



MATERIAL SAFETY DATA SHEET

Date Issued: 03/27/2008
MSDS No: 1621-10S/EUR
Date Revised: 03/02/2012
Revision No: 4

Ecoline Flux Remover

1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: Ecoline Flux Remover
PRODUCT DESCRIPTION: General Duty Flux Remover
PRODUCT CODE: 1621-10S/EUR
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

24 HR. EMERGENCY TELEPHONE NUMBERS

CHEMTREC CCN#21858 (US Transportation) : (800) 424 - 9300
CANUTEC (Canadian Transportation) : (613) 996 - 6666
Emergency Phone : (800) 858 - 4043

2. HAZARDS IDENTIFICATION

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: This material may be harmful or fatal if swallowed.

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: Swallowing of this material may result in nausea, vomiting and weakness followed by central nervous system depression.

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.

REPRODUCTIVE TOXICITY

TERATOGENIC EFFECTS: Contains Methanol which has been established as a teratogen by inhalation. See Sec.11 for details.

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

3. COMPOSITION / INFORMATION ON INGREDIENTS

MATERIAL SAFETY DATA SHEET



Date Issued: 03/27/2008
MSDS No: 1621-10S/EUR
Date Revised: 03/02/2012
Revision No: 4

Ecoline Flux Remover

Chemical Name	Wt.%	CAS	EINECS
n-Heptane	50 - 65	142-82-5	
2-Propanol	7 - 15	67-63-0	200-661-7
Ethanol	10 - 20	64-17-5	200-578-6
Methanol	1 - 3	67-56-1	200-659-6
n-Propyl acetate	< 1	109-60-4	2036861
1,1-difluoroethane (HFC-152a)	20 - 30	75-37-6	

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

Notes: Non-propellant material ("cold fill") only.

FLAMMABLE LIMITS: 1.1 (Heptane) to 6.7 (Heptane)

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: Follow all MSDS/label precautions even after container is emptied because they may

MATERIAL SAFETY DATA SHEET



Date Issued: 03/27/2008
MSDS No: 1621-10S/EUR
Date Revised: 03/02/2012
Revision No: 4

Ecoline Flux Remover

retain product residues.

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.

STORAGE TEMPERATURE: Contents under pressure. Do not expose to heat or store above (120) F (49) C.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE GUIDELINES

OSHA HAZARDOUS COMPONENTS (29 CFR1910.1200)							
Chemical Name		EXPOSURE LIMITS					
		OSHA PEL		ACGIH TLV		Supplier OEL	
		ppm	mg/m ³	ppm	mg/m ³	ppm	mg/m ³
n-Heptane	TWA	400 ppm	1600 mg/m ³	400 ppm			
	STEL	500 ppm	2000 mg/m ³	500 ppm			
2-Propanol	TWA	400 ppm	980 mg/m ³	400 ppm	983 mg/m ³	NL [1]	NL [1]
	STEL	500 ppm	1225 mg/m ³	500 ppm	1230 mg/m ³	NL	NL
Ethanol	TWA	1000 ppm	1900 mg/m ³	1000 ppm	1880 mg/m ³	NL	NL
	STEL	NL ppm	NL mg/m ³	NL ppm	NL mg/m ³	NL	NL
Methanol	TWA	S 200 ppm [2]	260 mg/m ³ [2]	S 200 ppm	262 mg/m ³	NL ppm	NL mg/m ³
	STEL	250 ppm	310 mg/m ³	250 ppm	328 mg/m ³	NL ppm	NL

OSHA TABLE COMMENTS:

- NL = Not Listed
- S = Skin

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: For prolonged or repeated use, wear nitrile, neoprene, or natural rubber gloves.

RESPIRATORY: NIOSH/MSHA approved air purifying respirator with an organic vapor cartridge or canister may



MATERIAL SAFETY DATA SHEET

Date Issued: 03/27/2008
MSDS No: 1621-10S/EUR
Date Revised: 03/02/2012
Revision No: 4

Ecoline Flux Remover

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 where air purifying respirators may not provide adequate protection.

WORK HYGIENIC PRACTICES: Wash hands before eating and wash before reuse.

