

Safety Data Sheet



Tecaflon® PVDF

ISSUE DATE: 06/23/2015

1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: Tecaflon® PVDF
SYNONYMS: Polyvinylidene Fluoride
PRODUCT CODES: Not Applicable

MANUFACTURER: Ensinger Inc.
DIVISION: Stock Shapes
ADDRESS: 365 Meadowlands Blvd., Washington, PA 15301

EMERGENCY PHONE: (724) 746-6050
OTHER CALLS: (856) 227-0500

CHEMICAL NAME: poly(1,1-difluoroethylene)
CHEMICAL FAMILY: Polyvinylidene Fluoride
CHEMICAL FORMULA: basic formula -(C₂H₂F₂)_n-

PRODUCT USE: Stock Shape for Machining
PREPARED BY: Allyson M. Crouse, Technical Resource Manager

SECTION 1 NOTE: Revised June 23, 2015

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: Mechanical injury only.

ROUTES OF ENTRY: Eyes

POTENTIAL HEALTH EFFECTS

EYES: Solid or dust causes irritation or corneal injury due to mechanical action.

SKIN: Essentially nonirritating to skin. Mechanical injury only. Molten material may burn skin.

INGESTION: Single dose oral LD₅₀ has not been determined. Single dose oral toxicity is believed to be very low. Now hazards anticipated from ingestion incidental to industrial exposure.

INHALATION: Dust may cause irritation to upper respiratory tract. At room temperature, exposure to vapors are unlikely due to physical properties, normal processing temperatures may generate vapors, which may cause irritation if ventilation is inadequate.

Safety Data Sheet



Tecaflon® PVDF

ISSUE DATE: 06/23/2015

ACUTE HEALTH HAZARDS: None Known

CHRONIC HEALTH HAZARDS: None Known

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: None Known

CARCINOGENICITY: None Known

Particulates:

- OSHA: Particulates not otherwise regulated/OSHA (PEL) 15 mg/m³ (TWA, Total Dust)
- Particulates not otherwise regulated/OSHA (PEL) 5 mg/m³ (TWA, Respirable Dust)
- ACGIH: Particulates not otherwise regulated/ACGIH (TLV) 10 mg/m³ (TWA, Total Dust)

3. COMPOSITION/INFORMATION ON INGREDIENTS

INGREDIENT: Polyvinylidene Fluoride

<u>CAS NO.</u>	<u>% WT</u>
24937-79-9	>99.5

This product contains a proprietary blend of components encapsulated within a polymer matrix. These components are not regarded as hazardous under 2012 OSHA Hazard Communication Standard; 29CFR Part 1910.1200.

4. FIRST AID MEASURES

EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing for at least 15 minutes. Mechanical effects only.

SKIN: Wash off in flowing water or shower.

INGESTION: No adverse effects anticipated by this route of exposure incidental to proper industrial handling. If ingested, induce vomiting; if patient is conscious. Call a poison control center/physician, if patient feels unwell.

INHALATION: Remove to fresh air, if effects occur. Consult a physician.

NOTES TO PHYSICIANS OR FIRST AID PROVIDERS: No specific antidote. Supportive care. Treatment based on judgment of the physician in response to reactions of the patient.

Safety Data Sheet

Tecaflon® PVDF



ISSUE DATE: 06/23/2015

5. FIRE FIGHTING MEASURES

AUTOIGNITION TEMPERATURE: Not Available

EXTINGUISHING MEDIA: Water, powder, foam, dry chemical, carbon dioxide

SPECIAL FIRE FIGHTING PROCEDURES: Wear self-contained breathing apparatus and protective suit. When intervention in close proximity wear acid resistant over suit. The product is not flammable or explosive. In case of fire, hazardous decomposition products may be produced. Do not use a solid water stream as it may scatter and spread fire.

UNUSUAL FIRE AND EXPLOSION HAZARDS: None Known

HAZARDOUS DECOMPOSITION PRODUCTS: Gaseous hydrogen fluoride (HF), Fluorophosgene, particles of carbon, carbon oxides

SECTION 5 NOTES: Evacuate personnel to safe areas. Approach from upwind. Protect intervention team with a water spray as they approach fire. Keep containers and surroundings cool with water spray. Keep product and empty container away from heat and sources of ignition.

6. ACCIDENTAL RELEASE MEASURES

ACCIDENTAL RELEASE MEASURES: Ventilate the area and prevent access to unauthorized people. Wear suitable personal protective equipment. Do not allow entry to drains, water courses or soil. Prevent spreading by use of suitable barriers. Take up with suitable equipment, fill up in air-tight containers and give further treatment as soon as possible.

7. HANDLING AND STORAGE

HANDLING AND STORAGE: Avoid accumulation of dust in enclosed space. Use in well-ventilated area. Static discharge (spark) in high dust environments may be explosive. Electrostatic charge may build up during handling. Equipment should be grounded and bonded. Metal containers involved in the transfer of this material should be grounded and bonded. All electrical equipment should be grounded and conform to applicable electric codes and regulatory requirements. Material creates dangerous slipping hazard on hard surfaces. After handling, always wash hands thoroughly with soap and water. Keep away from strong oxidizing compounds. Store in a well-ventilated place. Provide ventilation and wear necessary protectors.

