



EcoLine™ Flux Remover

General Purpose Defluxer
1621

Introduction

EcoLine™ Flux Remover is a unique combination of hydrocarbon solvents and alcohols making it an excellent defluxer. Safe on plastics and rapidly evaporating, the Flux Remover dissolves type R, RMA, SA and most no-clean fluxes. Can also be used as an all-purpose cleaner for removal of light oils, silicones, waxes, greases and similar contaminants.

Features / Benefits
 EPA SNAP Approved
 Non-Ozone Depleting
 Safe on Most Plastics
 Zero Residue
 Rapidly Evaporating
 Non-Corrosive

Physical Properties	
Boiling Point	80°C / 176°F
Flash Point (TCC)	53°F
Evaporation Rate	NIF
Surface Tension	
Kauri-Butanol (KB Value)	

Chemical Components

Isopropanol..... (67-63-0)	50-55%
Ethanol..... (64-17-5)	5-10%-Aerosol 6-11%-Bulk
2-Methyl-2-Propanol..... (75-65-0)	<<1%-Aerosol 1.4%-Bulk
Dimethyl Ketone..... (67-64-1)	10-12%
Cyclotetramethylene Oxide..... (109-99-9)	20-25%
Acetic Acid, Propyl Ester..... (109-60-4)	5-10%
Carbon Dioxide (Aerosol Propellant)..... (124-38-9)	1-5%

Plastic Compatibility

Material	Compatibility	Material	Compatibility
ABS	Excellent	PMMA	Excellent
Nylon	Excellent	POM	Excellent
Lexan	Excellent	PP	Excellent
HDPE	Excellent	PS	Excellent
CDPE	Excellent	PTFE	Excellent
C. E. Phenolic	Excellent	PVC	Excellent

Environmental Policy

Techspray® is committed to developing products to ensure a safer and cleaner environment. We will continue to meet and sustain the regulations of all federal, state and local government agencies.

Packaging and Availability

EcoLine™ Flux Remover may be ordered in the following container sizes:

1621-4S	4 Ounce Aerosol
1621-10S	10 Ounce Aerosol
1621-G	1 Gallon in Metal
1621-5G	33 Pounds in Metal
1621-54G	340 Pounds in Metal

MATERIAL SAFETY DATA SHEET



MSDS No: 1621-10S/EUR

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.

2. HAZARDS IDENTIFICATION

HAZARD DESIGNATION

"F" - Highly flammable
R11 - Highly flammable.

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.

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

3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name	Wt. %	CAS	EINECS
n-Heptane	50 - 65	142-82-5	
2-Propanol	7 - 15	67-63-0	200-661-0
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

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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 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	Boiling Point (°C)	Specific Gravity
2-Propanol	53.6	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

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STABILITY: Stable.

POLYMERIZATION: Will not occur.

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

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

11. TOXICOLOGICAL INFORMATION

ACUTE

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

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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 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)

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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)

Chemical Name	Wt.%	CERCLA RQ
Methanol	1 - 3	1* 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