Ecoline Flux Remover

1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: Ecoline Flux Remover
PRODUCT DESCRIPTION: Flux Remover
PRODUCT CODE: 1621-CAN/EUR/G/5G/54G
ACTIVE INGREDIENT(S): 2-Propanol; Ethanol

MANUFACTURER
Techspray, L.P.
1001 N.W. 1st Street
P.O. Box 949
Amarillo, TX 79107

Emergency Contact: Chemtrec
Emergency Phone: 1-800-858-4043
Service Number: 1-800-858-4043

2. HAZARDS IDENTIFICATION

HAZARD DESIGNATION
"F" - Highly flammable
R11 - Highly flammable.
"Xn" - Harmful
R20/22 - Harmful by inhalation and if swallowed.
R36/37/38 - Irritating to eyes, respiratory system and skin.

EMERGENCY OVERVIEW
PHYSICAL APPEARANCE: Transparent, colorless liquid.
IMMEDIATE CONCERNS: Vapors and/or aerosols which may be formed at elevated temperatures may be irritating to eyes and respiratory tract. Causes skin irritation. Harmful if swallowed.

POTENTIAL HEALTH EFFECTS
EYES: Avoid contact with eyes; may cause redness, irritation and conjunctivitis.
SKIN: Prolonged or repeated skin contact may cause irritation.
INGESTION: Ingestion of large amounts may produce abdominal pain, nausea and vomiting. Swallowing small amounts is not likely to produce harmful effects.
INHALATION: Prolonged or excessive inhalation may cause respiratory tract irritation.

SIGNS AND SYMPTOMS OF OVEREXPOSURE
EYES: Liquid splashed in the eye may cause redness, irritation and conjunctivitis.
SKIN: Prolonged or exposure may cause skin irritation.
INGESTION: For large amounts; abdominal pain, nausea and vomiting.
INHALATION: High concentrations may lead to central nervous system effects (drowsiness, dizziness, nausea, headaches, paralysis and loss of consciousness).
ACUTE TOXICITY: Overexposure may cause dizziness and loss of concentration. At higher levels, CNS depression and cardiac arrhythmia may result.

TARGET ORGAN STATEMENT: Prolonged or repeated overexposure may cause central nervous system, kidney, liver, and lung damage.

24 HR. EMERGENCY TELEPHONE NUMBERS
CHEMTREC CCN#21858 (US Transportation): (800) 424 - 9300
CANUTEC (Canadian Transportation): (613) 996 - 6666
Emergency Phone: (800) 858 - 4043
Ecoline Flux Remover

3. COMPOSITION / INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Wt.%</th>
<th>CAS</th>
<th>EINECS</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-Propanol</td>
<td>8 - 14</td>
<td>67-63-0</td>
<td>200-661-7</td>
</tr>
<tr>
<td>Ethanol</td>
<td>18 - 25</td>
<td>64-17-5</td>
<td>200-578-6</td>
</tr>
<tr>
<td>n-Propyl acetate</td>
<td>1 - 3</td>
<td>109-60-4</td>
<td>2036861</td>
</tr>
<tr>
<td>n-Heptane</td>
<td>50 - 70</td>
<td>142-82-5</td>
<td></td>
</tr>
</tbody>
</table>

4. FIRST AID MEASURES

**EYES:** Immediately flush eyes with plenty of water. Get medical attention, if irritation persists.

**SKIN:** Wash with soap and water. Get medical attention if irritation develops or persists.

**INGESTION:** Aspiration hazard. If swallowed, vomiting may occur spontaneously, but do not induce. If vomiting occurs, keep head below hips to prevent aspiration into lungs. Call a physician immediately.

**INHALATION:** Remove to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel. Seek immediate medical attention.

5. FIRE FIGHTING MEASURES

**FLASHPOINT AND METHOD:** (22°F) TAG CC

**GENERAL HAZARD:** Vapors can travel to a source of ignition and flash back.

**EXTINGUISHING MEDIA:** Use alcohol foam, carbon dioxide, or water spray when fighting fires involving this material.

**HAZARDOUS COMBUSTION PRODUCTS:** Smoke, fumes and oxides of carbon.

**FIRE FIGHTING PROCEDURES:** Evacuate area and fight fire from a safe distance.

**FIRE FIGHTING EQUIPMENT:** As in any fire, wear self-contained breathing apparatus pressure-demand, (MSHA/NIOSH approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

**SMALL SPILL:** Contain spill with dike to prevent entry into sewers.

**LARGE SPILL:** Clean up spills immediately, observing precautions in Protective Equipment section.

**GENERAL PROCEDURES:** Dike area to contain spill. Take precautions as necessary to prevent contamination of ground and surface waters. Recover spilled material on adsorbent, such as sawdust or vermiculite, and sweep into closed containers for disposal. After all visible traces, including vapors, have been removed thoroughly wet vacuum the area. Do not flush to sewer. If area of spill is porous, remove as much contaminated earth, gravel, etc. as necessary and place in closed containers for disposal.

