



MATERIAL SAFETY DATA SHEET

Polyflon PTFE F Series Powder

FX-9023

SECTION 1: CHEMICAL PRODUCT & COMPANY IDENTIFICATION

ISSUED: 03/01/10

DAIKIN TRADE NAME: Polyflon PTFE F Series Powder
GRADE NUMBER: FX-9023
MANUFACTURER: DAIKIN AMERICA INC.
 20 OLYMPIC DRIVE, ORANGEBURG, NEW YORK 10962
EMERGENCY PHONE: 1-256-306-5000
PRODUCT INFORMATION: 1-800-365-9570 9 am to 5 pm Eastern Standard Time

SECTION 2: HAZARDS IDENTIFICATION

PHYSICAL DESCRIPTION: Off white powder
ODOR: None
EMERGENCY OVERVIEW: The primary hazard occurs when material is exposed to high temperatures, whether by processing or fire. At temperatures above 260°C (500°F), local exhaust ventilation must be used to control exposures to hazardous gases, vapors, or fumes. At temperatures above 380°C (715°F), thermal decomposition products (such as hydrogen fluoride (HF), perfluoroisobutylene (PFIB), and carbonyl fluoride (COF₂)) will be produced. Inhalation may result in serious lung irritation. Symptoms of exposure may include chills, headache, nausea, breathing discomfort, cough, or sore throat. These symptoms generally disappear within 24-48 hours.

POTENTIAL HEALTH EFFECTS: Harmful if swallowed. May cause mild eye and skin irritation.

HMIS RATINGS: Health: 1
 Flammability: 0
 Reactivity: 0

SECTION 3: INFORMATION ON INGREDIENTS

COMPONENT	CAS. NO.	Wt%	OSHA (PEL)	ACGIH (TLV)
Polytetrafluoroethylene	9002-84-0	100	ND	ND

SECTION 4. FIRST AID PROCEDURES

EYE CONTACT: Immediately flush with plenty of water for 15 minutes. If irritation occurs, immediately get medical attention.

SKIN CONTACT: Wash affected area with soap and water.

INGESTION: If gastrointestinal symptoms develop, get medical attention.

INHALATION: Move to fresh air and get medical attention.

NOTE TO PHYSICIANS: In the event of inhalation of gases generated by high temperature decomposition of the product the patient needs to be treated for hydrogen fluoride inhalation. Excessive exposure to thermal degradation products could result in delayed pulmonary edema in some cases, and on very high exposure, damage to the liver and kidneys.

SECTION 5. FIRE FIGHTING MEASURES

FLASH POINT:	Non-flammable
FLAMMABLE LIMITS:	LEL: Not Applicable UEL: Not Applicable
HAZARDOUS COMBUSTION PRODUCTS:	Toxic and corrosive by product, including HF, COF ₂ , PFIB, etc. may be formed by thermal decomposition.
EXTINGUISHING MEDIA:	Foam, CO ₂ , Dry chemical and water spray
PROTECTIVE EQUIPMENT:	When fighting fires involving or exposing this material to heat wear a NIOSH/MSHA approved self-contained breathing apparatus (SCBA) and full bunker gear. Evolution of acidic gases may require washdown of protective clothing prior to removal.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Collect the spilled material and separate from other waste.

Put into separate containers.

Dispose of properly.

POTENTIAL ENVIRONMENTAL EFFECTS:	None known with proper cleanup. Runoff from fire fighting efforts involving this material may contain hydrofluoric acid. Depending on the concentration this should be contained and treated prior to discharge.
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SECTION 7. HANDLING & STORAGE

HANDLING:

Close containers after each use.

Do not eat, drink, or smoke while handling this product.

If smoking tobacco becomes contaminated by this material, exposure to toxic gases through inhalation can occur. Therefore, do not smoke in the work areas and wash hands and face after handling in order to avoid transfer of the material onto smoking materials.

Wash hands after handling.

STORAGE:

Do not store with flammable materials, such as solvents or oils.

Do not allow material to be exposed to excessive heat.

Keep material away from sparks and flames.

SECTION 8. EXPOSURE CONTROLS & PERSONAL PROTECTICE EQUIPMENT

RESPIRATORY PROTECTION:	Wear respirator suitable for particulate exposure protection in fine powder or dusty areas. Respirator for acidic gases is needed when material is heated above 260°C.
EYE PROTECTION:	Safety glasses with side shields or goggles.
PROTECTIVE CLOTHING:	Normal full clean room clothing should be worn.
OTHER PROTECTIVE EQUIPMENT:	Safety shower and eyewash station should be accessible in the work area.
ENGINEERING CONTROLS:	Avoid generating and inhalation of dust. Use local exhaust if this material is heated above 260 °C (500 °F). Provide good ventilation and use local exhaust when coating.

