

ParFlush Refrigerant System Flush (March 2010)

Material Safety Data Sheet

SECTION I - COMPANY IDENTIFICATION

PRODUCT: ParFlush (Aerosol)
DISTRIBUTED BY:
Sporlan Division-Parker Hannifin Corporation
206 Lange Drive
Washington, MO 63090

CAT. NO. PF-2
TELEPHONE NUMBERS:
Office: 1-(636) 239-1111
Emergency Only: 1-(800) 424-9300

SECTION II - HAZARDOUS INGREDIENTS

OSHA Hazardous Components (29 CFR 1910.1200)

	% By Wt.	ACGIH TLV	EXPOSURE LIMITS: 8 HR. TWA PEL
1,1,1,2,3,4,4,5,5,5-Decafluoropentane (CAS# 138495-42-8)	15-22%	200 ppm*	None Established
Trans, 1,2- Dichloroethylene (CAS# 156-60-5)	47-55%	200 ppm	200 ppm
Ethanol (CAS# 64-17-5)	1-8%	1000 ppm	1000 ppm
Tetrafluoroethane (CAS# 811-97-2)	15-37%	1000 ppm	1000 ppm

* ACGIH TLV or OSHA PEL levels established for this compound. The 200 ppm value has been established by DuPont as the acceptable exposure limit as an 8 hour & 12 hour time weighted average with 400 ppm being the ceiling limit.

SECTION III - HAZARDS IDENTIFICATIONS

EMERGENCY OVERVIEW: WARNING! Vapors harmful and can cause dizziness, nausea and cause suffocation since air is displaced by the heavier vapors.

POTENTIAL HEALTH EFFECTS:

INHALATION: Temporary central nervous system depression with dizziness, confusion, drowsiness or unconsciousness; tremors, nausea, vomiting, weakness, and abdominal cramps. Other affects include shortness of breath, coughing, wheezing, temporary lung irritation, irregular heart beat with strange sensation to chest, "heart thumping" and irregular pulse.

EYE CONTACT: Can cause eye irritation with burning, redness, swelling, rash, tearing, pain or blurred vision.

SKIN CONTACT: Can cause skin irritation with burning, redness, swelling, rash, discomfort or pain. Repeated contact there is a risk of chronic dermatitis.

INGESTION: Harmful if swallowed. Pathological changes in liver, kidneys and heart muscle tissue, plus central nervous system depression with dizziness, confusion, incoordination, drowsiness or unconsciousness can result.

CHRONIC Effects: Prolonged exposure above OSHA permissible exposure limits may result in kidney and liver damage.

NOTE:

CARCINOGENICITY: LISTED IN NTP? No IARC? No OSHA Regulated? No

SECTION IV - FIRST AID MEASURES

INHALATION: Remove from exposure immediately. Keep person calm. If breathing is stopped or irregular, begin artificial respiration and administer oxygen. Call a physician.

EYE CONTACT: Flush with water for 15 minutes holding eyelids open while flushing. Contact a physician.

SKIN CONTACT: Flush contaminated skin with large amounts of water while removing contaminated clothing. Wash affected skin areas with soap and water for at least 15 minutes.

INGESTION: **DO NOT** induce vomiting. Immediately give two glasses of water. Never give anything by mouth to an unconscious person. **Call a physician.**

If vomiting occurs naturally, have victim lean forward to reduce the risk of aspiration.

SECTION V - FIRE FIGHTING MEASURES

FLASHPOINT (TEST METHOD): Not flammable per Pensky-Martins Closed Cup (ASTM D93) and per Tag Open Cup (ASTM D 56)

FLAMMABLE LIMITS IN AIR (% BY VOLUME): LOWER: 4.3% UPPER: 13.5%

AUTOIGNITION TEMPERATURE: No data

GENERAL HAZARD:

FIRE FIGHTING INSTRUCTIONS: Self-contained breathing apparatus with full face piece and protective clothing. Water spray may be ineffective. Keep containers cool with water spray. Container generates pressure when heated, causing violent bursting and dangerous propelling of container. Never use product on surfaces that are heated above ambient temperature.

EXTINGUISHING MEDIA: Carbon dioxide-dry, chemical foam, water fog

HAZARDOUS COMBUSTION PRODUCTS: May form toxic decomposition products with elevated temperatures.

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SECTION VI - ACCIDENTAL RELEASE MEASURES

- LAND SPILL:** Ventilate area. Remove all sources of ignition. Evacuate the hazard area of unprotected personnel. Wear appropriate respirator and protective clothing. Absorb spilled liquid with a nonflammable absorbent (i.e., vermiculite, sand)
- WATER SPILL:** Comply with Federal, State, and local regulations. Consult appropriate regulatory agency prior to disposal or discharge of waste material. Do not flush to sewer.