**SPECIAL PROTECTIVE EQUIPMENT:** Only personnel equipped with proper respiratory and skin/eye protection should be permitted in area. See Section 8 for details.

7. HANDLING AND STORAGE

**GENERAL PROCEDURES:** Wash thoroughly after handling. Use only in a well ventilated area. Store in a cool dry place.
HANDLING: Use with sufficient ventilation to keep employee exposure below recommended limits. Provide adequate ventilation for storage, handling and use, especially for enclosed or low spaces. Avoid contact of liquid with eyes and prolonged skin exposure. Do not allow product to contact open flame or electrical heating elements because dangerous decomposition products may form.

STORAGE: Store away from heat.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE GUIDELINES

OSHA HAZARDOUS COMPONENTS (29 CFR1910.1200)

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>EXPOSURE LIMITS</th>
<th></th>
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<tr>
<td></td>
<td>OSHA PEL</td>
<td>ACGIH TLV</td>
<td>SupplierOEL</td>
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</tr>
<tr>
<td></td>
<td>ppm</td>
<td>mg/m³</td>
<td>ppm</td>
<td>mg/m³</td>
<td>ppm</td>
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<tr>
<td>2-Propanol</td>
<td>TWA</td>
<td></td>
<td>400 ppm</td>
<td>980 mg/m³</td>
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<tr>
<td></td>
<td>STEL</td>
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<td>500 ppm</td>
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<td>1900 mg/m³</td>
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<td>STEL</td>
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<td>NL ppm</td>
<td>NL mg/m³</td>
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<tr>
<td>n-Propyl acetate</td>
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<td>200 ppm</td>
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<td>200 ppm</td>
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<tr>
<td></td>
<td>STEL</td>
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<td>250 ppm</td>
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<td>250 ppm</td>
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<td>n-Heptane</td>
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<td></td>
<td>STEL</td>
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<td>500 ppm</td>
<td>2000 mg/m³</td>
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</table>

OSHA TABLE COMMENTS:
1. NL = Not Listed

ENGINEERING CONTROLS: Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.

PERSONAL PROTECTIVE EQUIPMENT

EYES AND FACE: For normal conditions, wear safety glasses. Where there is reasonable probability of liquid contact, wear splash-proof goggles.

SKIN: The glove(s) listed below may provide protection against permeation. Gloves of other chemically resistant materials may not provide adequate protection. Viton, Solvex, Butyl, Buna, Neoprene.

RESPIRATORY: NIOSH/MSHA approved air purifying respirator with an organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits. Protection provided by air purifying respirators is limited. Use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances
9. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Flash Point (°C)</th>
<th>Boiling Point (°C)</th>
<th>Specific Gravity</th>
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</thead>
<tbody>
<tr>
<td>2-Propanol</td>
<td>11.7</td>
<td>82.4</td>
<td>0.785</td>
</tr>
</tbody>
</table>

ODOR: Characteristic odor.

APPEARANCE: Clear, Colorless liquid

PERCENT VOLATILE: 100 at 20°C (68°F)

VAPOR DENSITY: 2.1 (Air=1)

FLASHPOINT AND METHOD: (22°F) TAG CC

SOLUBILITY IN WATER: Moderate

SPECIFIC GRAVITY: 0.710 (water=1)

(VOC): 713.400 g/L (non-exempt VOC)

10. STABILITY AND REACTIVITY

STABILITY: Stable.

POLYMERIZATION: Will not occur.

CONDITIONS TO AVOID: Stable. However, may decompose if heated.

HAZARDOUS DECOMPOSITION PRODUCTS: Oxides of Carbon (CO and CO2) may form when heated to decomposition.

INCOMPATIBLE MATERIALS: Incompatible with alkali or alkaline earth metals - powdered Al, Zn, Be, etc.

11. TOXICOLOGICAL INFORMATION

ACUTE

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>ORAL LD₅₀ (rat)</th>
<th>DERMAL LD₅₀ (rabbit)</th>
<th>INHALATION LC₅₀ (rat)</th>
</tr>
</thead>
<tbody>
<tr>
<td>n-Propyl acetate</td>
<td>9370 mg/kg</td>
<td>&gt; 20 ml/kg</td>
<td>8000 ppm</td>
</tr>
</tbody>
</table>

DERMAL LD₅₀: Slight to very low toxicity.

ORAL LD₅₀: Oral - Rat LD₅₀:5045 mg/kg for 2-propanol.

INHALATION LC₅₀: Slight to very low toxicity.

EYE EFFECTS: Mixture is a moderate eye irritant.