OTHER USE PRECAUTIONS: Emergency shower and eyewash facility should be in close proximity.

9. PHYSICAL AND CHEMICAL PROPERTIES

Chemical Name	Flash Point (°C)	Boiling Point (°C)	Specific Gravity
2-Propanol	11.7	82.4	0.785

ODOR: Characteristic odor.

APPEARANCE: Clear, Colorless liquid

pH: Not Applicable

PERCENT VOLATILE: 100 at 20°C (68°F)

VAPOR PRESSURE: 55.49 mmHg@20C (VOC Composite Vapor Pressure)

BOILING POINT: Not Determined

FREEZING POINT: Not Applicable

MELTING POINT: Not Applicable

FLASHPOINT AND METHOD: (22°F) TAG CC

Notes: Non-propellant material ("cold fill") only.

SOLUBILITY IN WATER: to 32 at 20°C (68°F)

EVAPORATION RATE: > 1 (TCE=1)

DENSITY: 0.713g/mL at 25°C

VISCOSITY: Not Applicable

(VOC): 75.000 % by weight

Notes: Meets VOC requirements for CARB Category: Electronic Cleaner

10. STABILITY AND REACTIVITY

STABILITY: Stable.

POLYMERIZATION: Will not occur.

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

HAZARDOUS DECOMPOSITION PRODUCTS: Carbon dioxide, carbon monoxide, fluorine, hydrofluoric acid, carbonyl halides.

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

11. TOXICOLOGICAL INFORMATION

ACUTE

MATERIAL SAFETY DATA SHEET



Date Issued: 03/27/2008
MSDS No: 1621-10S/EUR
Date Revised: 03/02/2012
Revision No: 4

Ecoline Flux Remover

Chemical Name	ORAL LD ₅₀ (rat)	DERMAL LD ₅₀ (rabbit)	INHALATION LC ₅₀ (rat)
Methanol	6.2 to 12.98 mg/kg	16 g/kg	64000 ppm
n-Propyl acetate	9370 mg/kg	> 20 ml/kg	8000 ppm

DERMAL LD₅₀: Slight to very low toxicity.

ORAL LD₅₀: Practically non-toxic to animals. However, based on reports of human exposure to Methanol, a small amount (usually two or more ounces) can cause mental sluggishness, nausea and vomiting leading to severe illness, blindness or death if treatment is not received.

INHALATION LC₅₀: Slight to very low toxicity.

EYE EFFECTS: Mixture is a moderate eye irritant.

SKIN EFFECTS: Based on human exposure reports, prolonged and repeated skin contact with Methanol has produced toxic effects including vision effects and death.

CARCINOGENICITY

Chemical Name	NTP Status	IARC Status	OSHA Status
2-Propanol	NOT LISTED	NOT LISTED	NOT LISTED
Ethanol	NOT LISTED	NOT LISTED	NOT LISTED
Methanol	NOT LISTED	NOT LISTED	NOT LISTED
n-Propyl acetate	NOT LISTED	NOT LISTED	NOT LISTED

TERATOGENIC EFFECTS: Information for Methanol: In an inhalation developmental toxicity study, rats were exposed 6hrs./day to 5000 - 20000 ppm vapors. A significant teratogenic response was seen at 20000 ppm. Fetotoxicity was noted at 10000 ppm, but not at 5000 ppm.

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: Isopropyl alcohol has a high biochemical oxygen demand and a potential to cause oxygen depletion in aqueous systems, a low potential to affect aquatic organisms, a low potential to affect secondary waste treatment microbial metabolism, a low potential to affect the germination of some plants, a high potential to biodegrade (low persistence) with unacclimated microorganisms from activated sludge.

