

FE-36

QUICK IDENTIFIER (In Plant Common Name)

Manufacturer's Name:	ANSUL INCORPORATED	Emergency Telephone No.:	CHEMTREC (800) 424-9300 or (703) 527-3887
Address:	One Stanton Street, Marinette, WI 54143-2542	Other Information Calls:	(715) 735-7411
Prepared By:	Safety and Health Department	Date Prepared:	May, 2000

SECTION 1 – IDENTITY

Common Name: (used on label) (Trade Name and Synonyms)	FE-36, HFC-236 fa	CAS No.:	690-39-1
Chemical Name:	1, 1, 1, 3, 3, 3 Hexafluoropropane	Chemical Family:	Hydrofluorocarbons
Formula:	CF ₃ – CH ₂ – CF ₃		

SECTION 2 – INGREDIENTS

PART A – HAZARDOUS INGREDIENTS				
Principal Hazardous Component(s) (chemical and common name(s)):	Wt. %	CAS No.	ACGIH TLV	Acute Toxicity Data
1, 1, 1, 3, 3, 3 Hexafluoropropane (FE-36)	99-100	690-39-1	NDA	NOAEL 10% LOAEL 15% ALC [4 hr.] rat: >189,000 PPM
PART B – OTHER INGREDIENTS				
Other Component(s) (chemical and common name(s)):	Wt. %	CAS No.	ACGIH TLV	Acute Toxicity Data
None	N/A	N/A	N/A	N/A

SECTION 3 – PHYSICAL AND CHEMICAL CHARACTERISTICS (Fire and Explosion Data)

Boiling Point:	29.5 °F (-1.4 °C)	Specific Gravity (H ₂ O = 1):	1.370	Vapor Pressure:	272.4 kPa @ 25 °C (39.9 PSIA)
Percent Volatile by Volume (%):	100	Vapor Density (Air = 1):	>1	Evaporation Rate (= 1):	NDA
Solubility in Water:	Negligible	Reactivity in Water:	Unreactive		
Appearance and Odor:	Colorless Liquefied Gas				
Flash Point:	N/A	Flammable Limits in Air % by Volume:	N/A	Extinguisher Media:	N/A, This is an extinguishing agent.
Auto-Ignition Temperature:	N/A				
Special Fire Fighting Procedures:	THIS IS A FIRE EXTINGUISHING AGENT. Use water to cool fire-exposed cylinders or other bulk containers. Use self-contained breathing apparatus and protective clothing when LOAEL limit of 15% is likely to be exceeded or when products of combustion are toxic.				
Unusual Fire and Explosion Hazards:	Not a fire or explosion hazard.				

SECTION 4 – PHYSICAL HAZARDS

Stability:	Unstable <input type="checkbox"/> Stable <input checked="" type="checkbox"/>	Conditions to Avoid:	N/A
Incompatibility (Materials to Avoid):	Strong bases, metallic sodium, potassium, lithium.		
Hazardous Decomposition Products:	HF or hydrofluoric acid may be produced		
Hazardous Polymerization:	May Occur <input type="checkbox"/> Will Not Occur <input checked="" type="checkbox"/>	Conditions to Avoid:	N/A

SECTION 5 – HEALTH HAZARDS

FE-36 (Continued)

Threshold Limit Value:	TLV (ACGIH) None established. AEL* 1000 PPM, 8 and 12 HR. TWA (DuPont). *AEL is DuPont's acceptable exposure limit. Where governmentally imposed occupational exposure limits which are lower than the AEL are in effect, such limits shall take precedence.		
Routes of Entry: Eye Contact:	"Frostbite-like" effects may occur if the liquid or escaping vapors contact the eyes.		
Skin Contact:	Frostbite, if liquid or escaping vapor contacts the skin.		
Inhalation:	Repeated exposure caused no significant toxicological effects in concentrations up to 2% based on animal data.		
Ingestion:	Not a probable route of exposure.		
Signs and Symptoms:	Acute Overexposure:	Based on animal data, this material may cause: Suffocation, if air is displayed by vapors. Irregular heart beat with a strange sensation in the chest, "heart thumping", apprehension, lightheadedness, feeling of fainting, dizziness, weakness, sometimes progressing to loss of consciousness and death.	
	Chronic Overexposure:	No significant effects known.	
Medical Conditions Generally Aggravated by Exposure:	This material may make the heart more susceptible to arrhythmias.		
Chemical Listed as Carcinogen or Potential:	National Toxicology Program:	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	I.A.R.C. Monographs: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
		OSHA: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	

SECTION 6 – EMERGENCY AND FIRST AID PROCEDURES

Eye Contact:	Immediately flush eyes with plenty of water for at least 15 minutes. Call a physician.
Skin Contact:	Flush area with lukewarm water. If frostbite has occurred, do not use hot water, call physician.
Inhalation:	Immediately remove to fresh air, keep person calm. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician.
Ingestion:	Ingestion is not considered a potential route of exposure.
Note to Physician:	THIS MATERIAL MAY MAKE THE HEART MORE SUSCEPTIBLE TO ARRHYTHMIAS. Catecholamines such as adrenaline, and other compounds having similar effects, should be reserved for emergencies and then used only with special caution.

SECTION 7 – SPECIAL PROTECTION INFORMATION

Respiratory Protection (Specify Type):	Wear NIOSH/MSHA approved respiratory protection, as appropriate, when concentrations may exceed NOAEL limit of 10%.		
Ventilation:	Local Exhaust:	Recommended to control exposures. See mechanical.	Mechanical (General): Recommended in low areas or indoors where vapors may collect.
Protective Gloves:	Good practice.	Eye Protection:	Wear safety glasses or overall chemical splash goggles when handling FE-36 liquid.
Other Protective Clothing or Equipment:	Wear impervious clothing, such as gloves, apron, or boots as appropriate, when recharging or working with liquid FE-36.		

SECTION 8 – SPECIAL PRECAUTIONS AND SPILL/LEAK PROCEDURES

Precautions to be Taken in Handling and Storage:	Vapors of the compound are heavier than air, posing a hazard of asphyxia if they are trapped in enclosed or low places. Keep away from heat, sparks and flames. Keep container in a cool place. Keep container tightly closed.
Other Precautions:	See extinguisher label for minimum room volume limitations. Note incompatibility information in Section 4.
Steps to be Taken in Case Material is Released or Spilled:	Keep upwind of leak – evacuate until gas has dispersed. Ventilate area before re-entering.
Waste Disposal Methods:	Dispose of in accordance with local, state, and federal regulations.

HAZARDOUS MATERIAL IDENTIFICATION SYSTEM RATINGS

HAZARD INDEX:	
4 Severe Hazard	<u> 1 </u> HEALTH
3 Serious Hazard	<u> 0 </u> FLAMMABILITY
2 Moderate Hazard	
1 Slight Hazard	<u> 1 </u> REACTIVITY
0 Minimal Hazard	

N/A = Not Applicable NDA = No Data Available

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Internet Address: <http://www.ansul.com>