGIH)
A3: Confirmed Animal Carcinogen with Unknown Relevance to Humans.
A4: Not Classifiable as a Human Carcinogen.
PRO ALCOHOL-ENHANCED FLUX REMOVER - PROCLEAN, AEROSOL

Ingredient Comments
WEL = Workplace Exposure Limits

Protective Equipment

Engineering Measures
Provide adequate general and local exhaust ventilation.

Respiratory Equipment
No specific recommendation made, but respiratory protection must be used if the general level exceeds the Recommended Occupational Exposure Limit

Hand Protection
For prolonged or repeated skin contact use suitable protective gloves. Gloves of nitrile rubber, PVA or Viton are recommended.

Eye Protection
Use eye protection. Wear approved, tight fitting safety glasses where splashing is probable.

Other Protection
Wear appropriate clothing to prevent any possibility of liquid contact and repeated or prolonged vapor contact.

Hygiene Measures
DO NOT SMOKE IN WORK AREA! Wash hands at the end of each work shift and before eating, smoking and using the toilet. Promptly remove any clothing that becomes contaminated. When using do not eat, drink or smoke.

9. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
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</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Liquid</td>
</tr>
<tr>
<td>Color</td>
<td>Clear Colourless.</td>
</tr>
<tr>
<td>Odor</td>
<td>Odor of alcohol.</td>
</tr>
<tr>
<td>Solubility</td>
<td>Completely soluble in water</td>
</tr>
<tr>
<td>Initial boiling point and boiling range</td>
<td>77.6</td>
</tr>
<tr>
<td>Vapor density (air=1)</td>
<td>1.82</td>
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<tr>
<td>Vapor pressure</td>
<td>39 mm Hg 20</td>
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<tr>
<td>Flash point</td>
<td>17 TOC (Tag open cup).</td>
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<tr>
<td>Flammability Limit - Lower(%)</td>
<td>2.0</td>
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<tr>
<td>Flammability Limit - Upper(%)</td>
<td>12.7</td>
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<td>Physical Data Comments</td>
<td>Aerosol.</td>
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<tr>
<td>Volatility Description</td>
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<tr>
<td>Volatile By Vol. (%)</td>
<td>100</td>
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<tr>
<td>Volatile Organic Compound (VOC)</td>
<td>785 g/litre</td>
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</table>

10. STABILITY AND REACTIVITY

Stability
Stable under normal temperature conditions.

Hazardous Polymerisation
Will not polymerise.

Conditions To Avoid

Materials To Avoid
Strong oxidizing substances.

Hazardous Decomposition Products

11. TOXICOLOGICAL INFORMATION

Other Health Effects
This substance has no evidence of carcinogenic properties.
PRO ALCOHOL-ENHANCED FLUX REMOVER - PROCLEAN, AEROSOL

Toxicological Information on Ingredients:

- **METHANOL (CAS: 67-56-1)**
  - Toxic Dose 1 - LD 50
    - 13000 mg/kg (oral rat)

- **ETHANOL (CAS: 64-17-5)**
  - Toxic Dose 1 - LD 50
    - 7,060 mg/kg (oral rat)
  - Toxic Conc. - LC 50
    - 20000 mg/l/4h (inh-rat)

- **PROPAN-2-OL (CAS: 67-63-0)**
  - Toxic Dose 1 - LD 50
    - 5045 mg/kg (oral rat)
  - Toxic Dose 2 - LD 50
    - 3600 mg/kg (oral-mouse)
  - Toxic Conc. - LC 50
    - 16,000 ppm/1h (inh-rat)

- **HFC-134a Tetrafluoroethane (CAS: 811-97-2)**
  - Toxic Dose 1 - LD 50
    - >2085 mg/kg (oral rat)

Other Health Effects

This substance has no evidence of carcinogenic properties.

### 12. ECOLOGICAL INFORMATION

Mobility:
Considering the limited amount applied during use and the size of the container, the risk of adverse effects is considered small.

Ecological Information on Ingredients:

- **METHANOL (CAS: 67-56-1)**
  - LC 50, 96 Hrs, Fish mg/l
    - 1368

- **ETHANOL (CAS: 64-17-5)**
  - LC 50, 96 Hrs, Fish mg/l
    - >10,000
  - EC 50, 48 Hrs, Daphnia, mg/l
    - 7,800

- **PROPAN-2-OL (CAS: 67-63-0)**
  - LC 50, 96 Hrs, Fish mg/l
    - 9,640
  - EC 50, 48 Hrs, Daphnia, mg/l
    - 5102
  - IC 50, 72 Hrs, Algae, mg/l
    - >2,000