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



MATERIAL SAFETY DATA SHEET

Date Issued: 03/27/2008
MSDS No: 1621-10S/EUR
Date Revised: 03/02/2012
Revision No: 4

Ecoline Flux Remover

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: CONSUMER COMMODITY ORM-D

UN/NA NUMBER: N/A

PACKING GROUP: N/A

ROAD AND RAIL (ADR/RID)

KEMLER NUMBER: UN1950

HAZARD CLASS: 2.1

AIR (ICAO/IATA)

SHIPPING NAME: CONSUMER COMMODITY ID8000

UN/NA NUMBER: ID8000

PRIMARY HAZARD CLASS/DIVISION: 9

PACKING GROUP: N/A

VESSEL (IMO/IMDG)

SHIPPING NAME: AEROSOLS IN LIMITED QUANTITIES OF CLASS 2

UN/NA NUMBER: 1950

PRIMARY HAZARD CLASS/DIVISION: 2.1

PACKING GROUP: II

15. REGULATORY INFORMATION

UNITED STATES

SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT)

311/312 HAZARD CATEGORIES: IMMEDIATE / DELAYED

FIRE: Yes **PRESSURE GENERATING:** Yes **ACUTE:** Yes **CHRONIC:** Yes

313 REPORTABLE INGREDIENTS: 2-propanol (CAS #67-63-0)

EPCRA SECTION 313 SUPPLIER NOTIFICATION

Chemical Name	Wt. %	CAS
2-Propanol	7 - 15	67-63-0
Methanol	1 - 3	67-56-1

TITLE III NOTES: Not listed as an Extremely Hazardous Substance.

302/304 EMERGENCY PLANNING

EMERGENCY PLAN: Methanol (#67-56-1)

CERCLA (COMPREHENSIVE RESPONSE, COMPENSATION, AND LIABILITY ACT)

CERCLA REGULATORY: Methanol (#67-56-1)

MATERIAL SAFETY DATA SHEET



Date Issued: 03/27/2008
MSDS No: 1621-10S/EUR
Date Revised: 03/02/2012
Revision No: 4

Ecoline Flux Remover

Chemical Name	Wt. %	CERCLA RQ
Methanol	1 - 3	5000 lbs.

CERCLA RQ: Methanol has an RQ of 5000 lbs.

TSCA (TOXIC SUBSTANCE CONTROL ACT)

Chemical Name	CAS
2-Propanol	67-63-0
Ethanol	64-17-5
Methanol	67-56-1
n-Propyl acetate	109-60-4
1,1-difluoroethane (HFC-152a)	75-37-6

TSCA REGULATORY: This product is listed on the TSCA Inventory.

CLEAN AIR ACT

40 CFR PART 68---RISK MANAGEMENT FOR CHEMICAL ACCIDENT RELEASE PREVENTION: Methanol (CAS# 67-56-1)

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

OSHA HAZARD COMM. RULE: Contents of this MSDS comply with the OSHA Hazard Communication Standard 29 CFR 1910.1200.

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.

WHMIS CLASS: Class A, B5, D2B (Aerosol, Flammable Aerosol, Toxic Materials)

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

16. OTHER INFORMATION

APPROVED BY: Pierce A. Pillon **TITLE:** Chemist

REVISION SUMMARY: This MSDS replaces the 12/05/2011 MSDS.

MATERIAL SAFETY DATA SHEET



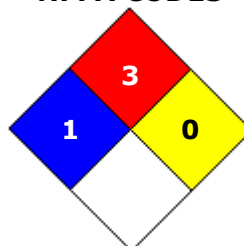
Date Issued: 03/27/2008
MSDS No: 1621-10S/EUR
Date Revised: 03/02/2012
Revision No: 4

Ecoline Flux Remover

HMIS RATING

HEALTH	<input type="checkbox"/>	1
FLAMMABILITY	<input type="checkbox"/>	3
PHYSICAL HAZARD	<input type="checkbox"/>	0
PERSONAL PROTECTION	<input type="checkbox"/>	

NFPA CODES



DATA SOURCES: Code of Federal Regulations (CFR) The Sigma-Aldrich Library of Regulatory and Safety Data
 OSHA Hazard Communication Standard (29CFR1910.1200) Various Federal, State and Local Regulations

GENERAL STATEMENTS: This product meets the California Air Resources Board VOC cap of 75 wt % for the Electronic Cleaner category.

MANUFACTURER DISCLAIMER: To the best of our knowledge, the information contained herein is accurate. However, neither Tech Spray, L.P., or any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards which exist.