

SECTION 1: CHEMICAL PRODUCT AND COMPANY IDENTIFICATION**Company Address:**8125 Cobb Center Drive
Kennesaw, GA 30152Product Information: 800-TECH-401
Customer Service: 800-645-5244Emergency: (Chemtrec) 800-424-9300
Revision Date: April 4, 2008**Product Identification****NEW & IMPROVED FLUX-OFF® NO CLEAN****Product Code: ES1695, ES895B****SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS**

Chemical Name	CAS#	Wt. % Range
trans-1,2-dichloroethylene	156-60-5	20.0-50.0
HCFC-225ca	422-56-0	10.0-20.0
HCFC-225cb	507-55-1	10.0-20.0
1,1,1,2-tetrafluoroethane	811-97-2	10.0-25.0
Tetrahydrofuran	109-99-9	1.0-5.0
Carbon dioxide	124-38-9	1.0-5.0
Methanol	67-56-1	1.0-3.0

SECTION 3: HAZARD IDENTIFICATION**Emergency Overview:** Clear, colorless liquid with strong ethereal odor. This product is nonflammable. Liquid may irritate eyes and skin under repeated or prolonged exposure. Breathing high concentrations of product vapors may produce drowsiness and a headache.**Potential Health Effects:****Eyes:** Liquid, aerosols and vapors of this product may be irritating and can cause pain, tearing, reddening and swelling accompanied by a stinging sensation.**Skin:** Contact may cause skin irritation.**Ingestion:** Harmful if swallowed. Irritating to mouth, throat and stomach. May cause vomiting.**Inhalation:** Harmful if inhaled. High concentrations of vapors in immediate area can displace oxygen and can cause dizziness, unconsciousness, and even death with longer exposure. Keep people away from such vapors without self-contained breathing apparatus.**Pre-Existing Medical Conditions Aggravated by Exposure:** Lung, skin, eye, gastrointestinal tract, central nervous system.**SECTION 4: FIRST AID****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 if irritation develops or persists.**Skin:** Wash skin with soap and water. Remove contaminated clothing. Get medical attention if irritation develops or persists. Wash clothing separately before reuse.**Ingestion:** If swallowed, do not induce vomiting. Keep head below knees to minimize chance of aspirating material into the lungs. Never give anything by mouth to an unconscious person. Get medical attention immediately.**Inhalation:** Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.**SECTION 5: FIRE FIGHTING MEASURES****Flash Point:** None (TCC)**LEL/UEL:** Not available**Extinguishing media:** Use alcohol foam, carbon dioxide, or water spray when fighting fires involving this material.**Fire Fighting Instructions:** As in any fire, wear self-contained breathing apparatus (pressure-demand, MSHA/NIOSH approved or equivalent) and full protective gear.**SECTION 6: ACCIDENTAL RELEASE MEASURES****Large Spills:** Shut off leak if possible and safe to do so. Wear a self-contained breathing apparatus and appropriate personal protective equipment. Absorb spill with inert material (e.g. dry sand or earth), then place in a chemical waste container for proper disposal. Do not flush to sewer. Avoid runoff into storm sewers and ditches which lead to waterways.**Small Spills:** Absorb spill with inert material (e.g. dry sand or earth), then place in a chemical waste container for proper disposal.**SECTION 7: HANDLING AND STORAGE**

Avoid prolonged or repeated contact with eyes, skin, and clothing. Wash hands before eating. Use with adequate ventilation. Avoid breathing product vapor or mist. Do not reuse this container. Store in a cool dry place away from heat, sparks or flames. Keep container closed when not in use. Do not store in direct sunlight.

KEEP OUT OF REACH OF CHILDREN.**SECTION 8: EXPOSURE CONTROLS, PERSONAL PROTECTION****Exposure Guidelines:**

CHEMICAL NAME	ACGIH TLV	OSHA PEL	ACGIH STEL	OTHER
trans-1,2-dichloroethylene	200 ppm	200 ppm	not established	
HCFC-225ca/HCFC-225cb	not established	not established	not established	100 ppm*
1,1,1,2-tetrafluoroethane	not established	not established	not established	1000 ppm*
Tetrahydrofuran	50 ppm	200 ppm	100 ppm	
Carbon dioxide	5000 ppm	10,000 ppm	30,000 ppm	
Methanol	200 ppm	200 ppm	250 ppm	

* Supplier's Occupational Exposure Limit

Work/Hygienic Practices: Good general ventilation should be sufficient to control airborne levels. Local exhaust ventilation may be necessary to control any air contaminants to within their TLVs during the use of this product. If vapor concentration exceeds TLV, use NIOSH approved organic vapor cartridge respirator. Wear safety glasses with side shields (or goggles) and rubber or other chemically resistant gloves when handling this material.

