Material Safety Data Sheet

Section 1 - Chemical Product and Company Identification

MSDS Name:	4-Fluorophthalic anhydride
Synonyms:	
Company Identification:	PI Chemicals Ltd. Room 6-306, Building 2 1341 Pudong South Road Pudong New Area, Shanghai 200212, China
Telephone Number:	86-21-51389368
Fax Number:	86-21-51389367
Emergency Number:	86-21-51389369

Section 2 - Product Information

Catalog Number:	PI-10664
CAS Number:	319-03-9
MDL Number:	MFCD00191363
EC Number:	None
Purity:	99.2%

Section 3 - Physical and Chemical Properties

Physical state:	Crystalline powder
Color:	Grey
Odor:	Not available
Molecular Formula:	$C_8H_3FO_3$
Molecular Weight:	166.11
Freezing/Melting Point:	76-78 deg C
Boiling Point:	147-149 deg C/20mmHg
Flash Point:	Not available
Autoignition Temperature:	Not available
Refractive Index (nD20):	Not available
Density:	1.5 g/cm^3
Decomposition Temperature:	Not available
Solubility:	Not available

Section 4 - Hazards Identification

Eye:	Causes eye irritation.

Skin: Causes skin irritation. Harmful if absorbed through the skin.
Ingestion: May cause irritation of the digestive tract. Toxic if swallowed.
Inhalation: May be harmful if inhaled. Causes respiratory tract irritation.

Section 5 - First Aid Measures

Eye: Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.
Skin: Get medical aid. Flush skin with plenty of water and soap for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid if irritation develops and persists.
Ingestion: Get medical aid immediately. Wash mouth out with water.
Inhalation: Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.

Section 6 - Stability and Reactivity

Chemical Stability: Moisture sensitive.
Materials to avoid: Strong oxidizing agents, bases.
Conditions to Avoid: Incompatible materials, exposure to moist air or water.
Hazardous Decomposition Products: Carbon monoxide, carbon dioxide, nitrogen oxides.
Hazardous Polymerization: Has not been reported.

Section 7 - Handling and Storage

Handling: Avoid breathing dust, vapor, mist, or gas. Keep container tightly closed. Avoid contact with skin and eyes. Wash thoroughly after handling. Mechanical exhaust required.
Storage: Store in a cool, dry well ventilated place away from sources of heat and incompatible substances. Keep container tightly closed when not in use.

Section 8 - Personal Protection

Eyes: Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.
Skin: Wear appropriate protective gloves to prevent skin exposure.
Clothing: Wear appropriate protective clothing to prevent skin exposure.
Respirators: Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

Section 9 - Fire and Explosion Hazard Data

General Information: As in any fire, wear a self-contained breathing apparatus, MSHA/NIOSH

(approved or equivalent) and protective clothing to prevent contact with skin and eyes.

Extinguishing Media: Use water spray, dry chemical, carbon dioxide, or appropriate foam.

Section 10 - Accidental Release Measures

General Information: Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks: Vacuum or sweep up material and place into a suitable disposal container.

Section 11 - Toxicological Information

RTECS#: CAS#319-03-9: Not available

LD50/LC50: RTECS: Not available.

Carcinogenicity: 4-Fluorophthalic anhydride - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.

Section 12 - Environmental information

Not available

Section 13 - Disposal Consideration

Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. Observe all federal, state and local environmental regulations.

Section 14 - Transport Information

	IATA	IMO	RID/ADR
Shipping Name:	TOXIC SOLID, ORGANIC, N.O.S.*	TOXIC SOLID, ORGANIC, N.O.S.	TOXIC SOLID, ORGANIC, N.O.S.
Hazard Class:	6.1	6.1	6.1
UN Number:	2811	2811	2811
Packing Group:	III	III	III

Section 15 - Regulatory Information

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols: Xi

Indication of Danger: Irritant

Risk Phrases:

R 22: Harmful if swallowed.

R 36/37/38 Irritating to eyes, respiratory system and skin.

R 42/43 May cause sensitization by inhalation and skin contact.

Safety Phrases:

S 24/25: Avoid contact with skin and eyes.

S 26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S 36/37/39: Wear suitable protective clothing, gloves and eye/face protection.

S 45: In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

WGK (Water Danger/Protection)

CAS#319-03-9: 3

Canada

CAS#319-03-9: Not available

US Federal

TSCA

CAS# 319-03-9 is listed on the TSCA Inventory.

Section 16 - Additional Information

MSDS Creation Date:	March 25, 2006
Update:	December 26, 2007

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