



Flux Remover AMS

General Purpose Defluxer
1665

Introduction

Very similar in properties to DuPont's Freon® TMS, Flux Remover AMS is a mixture of AK225 and methanol. Specifically designed for defluxing in vapor degreasing and cold-batch cleaning. AMS offers superior flux removal for type R, RMA, RA, and synthetic fluxes. Non-flammable, safe on plastics and elastomers, AMS is the perfect choice for all defluxing applications.

Features / Benefits

- Non-Flammable
- Rapidly Evaporating
- Zero Residue
- Low Ozone Depletion Potential
- Non-Corrosive
- Replacement for CFC-113
- Replacement for HCFC-141b

Physical Properties

Boiling Point	56°C / 133°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 (HCFC-225ca).. (422-56-0)	32-42%-Aerosol 40-45%-Bulk
1,3-Dichloro-1,1,2,2,3-pentafluoropropane (HCFC-225cb).. (507-55-1)	40-50%-Aerosol 50-55%-Bulk
Methanol..... (67-56-1)	4.6%-Aerosol 5.8%-Bulk
Nitromethane..... (75-52-5)	<.5%
Aerosol - 1,1,1,2-Tetrafluoroethane..... (811-97-2)	18-23%
Carbon Dioxide (Aerosol Propellant)..... (124-38-9)	1-2%

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

Flux Remover AMS may be ordered in the following container sizes:

1665-8S	8 Ounce Aerosol
1665-18S	18 Ounce Aerosol
1665-5G	50 Pounds in Metal
1665-54G	600 Pounds in Metal

MATERIAL SAFETY DATA SHEET

Finished Product

MSDS Ref. No: 1665-A

Flux Remover AMS

1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: Flux Remover AMS**GENERAL USE:** General Purpose Flux Remover**PRODUCT DESCRIPTION:** General Purposes Cleaner**PRODUCT CODE:** 1665/CAN/EUR-6S, 8S, 18S

MANUFACTURER

Techspray, L.P.

2. COMPOSITION / INFORMATION ON INGREDIENTS

<u>Chemical Name</u>	<u>Wt.%</u>	<u>CAS#</u>	<u>EINECS#</u>
3,3-Dichloro-1,1,1,2,2-pentafluoropropane (HCFC-225ca)	65 - 75	422-56-0	2070169
1,3-Dichloro-1,1,2,2,3-pentafluoropropane (HCFC-225cb)	<5	507-55-1	2080769
Methanol	3 - 9	67-56-1	200-659-6
Nitromethane	<2	75-52-5	
1,1,1,2-Tetrafluoroethane (HFC-134a)	15 - 25	811-97-2	223770
Carbon dioxide	2 - 5	124-38-9	

EEC LABEL SYMBOL AND CLASSIFICATION

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 or give oxygen by trained personnel. Seek immediate medical attention.

5. FIRE FIGHTING MEASURES

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

FLAMMABLE LIMITS: NA to NA

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.

HAZARDOUS DECOMPOSITION PRODUCTS: Toxic oxides of carbon and corrosive vapors of hydrogen chloride.

6. ACCIDENTAL RELEASE MEASURES

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

LARGE SPILL: If this material is released into a work area, evacuate the area immediately.

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: Use only in a well ventilated area.

9. PHYSICAL AND CHEMICAL PROPERTIES

ODOR: Faint ethereal odor

APPEARANCE: Clear, Colorless liquid

PERCENT VOLATILE: 100 at 20°C (68°F)

VAPOR DENSITY: 7.0 (Air=1)

BOILING POINT: to 54°C (129°F)

SOLUBILITY IN WATER: Insoluble

EVAPORATION RATE: >1 (n-Butyl Acetate=1)

(VOC): 70 to 75 g/L (non-exempt VOC)

10. STABILITY AND REACTIVITY

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

STABILITY: Stable.

POLYMERIZATION: Will not occur.

HAZARDOUS DECOMPOSITION PRODUCTS: May form hydrochloric and hydrofluoric acids - possibly carbonyl halides, when exposed to high temperatures.

INCOMPATIBLE MATERIALS: Oxidizing agents, alkalies and bases.

11. TOXICOLOGICAL INFORMATION

ACUTE

EYES: Moderately to severely irritating

DERMAL LD₅₀: Mildly to moderately irritating.

ORAL LD₅₀: Slight to very low toxicity.

INHALATION LC₅₀: Slight to very low toxicity.

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

TERATOGENIC EFFECTS: Test results indicate this compound/mixture is not teratogenic.

GENERAL COMMENTS: Data from acute toxicity studies indicate that HCFC-225ca and HCFC-225cb have very low acute toxicity. Neither isomer causes eye irritation nor dermal toxicity in standardized tests; skin application of both isomers at high doses (2,000 mg/kg body weight) produces no adverse effects. Therefore, the dermal LD50s are greater than 2,000 mg/kg body weight. Oral administration of either isomer at high doses (5,000 mg/kg body weight) does not cause any mortality and the oral LD50s are greater than 5,000 mg/kg body weight. Both isomers also have very low acute inhalation toxicity as measured by the concentration that cause 50% mortality in experimental animals.

In 28-day inhalation studies with rat, the activity and responsiveness of the animals was reduced at 5,000 ppm or

15. REGULATORY INFORMATION

UNITED STATES

SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT)

311/312 HAZARD CATEGORIES: IMMEDIATE / DELAYED

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

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.

TSCA (TOXIC SUBSTANCE CONTROL ACT)

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

CANADA

WHMIS (WORKER 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 D2B - Toxic Materials

EUROPEAN COMMUNITY

EEC LABEL SYMBOL AND CLASSIFICATION



R23/25 - Toxic by inhalation and if swallowed.

EEC Toxic - "T"



R11 - Highly flammable.

EEC Highly flammable - "F"

R63 - Possible risk of harm to the unborn child.

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

COMMENTS: WARNING: Contains 1,1,1,2-tetrafluoroethane (HFC-134a), a greenhouse gas which may contribute to global warming.

16. OTHER INFORMATION

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

PREPARED BY: Steve Cook