TECHSPRAY™

Product Information

No-Clean Flux Remover

No-Clean Defluxer

1660

Introduction

No-Clean Flux Remover 1660 is a non-flammable, rapidly evaporating blended AK225 designed specifically for the removal of No-Clean Flux and white residue. No-Clean Flux Remover also effectively and aggressively removes greases, oils and similar soils from contacts, PCBs, connectors, motors, generators, and relays.

Features / Benefits

Removes White Residue
Non-Flammable
Rapidly Evaporating
Zero Residue
Non-Corrosive

Physical Properties	
Boiling Point	40°C / 104°F
Flash Point (TCC)	None
Evaporation Rate	>1
Surface Tension	
Kauri-Butanol (KB Value)	

Chemical Components

3,3-Dichloro-1,1,1,2,2-pentafluoropropane…	(422-56-0)	20-30%
1,3-Dichloro-1,1,2,2,3-pentafluoropropane…	(507-55-1)	25-30%
Trans-dichloroethylene……	(156-60-5)	22-29%
Methanol……..……	(67-56-1)	4.8%
Nitromethane……..	(75-52-5)	< .5%
1,1,1,2-tetrafluoroethane……..	(811-97-2)	18-23%
Carbon Dioxide…….……..	(124-38-9)	1-2%

Plastic Compatibility

Material	Compatibility	Material	Compatibility
ABS	Not Compatible	PMMA	Not Compatible
Nylon	Excellent	POM	Excellent
Lexan	Not Compatible	PP	Excellent
HDPE	Excellent	PS	Not Compatible
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

No-Clean Flux Remover may be ordered in the following container sizes:

1660-6S	6 Ounce Aerosol (with Brush Attachment 1995)
1660-12S	12 Ounce Aerosol

MATERIAL SAFETY DATA SHEET

Finished Product

MSDS No: 1660-A

No-Clean Flux Remover

1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: No-Clean Flux Remover
PRODUCT DESCRIPTION: Azeotropic Mixture
PRODUCT CODE: 1660-6S/12S
ACTIVE INGREDIENT(S): 3,3-Dichloro-1,1,1,2,2-pentafluoropropane (HCFC-225ca); 1,3-Dichloro-1,1,2,2,3-pentafluoropropane (HCFC-225cb); 1,2-transdichloroethylene (Trans); Nitromethane

MANUFACTURER

Techspray, L.P.

2. HAZARDS IDENTIFICATION

HAZARD DESIGNATION

EEC LABEL SYMBOL AND CLASSIFICATION

"T" - Toxic
R23/25 - Toxic by inhalation and if swallowed.

"F" - Highly flammable
R11 - Highly flammable.

R52/53 - Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

R63 - Possible risk of harm to the unborn child.

EMERGENCY OVERVIEW

PHYSICAL APPEARANCE: Transparent, colorless liquid.

IMMEDIATE CONCERNS: Warning! High concentrations of vapor can reduce oxygen available for breathing. Harmful if inhaled. May decompose on contact with flames or extremely hot metal surfaces to produce toxic and corrosive products.

POTENTIAL HEALTH EFFECTS

EYES: Substance causes substantial eye irritation.

SKIN: Prolonged or repeated contact can result in defatting and drying of the skin which may result in skin irritation and dermatitis (rash).

INGESTION: Substance may be harmful if swallowed.

INHALATION: High concentrations in immediate area can displace oxygen and can cause dizziness, unconsciousness, and possibly death with longer exposure. Keep people away from such vapors without self-contained breathing apparatus.

SIGNS AND SYMPTOMS OF OVEREXPOSURE

EYES: Liquid splashed in the eye may cause redness, irritation and conjunctivitis.

SKIN: Prolonged exposure causes redness, pain, drying and cracking of the skin.

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.

REPRODUCTIVE TOXICITY

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

3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name	Wt.%	CAS	EINECS
3,3-Dichloro-1,1,1,2,2-pentafluoropropane (HCFC-225ca)	16.5 - 20.7	422-56-0	2070169
1,3-Dichloro-1,1,2,2,3-pentafluoropropane (HCFC-225cb)	20.6 - 24.8	507-55-1	2080769
1,2-transdichloroethylene (Trans)	5 - 60	156-60-5	205-860-2
Nitromethane	< 1	75-52-5	
Methanol	2 - 5	67-56-1	200-659-6
1,1,1,2-Tetrafluoroethane (HFC-134a)	18 - 23	811-97-2	223770
Carbon dioxide	1 - 2	124-38-9	

4. FIRST AID MEASURES

EYES: Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Have eyes examined and tested by medical personnel.

