



MATERIAL SAFETY DATA SHEET

**HFC-227ea - Engineered, Pre-Engineered and Portables**

**Fire Extinguisher / System**

MSDS No. 123-242 Rev B Review Date: 5/3/13

**Section 1 – Company and Chemical Identification**

Sea-Fire Marine  
(a division of Metalcraft, Inc.)  
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**Emergency Phone: 1-800-535-5053 (InfoTrac)**

**International Phone: 352-323-3500**

Phone: 1-800-445-7680

Issue Date: 8/29/07

Product Name: **Fire Extinguisher / System**

**Product Name: DuPont FM-200® 1.1.1.2.3.3.3 HEPTAFLUOROPROPANE (HFC-227ea) (R227)**

**Section 2 – Hazard Identification**

**Emergency Overview:** HEPTAFLUOROPROPANE is a colorless, odorless gas. Direct eye or skin contact with the liquid or cold gas can cause chilling or possibly frostbite of exposed tissues. Inhalation of high concentrations can be harmful or fatal due to oxygen deprivation and/or heart irregularities. Fire Extinguisher cylinders are pressurized. Although unlikely, a cylinder could be propelled and cause bodily injury and/or property damage if the valve is broken due to improper handling or storage.

**Section 3 – Composition/Information on Ingredients**

C.A.S.	INGREDIENT NAME	OSHA PEL	ACGIH TLV	OSHA STEL	%
431890	FM-200 (HFC 227ea) HEPTAFLUOROPROPANE	NOT ESTAB.	NOT ESTAB.	NOT ESTAB.	> 99
7727-37-9	Nitrogen, Compressed	None	Simple Asphyxiant	N/A	1

**Section 4 – First Aid Measures**

**Skin contact:** Flush with water, treat for frostbite if necessary by gently warming affected areas. Consult a physician.

**Eye contact:** Immediately flush eyes with plenty of water for at least 15 minutes. Consult an ophthalmologist.

**Inhalation:** Remove victim(s) to fresh air, as quickly as possible. If not breathing, qualified personnel should administer artificial respiration. Get medical attention. If breathing is difficult, administer oxygen.

**Ingestion:** No first aid should be needed. Not considered a potential route of exposure.

**Section 5 – Fire Fighting Measures**

**Flammability:** Not flammable.

**Conditions of flammability:** Will not burn.

**Extinguishing media:** Use appropriate extinguishing media for surrounding fire.

Keep cylinders cool with water spray applied from a safe distance.

**Section 6 – Accidental Release Measures**

Evacuate the area and ventilate. Do not enter areas where high concentrations may exist (especially confined or poorly ventilated areas) without appropriate protective equipment including a self-contained breathing apparatus.

**Section 7 – Handling and Storage**

Handle, transport and store carefully and securely to avoid accidental knocking over or other severe physical impacts. Do not expose to direct heat sources. Do not over-pressurize.

**Section 8 – Exposure Controls/Personal Protection**

**Respiratory:** None

**Protective Gloves:** Leather gloves are recommended when handling cylinders.

**Eye Protection:** Eye protection is recommended when handling cylinders.

**Other Protective Clothing or Equipment:** Safety shoes are recommended when handling cylinders.

**Work Hygienic Practices:** Wash thoroughly after handling. Wash contaminated clothing before reuse.

### Section 9 – Physical & Chemical Properties

**Appearance:** Colorless gas                      **Physical State:** Gas  
**Odor:** Odorless                                      **Solubility in Water:** 260 mg/L

### Section 10 – Stability and Reactivity

**Stability:** Stable under normal conditions of handling and use.

**Conditions to Avoid:** None

### Section 11 – Toxicological Information

VALUE (LD50 or LC50)	Animal	Routes	Components
>788.696 ppm/4H	Rat	Acute Inhalation	1.1.1.2.3.3.3 Heptafluoropropane

The human health hazards of this product are expected to be similar to other liquefied gases including N<sub>2</sub>, CO<sub>2</sub>, CFCs, HCFCs, and HFCs. Therefore, direct eye or skin contact with the liquid or cold gas can cause chilling or possibly frostbite of exposed tissues. Inhalation of high concentrations can be harmful or fatal due to oxygen deprivation and/or heart irregularities (arrhythmias). Misuse of the products by deliberately inhaling high concentrations of this gas could cause death without warning. Persons with preexisting cardiac or central nervous system disorders may be more susceptible to effects of an overexposure.

### Section 12 – Ecological Information

No ecological information is available.

### Section 13 – Disposal Considerations

Dispose of waste and empty cylinders as allowed by current Local, State/Province, or Federal laws and regulations.

### Section 14 – Transport Information

**Proper Shipping Name:** Heptafluoropropane                      **Packing Group:** N/A  
**ID Number:** UN 3296    **Labels:** Non-flammable gas  
**Hazard Class:** 2.2    **Packing Instructions:** 200

### Section 15 – Regulatory Information

**U.S. Federal Regulations:** The components of this product are either on the TSCA Inventory or exempt (i.e. impurities, a polymer complying with the exemption rule at 40 CFR 723.250) from the Inventory.

**State Regulations:** None Known

### Section 16 – Other Information

**HAZARDOUS MATERIAL IDENTIFICATION SYSTEM (HMIS) CODES:**

HEALTH: 1 (slight hazard); FLAMMABILITY: 0 (will not burn); REACTIVITY: 0 (normally stable); PPE: See Section 8

### Section 17 – Disclaimer of Expressed and Implied Warranties

Sea-Fire has taken reasonable care in preparing this document, however, since the use of this information and the conditions of use of the product are not within the control of Sea-Fire, it is the user's obligation to determine the conditions of safe use of this product. The information in this document is offered with no warranties or representations as to accuracy or completeness and it is the responsibility of each individual to determine the suitability of the information for their particular purpose(s).