Safety Data Sheet



Tecaflon® PVDF

ISSUE DATE: 06/23/2015

OTHER PRECAUTIONS: Obtain special instructions, before use. Do not breathe dust. Wash hands thoroughly after handling. Do not eat, drink or smoke; when machining this product. Use personal protective equipment as required.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS: Standard ventilation required

VENTILATION: Good general ventilation should be sufficient for most conditions. Local exhaust ventilation may be necessary for some operations.

RESPIRATORY PROTECTION: For most conditions a dust mask is sufficient; however, if handling at elevated temperatures without sufficient ventilation, use an approved air-purifying respirator.

EYE PROTECTION: Safety glasses should be sufficient for most operations; however, for dusty operations wear chemical goggles. If vapor exposure causes eye discomfort, use a full-face respirator

SKIN PROTECTION: No precautions other than clean body-covering clothing should be needed.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT: None Known

Special Precautions to be taken in Handling and Storage: Store in sealed containers. Protect from atmospheric moisture. Molten material can produce thermal burns. Avoid skin contact. Fumes released during normal processing may cause irritation. Provide adequate ventilation. Heating the resin above normal processing temperatures may cause hazardous decomposition products. Do not overheat. Handling and fabrication of plastic resins can result in the generation of dust. Dust results from sawing, filing, and sanding of plastic parts in post-molding operations. Quantities of dust in air may be combustible and may cause respiratory irritation.

EXPOSURE GUIDELINES:

Particulates not otherwise regulated:

OSHA: Particulates not otherwise regulated/OSHA (PEL) 15 mg/m³ (TWA, Total Dust)

Particulates not otherwise regulated/OSHA (PEL) 5 mg/m³ (TWA, Respirable Dust)

ACGIH: Particulates not otherwise regulated/ACGIH (TLV) 10 mg/m³ (TWA, Total Dust)

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: Opaque color stock shape

ODOR: None

Safety Data Sheet

Tecaflon® PVDF



ISSUE DATE: 06/23/2015

PHYSICAL STATE: Solid

AUTOIGNITION TEMPERATURE: Not Applicable

MELTING POINT: 170 – 175°C (338 - 347°F)

DECOMPOSITION TEMPERATURE: >290°C (554°F)

SPECIFIC GRAVITY (H₂O = 1): 1.7 – 1.8

SOLUBILITY IN WATER: Insoluble

10. STABILITY AND REACTIVITY

STABILITY: Stable under normal conditions.

CONDITIONS TO AVOID (STABILITY): To avoid thermal decomposition, do not overheat. The decomposition is promoted at high temperature by silica (glass fibers, etc.), boron, and titanium dioxide. Keep away from flames and sparks. Keep at temperatures not exceeding: 290°C (554 °F).

INCOMPATIBILITY (MATERIAL TO AVOID): Strong bases, esters, ketones, silica, boron, and titanium dioxide at high temperatures. Alkali metals (molten form), finely divided aluminum, silver, powdered metals

HAZARDOUS DECOMPOSITION OR BY-PRODUCTS: Gaseous hydrogen fluoride (HF), fluorophosgene, particulate of carbon and carbon oxides.

HAZARDOUS POLYMERIZATION: Not Applicable

11. TOXICOLOGICAL INFORMATION

TOXICOLOGICAL INFORMATION: No data – In solid state, this material is not considered as being harmful to human health.

Remarks

- Description of possible hazardous to health effects is based on experience and/or toxicological characteristics of several components.
- Product dust may be irritating to eyes, skin and respiratory system.
- The thermal decomposition vapours of fluorinated polymers may cause polymer fume fever with flu-like symptoms in humans, especially when smoking contaminated tobacco.

Safety Data Sheet



Tecaflon® PVDF

ISSUE DATE: 06/23/2015

12. ECOLOGICAL INFORMATION

ECOLOGICAL INFORMATION: No data – This material does not harm the environment, but is not biodegradable.

13. DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD: Dispose of contents/containers in accordance with local, regional, national and international regulations.

14. TRANSPORT INFORMATION

U.S. DEPARTMENT OF TRANSPORTATION
Not regulated

15. REGULATORY INFORMATION

U.S. FEDERAL REGULATIONS

TSCA (TOXIC SUBSTANCE CONTROL ACT): All ingredients are either exempt or listed on the TSCA Chemical Substance Inventory.

SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT): This product contains no known toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 and 40CFR372.

16. OTHER INFORMATION

ADDITIONAL INFORMATION

MEDICAL USE: CAUTION – Do not use in medical applications involving permanent implantation in the human body.

This Safety Data Sheet and the information it contains is offered to you in good faith as accurate. We have reviewed any information contained in this data sheet which we received from sources outside our company. We believe this information to be correct but cannot guarantee its accuracy or completeness. Health and safety precaution in this data sheet may not be adequate for all individuals and/or situations. It is the user's responsibility to evaluate and use this product safely and to comply with all applicable laws and regulations. No statement made in the data sheet shall be construed as a permission or recommendation for the use of any product in a manner that may infringe existing patents. No warranty is made, either expressed or implied.