SECTION VII - HANDLING AND STORAGE

- HANDLING:** Handle containers with care. Do not puncture or incinerate. Empty containers may be disposed of through normal channels. Full or partially filled containers are considered hazardous. DO NOT SMOKE where this product is used or stored.
- STORAGE:** Store in a clean, dry area. Do not allow stored product to exceed 52°C (125°F). DO NOT STORE OR USE near heat, sparks, or open flame. Refer to OSHA 29 CFR Part 1910.106 "Flammable and Combustible Liquids" for specific storage requirements. Do not puncture, drag, or slide container. Keep container closed when not in use.

SECTION VIII - EXPOSURE CONTROLS/PERSONAL PROTECTION

- ENGINEERING CONTROLS:** Mechanical ventilation recommended. CAUTION: Vapors are heavier than air and collect in lower levels of the work area.
- PERSONAL PROTECTION:** Use a NIOSH/MSHA approved chemical/mechanical filter respirator designed to remove a combination of particulates and organic vapor if occupational limits are exceeded. Observe OSHA regulations (29CFR 1910.134) for respirator use. Use neoprene, nitrile, or rubber gloves. Use safety eyewear with side shields.

SECTION IX - PHYSICAL AND CHEMICAL PROPERTIES

- | | |
|-----------------------------------------------------------------|---------------------------------------|
| VAPOR PRESSURE @ 20°C/ 77 F: 5.5 psia | VAPOR DENSITY (Air=1): 3.4 |
| SPECIFIC GRAVITY (H₂O=1): No Data | EVAPORATION RATE (ether=1): >1 |
| SOLUBILITY IN WATER: 0.4 % | VOC CONTENT (% BY WEIGHT): 100 |
| pH: NA | FREEZING POINT: NA |
| BOILING POINT: 41°C (106°F) | |
| APPEARANCE & ODOR: Colorless liquid, slight ethereal | |

SECTION X - STABILITY AND REACTIVITY

- STABILITY:** Stable under normal storage conditions.
- CONDITIONS TO AVOID:** High temperatures or source of ignition (open flame, glowing metal surfaces).
- MATERIALS TO AVOID:** Incompatible with alkali or alkaline powdered earth metals (Al, Zn, Be, Na, Mg, etc.)
Incompatible with strong bases such as NaOH, KOH, etc.
- HAZARDOUS DECOMPOSITION PRODUCTS:** Thermal decomposition may yield hydrofluoric acid, hydrochloric acid and unsaturated compounds of unknown toxicity.
- HAZARDOUS POLYMERIZATION:** Will not occur under normal storage conditions.

SECTION XI - TOXICOLOGICAL INFORMATION

1,1,1,2,3,4,4,5,5,5-Decafluoropentane	LD50	>5000 mg/kg	(oral-rats)
	ALD	>5000 mg/kg	(dermal-rabbits)
	LC50(4hr)	11,100 ppm	(inhalation-rats)
Trans. 1,2-Dichloroethylene	LD50	1275 mg/kg	(oral-rats)
	LD50	>5000 mg/kg	(dermal-rabbits)
	LC50(4hr)	24,100 ppm	(inhalation-rats)
Ethanol	LD50	11,500 mg/kg	(oral-rats)
	LD50	>20 ml/kg	(dermal-rabbits)
	ALC(8hr)	>16,000 ppm	(inhalation-rats)

SECTION XII - ECOLOGICAL INFORMATION

1,1,1,2,3,4,4,5,5,5-Decafluoropentane	LD50(96hr)	27.2 mg/l	(fathead minnows)
	LC50(96hr)	13.9 mg/l	(rainbow trout)
	LC50(48hr)	11.7 mg/l	(daphnia magna)
Trans. 1,2-Dichloroethylene	LD50(96hr)	1350 mg/l	(bluegill sunfish)
	LC50(48hr)	220 mg/l	(daphnia magna)
Ethanol	LC50(96hr)	14,200 mg/l	(fathead minnows)

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SECTION XIII - DISPOSAL CONSIDERATIONS

Disposal in accordance with federal (40 CFR Part 261), state and local environmental control regulations. If waste is hazardous, use proper disposal facility.

SECTION XIV - TRANSPORTATION INFORMATION

PROPER SHIPPING NAME: Consumer commodity, ORM-D

HAZARD CLASS: Not applicable

IDENTIFICATION NUMBER: Not applicable

DOT Emergency Guide #: 126

Reportable Quantity (RQ): Not applicable

International: UN1950, Aerosols, 2.2, LTD QTY

SECTION XV - REGULATORY INFORMATION

TSCA (Toxic Substance Control Act): All components of this product are listed on the TSCA Inventory.

CERCLA (Comprehensive Environmental Response, Compensation and Liability Act): Yes.*

* 1,2 Dichloroethylene component only

SARA TITLE III (Superfund Amendments and Reauthorization Act): No Section: 311, 312- Acute

CALIFORNIA PROPOSITION 65: None listed as per this formulation

SECTION XVI - OTHER INFORMATION

State Right-to-Know Programs:

NFPA Ratings

Health: 1

Flammability: 0

Reactivity: 1

HMIS Protective Equipment: X See your supervisor

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