- **HFC-134a Tetrafluoroethane (CAS: 811-97-2)**
  - LC 50, 96 Hrs, Fish mg/l
    - 450
  - EC 50, 48 Hrs, Daphnia, mg/l
    - 980

### 13. DISPOSAL CONSIDERATIONS

**Waste Management**
Recover and reclaim or recycle, if practical.

**Disposal Methods**
Empty containers must not be burned because of explosion hazard. Recover and reclaim or recycle, if practical. Dispose of waste and residues in accordance with local authority requirements.
14. TRANSPORT INFORMATION

<table>
<thead>
<tr>
<th>Description</th>
<th>Details</th>
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<tbody>
<tr>
<td>UN No. (DOT/TDG)</td>
<td>UN1950</td>
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<tr>
<td>UN No. (IMDG)</td>
<td>1950</td>
</tr>
<tr>
<td>UN No. (ICAO)</td>
<td>1950</td>
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<tr>
<td>DOT Proper Shipping Name</td>
<td>Limited Quantities</td>
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<td>DOT Proper Shipping Name</td>
<td>AEROSOLS</td>
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<tr>
<td>TDG Proper Shipping Name</td>
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<td>IMDG Class</td>
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<tr>
<td>ICAO Class</td>
<td>2.1</td>
</tr>
<tr>
<td>ICAO Subsidiary Risk</td>
<td>N/A</td>
</tr>
<tr>
<td>Transport Labels</td>
<td>[Image of flammable gas label]</td>
</tr>
<tr>
<td>IMDG Pack Group</td>
<td>N/A</td>
</tr>
<tr>
<td>Air Pack Group</td>
<td>N/A</td>
</tr>
<tr>
<td>EMS</td>
<td>F-D, S-U</td>
</tr>
<tr>
<td>Transport in Bulk according to Annex II of MARPOL 73/78 and the IBC Code Notes</td>
<td>Not applicable.</td>
</tr>
</tbody>
</table>

15. REGULATORY INFORMATION

**Regulatory Status (US)**

TSCA: The ingredients of this product are on the TSCA Inventory. This Product is Hazardous under the OSHA Hazard Communication Standard.

**Regulatory References**


**US Federal Regulations**

SARA Section 302 Extremely Hazardous Substances Tier II Threshold Planning Quantities

None of the ingredients are listed.

CERCLA/Superfund, Hazardous Substances/Reportable Quantities (EPA)

The following ingredients are listed.

METHANOL; 5, 000 lbs (2270 Kg)

SARA Extremely Hazardous Substances EPCRA Reportable Quantities

None of the ingredients are listed.

SARA 313 Emission Reporting

The following ingredients are listed.

METHANOL 2%

CAA Accidental Release Prevention

None of the ingredients are listed.

SARA (311/312) Hazard Categories

Acute Chronic Fire

OSHA Highly Hazardous Chemicals

None of the ingredients are listed.

**US State Regulations**

California Proposition 65 Carcinogens and Reproductive Toxins

The following ingredients are listed.
PRO ALCOHOL-ENHANCED FLUX REMOVER - PROCLEAN, AEROSOL

METHANOL; Known to the State of California to cause developmental and reproductive toxicity.

California Air Toxics "Hot Spots" (A-I)
The following ingredients are listed.
METHANOL
PROPN-2-OL

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

Massachusetts "Right To Know" List
The following ingredients are listed.
ETHANOL
METHANOL
PROPN-2-OL

Rhode Island "Right To Know" List
The following ingredients are listed.
ETHANOL
METHANOL
PROPN-2-OL

Minnesota "Right To Know" List
All ingredients are listed.

New Jersey "Right To Know" List
The following ingredients are listed.
ETHANOL
METHANOL
PROPN-2-OL

Pennsylvania "Right To Know" List
The following ingredients are listed.
ETHANOL
METHANOL
PROPN-2-OL

International Inventories

Canada – DSL/NDSL
All ingredients are listed or exempt.

US - TSCA
All ingredients are listed or exempt.

US – TSCA 12(b) Export Notification
None of the ingredients are listed.

16. OTHER INFORMATION

HAZARDOUS MATERIAL INFORMATION SYSTEM (HMIS)

<table>
<thead>
<tr>
<th>Category</th>
<th>Symbol</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>HEALTH</td>
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<td>1</td>
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<tr>
<td>FLAMMABILITY</td>
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<tr>
<td>PHYSICAL</td>
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<tr>
<td>PERSONAL PROTECTION</td>
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NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)

<table>
<thead>
<tr>
<th>Category</th>
<th>Symbol</th>
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<tr>
<td>SPECIAL</td>
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Revision Comments

NOTE: Lines within the margin indicate significant changes from the previous revision.
Disclaimer

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.