SKIN EFFECTS: Prolonged exposure may cause irritation and defatting of skin.

CARCINOGENICITY
12. ECOLOGICAL INFORMATION

ENVIRONMENTAL DATA: There is limited information available on the environmental fate and effects of this material. The primary environmental concern for release is the impact on aquatic and terrestrial species. Due care should be taken to avoid the accidental release of this material into the environment.

ECOTOXICOLOGICAL INFORMATION: Invertebrate toxicity: LC50 (30 min) Photobacterium phosphoreum = 1540 ppm Microtoxicity test.

13. DISPOSAL CONSIDERATIONS

DISPOSAL METHOD: Federal, State, and Local laws governing disposal of materials can differ. Ensure compliance with proper authorities before disposal.

FOR LARGE SPILLS: Contaminated sawdust, vermiculite, or porous surfaces must be disposed of in a permitted hazardous waste management facility. Recovered liquids may be reprocessed or incinerated or must be treated in a permitted hazardous waste management facility.

GENERAL COMMENTS: Dispose of in a manner consistent with federal, state, and local regulations.

14. TRANSPORT INFORMATION

DOT (DEPARTMENT OF TRANSPORTATION)

PROPER SHIPPING NAME: Flammable Liquids, N.O.S. (Heptane, Ethanol)

PRIMARY HAZARD CLASS/DIVISION: 3

UN/NA NUMBER: 1993

PACKING GROUP: II

ROAD AND RAIL (ADR/RID)

KEMLER NUMBER: UN1993

HAZARD CLASS: 3

AIR (ICAO/IATA)

SHIPPING NAME: Flammable Liquids, N.O.S. (Heptane, Ethanol)

UN/NA NUMBER: 1993

PRIMARY HAZARD CLASS/DIVISION: 3
PACKING GROUP: II
NOTE: Domestic shipments only. When shipping International contact TechSpray shipping department.

VESSEL (IMO/IMDG)
SHIPPING NAME: Flammable Liquids, N.O.S. (Heptane, Ethanol)
UN/NA NUMBER: 1993
PRIMARY HAZARD CLASS/DIVISION: 3
PACKING GROUP: II
NOTE: Page 3232

15. REGULATORY INFORMATION

UNITED STATES
SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT)
311/312 HAZARD CATEGORIES: IMMEDIATE / DELAYED
313 REPORTABLE INGREDIENTS: 2-propanol (CAS #67-63-0)

EPCRA SECTION 313 SUPPLIER NOTIFICATION

<table>
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<td>8 - 14</td>
<td>67-63-0</td>
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TITLE III NOTES: Not listed as an Extremely Hazardous Substance.

TSCA (TOXIC SUBSTANCE CONTROL ACT)

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<td>n-Propyl acetate</td>
<td>109-60-4</td>
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TSCA REGULATORY: This product is listed on the TSCA Inventory.

OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA)

29 CFR1910.119---PROCESS SAFETY MANAGEMENT OF HIGHLY HAZARDOUS CHEMICALS: None of the chemicals in this product are considered highly hazardous by OSHA.

CALIFORNIA PROPOSITION 65: This product does not contain any chemicals known to the State of California to cause cancer.

RCRA STATUS: D001


CANADA
WHMIS (WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM): This MSDS has been prepared according to the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.


CANADA INGREDIENT DISCLOSURE LIST: CAS# 67-63-0 is listed on Canada's Ingredient Disclosure List.

EUROPEAN COMMUNITY
EEC LABEL SYMBOL AND CLASSIFICATION

"F" - Highly flammable
R11 - Highly flammable.

"Xn" - Harmful
R20/22 - Harmful by inhalation and if swallowed.
R36/37/38 - Irritating to eyes, respiratory system and skin.

16. OTHER INFORMATION

APPROVED BY: Pierce A. Pillon  TITLE: Chemist

REVISION SUMMARY: This MSDS replaces the 03/02/2012 MSDS. Revised: Section 2: TERATOGENIC EFFECTS. Section 3: Wt.%. Section 11: SKIN EFFECTS, TERATOGENIC EFFECTS. Section 15: CERCLA REGULATORY, CERCLA RQ, 302/304 EMERGENCY PLANNING, 40 CFR PART 68---RISK MANAGEMENT FOR CHEMICAL ACCIDENT RELEASE PREVENTION.

HMIS RATING

<table>
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<tr>
<th>HEALTH</th>
<th>FLAMMABILITY</th>
<th>PHYSICAL HAZARD</th>
<th>PERSONAL PROTECTION</th>
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<tbody>
<tr>
<td>1</td>
<td>3</td>
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NFPA CODES

<table>
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<tr>
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<th>FLAMMABILITY</th>
<th>PHYSICAL HAZARD</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>3</td>
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