SKIN: Immediately flush skin with plenty of water. Remove clothing. Get medical attention immediately. Wash clothing separately before reuse.

INGESTION: If swallowed, gently wipe or rinse the inside of the mouth with water. DO NOT induce vomiting. Sips of water may be given if person is fully conscious. Never give anything by mouth to an unconscious or convulsing person. Immediately contact a poison control center, emergency room or physician as further treatment may be necessary.

INHALATION: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

5. FIRE FIGHTING MEASURES

FLASHPOINT AND METHOD: None : . . . . ASTM D-56 (Tag C.C.)

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

FIRE FIGHTING PROCEDURES: Use water spray to keep fire-exposed containers cool and to knock down vapors which may result from product decomposition.

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

OSHA TABLE COMMENTS:

1. NOT ESTABLISHED
2. * (AEL)=Acceptable Exposure Limit as established by the manufacture
3. S = Skin

ENGINEERING CONTROLS: Local exhaust ventilation may be necessary to control any air contaminants to within their TLVs during the use of this product.

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: A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use.

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)	Freezing Point (°C)	Auto Ignition (°C)	Solubility in Water	Specific Gravity	Specific Volume
1,2-transdichloroethylene (Trans)	36	48	-50		slight	1.257	
1,1,1,2-Tetrafluoroethane (HFC-134a)		-26.4	-101		NEGLIGIBLE	1.21	

ODOR: Faint ethereal odor

APPEARANCE: Clear, Colorless liquid

PERCENT VOLATILE: 100 at 20°C (68°F)

VAPOR DENSITY: 4 (Air=1)

BOILING POINT: to 44.6°C (114°F)

SOLUBILITY IN WATER: Insoluble

EVAPORATION RATE: > 1 (H2O=1)

SPECIFIC GRAVITY: 1.400 (water=1)

(VOC): 517.000 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: Whem exposed to high temperatures or flames this product may form hydrochloric and hydrofluoric acids - possibly carbonyl halides.

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

11. TOXICOLOGICAL INFORMATION

Chemical Name	Wt.%	CAS	Comments
3,3-Dichloro-1,1,1,2,2-pentafluoropropane (HCFC-225ca)	16.5 - 20.7	422-56-0	
1,3-Dichloro-1,1,2,2,3-pentafluoropropane (HCFC-225cb)	20.6 - 24.8	507-55-1	
Methanol	2 - 5	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: Releases to air, land, or water which exceed the RQ must be reported to the National Response Center [(800)424-8802] and to your Local Emergency Planning Committee.

Chemical Name	Wt.%	CERCLA RQ
1,2-transdichloroethylene (Trans)	5 - 60	1000 lbs.
Methanol	2 - 5	1* lbs.

CERCLA RQ: Trans-1,2-dichloroethylene is listed in Table 302.4 of 40 CFR Part 302 as a hazardous substance. Reportable Quantity = 1,000 lbs.

TSCA (TOXIC SUBSTANCE CONTROL ACT)

Chemical Name	CAS	TSCA SECTION
3,3-Dichloro-1,1,1,2,2-pentafluoropropane (HCFC-225ca)	422-56-0	
1,3-Dichloro-1,1,2,2,3-pentafluoropropane (HCFC-225cb)	507-55-1	
1,2-transdichloroethylene (Trans)	156-60-5	
Methanol	67-56-1	
1,1,1,2-Tetrafluoroethane (HFC-134a)	811-97-2	

TSCA REGULATORY: All chemicals in this product are listed on the TSCA Inventory.

CLEAN AIR ACT

Chemical Name	Wt.%	CAS
3,3-Dichloro-1,1,1,2,2-pentafluoropropane (HCFC-225ca)	16.5 - 20.7	422-56-0
1,1,1,2-Tetrafluoroethane (HFC-134a)	18 - 23	811-97-2

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

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, Class D2B.