®

ITW CHEMTRONICS

MSDS #0309

NFPA and HMIS Codes:	NFPA	HMIS
Health	1	1
Flammability	0	0
Reactivity	1	1
Personal Protection	-	B

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

<u>Physical State:</u> Clear colorless liquid	<u>Solubility in Water:</u> Negligible
<u>Odor:</u> Ethereal	<u>Specific Gravity:</u> (Water =1) 1.34
<u>pH:</u> NA	<u>Evaporation Rate:</u> >1 (Butyl acetate=1):
<u>Vapor Pressure:</u> 205 mm Hg @ 68 F	<u>Viscosity:</u> 1 (Approx.) (Water = 1)
<u>Vapor Density:</u> >1 (Air = 1)	<u>Percent Volatile:</u> 100%
<u>Boiling Point:</u> 99 F (37C)	

SECTION 10: STABILITY AND REACTIVITY

Stability: - This product is stable. Conditions to Avoid: Do not spray near open flames, red hot surfaces or other sources of ignition.
Incompatibility: Do not mix with powdered alkali and alkaline earth metals or strong oxidizing agents.
Products of Decomposition: Thermal decomposition may release carbon monoxide, carbon dioxide and incompletely burned hydrocarbons as well as hydrochloric and hydrofluoric acid vapor.
Hazardous Polymerization: Will not occur Conditions to Avoid: NA

SECTION 11: TOXICOLOGICAL INFORMATION:

<u>Inhalation:</u>			<u>Ingestion:</u>		
Methanol	LC50 rat	64,000 ppm/4 hrs	trans-1,2-dichloroethylene	LD50 rat	>5,000 mg/kg
HCFC-225ca	LC50 rat	37,300 ppm/4 hrs	HCFC-225ca	LD50	>5,000 mg/kg
HCFC-225cb	LC50 rat	36,800 ppm/4 hrs	HCFC-225cb	LD50	>5,000 mg/kg
trans-1,2-dichloroethylene	LC50 rat	24,100 ppm/4 hrs	Tetrahydrofuran	LD50 rat	3240 mg/kg
Tetrahydrofuran	LC50 Rat	18,000ppm/4hrs			

<u>Eye:</u>			<u>Skin</u>		
trans-1,2-dichloroethylene		MOD – SEV	trans-1,2-dichloroethylene	LD50 rabbit	>5,000 mg/kg
HCFC-225ca/HCFC-225cb	rabbit	Not an irritant	Methanol	LD50 rabbit	15,800 mg/kg
Tetrahydrofuran		Moderate irritant	HCFC-225ca/HCFC-225cb	LD50 rabbit	>2,000 mg/kg
			Tetrahydrofuran		Severe irritant

Cancer Information: No ingredients listed as human carcinogens by NTP or IARC

Reproductive effects: none Teratogenic effects: none Mutagenic effects: none

SECTION 12: ECOLOGICAL INFORMATION**Environmental Impact Information**

Avoid runoff into storm sewers and ditches which lead to waterways. Water runoff can cause environmental damage.

REPORTING

US regulations require reporting spills of this material that could reach any surface waters. The toll free number for the US Coast Guard National Response Center is: **1-800-424-8802**

SECTION 13: DISPOSAL CONSIDERATIONS

Dispose of in accordance with all federal, state and local regulations. Water runoff can cause environmental damage.

SECTION 14: TRANSPORTATION INFORMATION

	Proper Shipping Name	UN Number	Class	Sub. Risk	Pkg. Group	Hazard Label	Pkg. Instr.	Max. Quantity
<u>Air:</u>	Aerosols, nonflammable	UN1950	2.2	NA	NA	Nonflammable Gas	203	75kg;150kg
<u>Ground:</u>	Consumer Commodity ORM-D	NA	ORM-D	NA	NA	ORM-D	Pkg. Auth.	173.306

SECTION 15: REGULATORY INFORMATION

SECTION 313 SUPPLIER NOTIFICATION This product contains the following toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 (40 CFR 372).

Chemical Name	CAS#	Wt. % Range
HCFC-225ca	422-56-0	10.0-20.0
HCFC-225cb`	507-55-1	10.0-20.0
Methanol	67-56-1	1.0-3.0

This information should be included on all MSDSs copied and distributed for this material.

TOXIC SUBSTANCES CONTROL ACT (TSCA). All ingredients of this product are listed on the TSCA Inventory.

WHMIS: Class A; Class D2B

This product has been classified according to the hazard criteria of the CPR and the MSDS contains all of the information required by the CPR.

SECTION 16: OTHER INFORMATION:

Product is a Level 1 aerosol. Do not puncture or incinerate containers. Normal ventilation for standard manufacturing practices is usually adequate. Local exhaust should be used when large amounts are released.

To the best of our knowledge, the information contained herein is accurate. However, all materials may present unknown hazards and should be used with caution. In particular, improper use of our products and their inappropriate combination with other products and substances may produce harmful results which cannot be anticipated. Final determination of the suitability of any material is the sole responsibility of the user. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that may exist.