SECTION 9. PHYSICAL & CHEMICAL PARAMETERS

PHYSICAL STATE:	Solid
pH:	Not applicable
VAPOR PRESSURE:	Not applicable
VAPOR DENSITY:	Not applicable
BOILING POINT (°C):	Not applicable
FREEZING OR MELTING POINT (°C):	325 ~ 335 °C
SOLUBILITY:	Insoluble in water

SPECIFIC GRAVITY (H₂O=1): 2.14 ~ 2.20
OTHER PROPERTIES: Average Particle Size: 400 - 650 Micrometers

SECTION 10. STABILITY & REACTIVITY

STABILITY: Stable
CONDITIONS TO AVOID: Heat, sparks, and open flames
HAZARDOUS POLYMERIZATION: Should not occur
INCOMPATIBILITIES: Molten alkali metals, interhalogen compounds, and some kinds of amines.

Hazardous decomposition or by-products and toxic by-products including hydrofluoric acid, perfluoroisobutylene, and carbonyl fluoride may be formed at very high temperatures.

SECTION 11. TOXICOLOGICAL INFORMATION

ACUTE EFFECTS OF EXPOSURE

EYE CONTACT: Mild eye irritation may occur.
SKIN CONTACT: Mild skin irritation may occur.
INGESTION: Do not swallow. Small amounts (tablespoonfuls) swallowed during normal handling operation are not likely to cause injury. Swallowing large amounts of the material may cause illness.
INHALATION: Normally inhalation problems are not expected (unless heated). When thermally decomposed, this fluoropolymer may cause chills, headaches, nausea, breathing discomfort, cough, or sore throat. These symptoms generally disappear within 24 to 48 hours. Inhalation of excessive dust may cause upper respiratory tract irritation.
CHRONIC EFFECTS: None known
OTHER: Fluoropolymer is not listed with OSHA, NTP or IARC as a carcinogenic chemical.
EXPOSURE GUIDELINES: Particulates Not Otherwise Specified (PNOC): 15 mg/m³ OSHA PEL (TWA)
10 mg/m³ ACGIH (TWA)

Excessive exposure to thermal degradation products could result in delayed pulmonary edema in some cases, and on very high exposure, damage to the liver and kidneys. These substances may include: perfluoroisobutylene (TLV = 10 ppb Ceiling), carbonyl fluoride (TLV = 2 ppm TWA, 5 ppm STEL), hydrogen fluoride (TLV = 2 ppm Ceiling, 0.5 ppm TWA).

SECTION 12. ECOLOGICAL INFORMATION

BIODEGRADABILITY: No Data
BIOACCUMULATION: No Data

POTENTIAL ENVIRONMENTAL EFFECTS: None known with proper cleanup. Runoff from fire fighting efforts involving this material may contain hydrofluoric acid. Depending on the concentration this should be contained and treated prior to discharge.

SECTION 13. DISPOSAL CONSIDERATIONS

Comply with Federal, State, and Local regulations concerning health and environment when disposing of materials. Regulations may also apply to empty containers, liners, or rinsate. DO NOT INCINERATE unless incinerator is capable of scrubbing hydrogen fluoride and other acidic combustion products.

SECTION 14. TRANSPORT INFORMATION

UN CLASSIFICATION: Not applicable
DOT HAZARD DESCRIPTION: Not applicable
CANADIAN TRANSPORTATION OF DANGEROUS GOODS (TDG): Not applicable

SECTION 15. REGULATORY INFORMATION

TSCA: All components of this product are in compliance with the inventory listing regulations of the U.S. Toxic Substance Control Act (TSCA) chemical substance inventory.

SARA Title III: Not applicable

CERCLA RQ: Not applicable

Canadian Workplace Hazardous Materials Information System (WHMIS): Does not meet criteria.

European Union (EU) Classification and Labeling Information: Classification has not been published in Commission Directives 93/72/EEC or 94/69/EC for components of this product.

States such as Pennsylvania, New Jersey, California, Vermont, Massachusetts and Rhode Island may have specific requirements or components of this product listed; consult specific state regulatory requirements for additional information.

SECTION 16. OTHER INFORMATION

For additional information, refer to the American Conference of Governmental Industrial Hygienists (ACGIH) documentation of TLV's (Threshold Limit Values) for individual components, Fluoropolymers Safe Handling Guide published by The Society of the Plastics Industry, and the DOT Emergency Response Guidebook.

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