**TECAFLON™ PVDF**

**EMERGENCY TELEPHONE:** 724-746-6050 or 856-227-0500  
**Issue Date:** December 1, 1996  
**Revised Date:** July 8, 2004  
**TRADE NAME:** Tecaflon PVDF  
**CHEMICAL NAME:** Polyvinylidene fluoride  
**FORMULA:** \((\text{C}_2\text{H}_2\text{F}_2)\text{X}\)

### 1. Composition / Information on Ingredients

- **Monomer Composition:** 100% Vinylidene fluoride - CAS#: 75-38-7  
- **Polymer Description:** PVDF homopolymer - CAS#: 24937-79-9

### 2. Hazards Identification

Hazards due to contact with the product at high temperature  
In case of decomposition, releases dangers products.  
Note: When decomposed by high heat, or by smoking tobacco or cigarettes contaminated with polymer dust, may cause flu-like illness with fever and chills which will pass within 36-48 hours.  
Possibility of ingestion hazard to wildlife.

**Effects**

- **Inhalation:** Negligible  
- **Eye Contact:** Mechanical irritation from the particulates generated by the product.  
- **Skin Contact:** Negligible  
- **Ingestion:** Negligible

### 3. First Aid Measures

- **Inhalation:** Negligible  
- **Eye Contact:** Flush eyes with running water for several minutes, while keeping the eyelids wide open.  
- **Skin Contact:** Negligible for unheated product. In case of contact with molten polymer, cool rapidly with cold water without attempting to peel from the skin. Obtain medical treatment for burns.  
- **Ingestion:** If the subject is completely conscious: Negligible. If the subject is unconscious: Not applicable

### 4. Fire Fighting Measures

- **Flashpoint:** Not Applicable  
- **Flammability:** Lower limit = 70 g/m³  
- **Auto-flammability:** No data  
- **Danger of Explosion:** Negligible  
- **Oxidizing Properties:** Non-oxidizer  
- **Common Extinguishing Means:** In case of fire in close proximity, most means of extinguishing are acceptable.  
- **Specific Hazards:** In a fire, the polymer is considered auto-extinguishing and so is unable to propagate fire. Strong energy source necessary for ignition. Formation of dangerous gas/vapors in case of combustion.  
- **Protective measure in case on Intervention:** Evacuate all non-essential personnel. Intervention only by capable personnel who are trained and aware of the hazards of the product. In all cases, wear self-contained breathing apparatus. Wear chemically resistant over-suits. After intervention, proceed to clean
5. Accidental Release Measures

Precautions: Follow the protective measures giving in Section 7. Avoid dispersing the dust into a cloud. Spilled material can be a slipping hazard. Cleanup Methods: Collect the product with suitable means avoiding dust formation. Place everything into a closed, labeled container compatible with the product. For disposal methods, refer to Section 12. Precautions for Protections of the Environment: Prevent discharges into the environment (sewers, rivers, soils, etc.).

6. Handling and Storage

Handling: Prevent any product decomposition from contacting hot spots. Use electrically conductive materials for piping circuits and equipment. Storage: Keep away from heat sources and combustible substances. Other Precautions: Grounded equipment. Follow the protective measure given in Section 7. Prohibit smoking or smoking material when handling this product.

7. Exposure Controls / Personal Protection

Engineering Controls: follow the protective measures given in Section 6. Provide local ventilation suitable for the product decomposition risk (see Section 8). Maintain employee exposures to levels below the applicable exposure limits. Authorized Limit Values: ACGIH TLV: 10 mg/m³ inhalable and 3 mg/m³ respirable Particulates Not Otherwise Classified (PNOC). OSHA Permissible Exposure Limit 5 mg/m³ total dust, 5 mg/m³ respirable fraction PNOC. The OSHA Permissible Exposure Limit for hydrogen fluoride from decomposition is 3 ppm. Respiratory Protection: In case of dust use NIOSH approved dust respirator. In case of decomposition hazard (see Section 9), use air supplies full face respirator to prevent exposure to hydrofluoric acid. Self-contained breathing apparatus in medium confinement/insufficient oxygen/ in case of large uncontrolled emissions. Hand Protection: Protective gloves against molten polymer. Protective gloves, if risk of decomposition. Eye Protection: Wear safety glasses/protective goggles. Skin Protection: Only necessary to protect against molten polymer.

8. Chemical and Physical Properties

Appearance and Odor: Opaque pellets; odorless Melting Point/Range: 170-175°C Boiling Point/Range: Not applicable Vapor Pressure: Not applicable Vapor Density (air = 1): Not applicable Density: Bulk Density: from 0.8 to 1.3 kg/dm³ Solubility: In Water: Insoluble In Dimethyl formamide: Slightly Soluble In N-methyl pyrrolidone: Slightly Soluble In Dimethyl acetamide: Slightly Soluble pH: Not applicable Partition Coefficient P (n-octanol/water): Not applicable Decomposition Temperature: >290°C

9. Stability and Reactivity

Stability: Stable under certain conditions (see below). Decomposition produces dangerous gases upon contact with flames, or hot metallic surfaces. Conditions to Avoid: Heating the product to its decomposition temperature (see Section 8). Naked flames, sparks.
Material to Avoid: Negligible.

Hazardous Decomposition Products: Hydrogen fluoride, particulates of carbon, carbon monoxide, carbonyl fluoride

10. Toxicological Information

Comments: No specific data. Biologically inert and little toxicity in bulk form.

NOTE: Decomposition Risk: When decomposed by high heat, or by smoking tobacco or cigarettes contaminated with polymer dust, a flu-like illness with fevers and chills may result which will pass within 36-48 hours. Acute or chronic overexposure to hydrogen fluoride can injure the liver and kidneys.

11. Ecological Information

Comments: No specific data. Product is biologically inert and non-degradable.

12. Disposal Considerations

Waste Treatment: Dispose in compliance with local/federal and national regulations. It is recommended to contact the producer for recycling/recovery. Or, send the product to an authorized industrial waste incinerator. The incinerator must be equipped with a system for the neutralization of hydrogen fluoride. Or, dispose of the product at a landfill authorized for industrial waste.

Packaging Treatment: Containers that cannot be cleaned must be treated as waste. The empty and clean containers are to be reused in conformity with regulations.

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