

Material Safety Data Sheet

Date Printed: 11/OCT/2005

Date Updated: 15/MAR/2004

Version 1.1

According to 91/155/EEC

Classified as Hazardous according to the criteria of EU Annex 1 and NOHSC.

1 - Product and Company Information

Product Name	4-FLUOROPHENYL ISOCYANATE, 99%
Product Number	F14335
Company	Sigma-Aldrich Pty. Ltd. 12 Anella Avenue Castle Hill NSW 2154 Australia
Technical Phone #	+61 2 9841 0555 (1800 800 097)
Fax	+61 2 9841 0500 (1800 800 096)
Emergency Phone #	+44 8701906777 (1800 448 465)

2 - Composition/Information on Ingredients

Product Name	CAS #	EC no	Annex I Index Number
4-FLUOROPHENYL ISOCYANATE	1195-45-5	214-799-0	None
Formula	C7H4FNO		
Molecular Weight	137.11 AMU		

3 - Hazards Identification

SPECIAL INDICATION OF HAZARDS TO HUMANS AND THE ENVIRONMENT
Harmful by inhalation, in contact with skin and if swallowed.
Irritating to eyes. May cause sensitization by inhalation.

4 - First Aid Measures

AFTER INHALATION

If inhaled, remove to fresh air. If not breathing give artificial respiration. If breathing is difficult, give oxygen.

AFTER INGESTION

If swallowed, wash out mouth with water provided person is conscious. Call a physician.

5 - Fire Fighting Measures

EXTINGUISHING MEDIA

Suitable: Carbon dioxide. Dry chemical powder.

SPECIAL RISKS

Specific Hazard(s): Emits toxic fumes under fire conditions.

SPECIAL PROTECTIVE EQUIPMENT FOR FIREFIGHTERS

Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

6 - Accidental Release Measures

PERSONAL PRECAUTION PROCEDURES TO BE FOLLOWED IN CASE OF LEAK OR SPILL
Evacuate area.

PROCEDURE(S) OF PERSONAL PRECAUTION(S)

Wear self-contained breathing apparatus, rubber boots, and heavy rubber gloves.

METHODS FOR CLEANING UP

Absorb on sand or vermiculite and place in closed containers for disposal. Ventilate area and wash spill site after material pickup is complete.

7 - Handling and Storage

HANDLING

Directions for Safe Handling: Do not breathe vapor. Do not get in eyes, on skin, on clothing. Avoid prolonged or repeated exposure.

STORAGE

Conditions of Storage: Keep tightly closed. Keep away from heat and open flame.

Store at 2-8°C

SPECIAL REQUIREMENTS: Moisture sensitive.

8 - Exposure Controls / Personal Protection

ENGINEERING CONTROLS

Use only in a chemical fume hood. Safety shower and eye bath.

GENERAL HYGIENE MEASURES

Wash contaminated clothing before reuse. Wash thoroughly after handling.

PERSONAL PROTECTIVE EQUIPMENT

Special Protective Measures: Wear appropriate government approved respirator, chemical-resistant gloves, safety goggles, other protective clothing.

9 - Physical and Chemical Properties

Appearance	Color: Colorless Form: Clear liquid	
Property	Value	At Temperature or Pressure
pH	N/A	
BP/BP Range	55 °C	8 mmHg
MP/MP Range	N/A	
Flash Point	53 °C	Method: closed cup
Flammability	N/A	
Autoignition Temp	N/A	
Oxidizing Properties	N/A	
Explosive Properties	N/A	
Explosion Limits	N/A	
Vapor Pressure	N/A	
SG/Density	1.22 g/cm3	
Partition Coefficient	N/A	

Viscosity	N/A
Vapor Density	N/A
Saturated Vapor Conc.	N/A
Evaporation Rate	N/A
Bulk Density	N/A
Decomposition Temp.	N/A
Solvent Content	N/A
Water Content	N/A
Surface Tension	N/A
Conductivity	N/A
Miscellaneous Data	N/A
Solubility	N/A

10 - Stability and Reactivity

STABILITY

Conditions to Avoid: Heat.

Materials to Avoid: Alcohols, Strong bases, Amines, Acids, Strong oxidizing agents, Water.

HAZARDOUS DECOMPOSITION PRODUCTS

Hazardous Decomposition Products: Carbon monoxide, carbon dioxide, and nitrogen oxides, Hydrogen cyanide, Hydrogen fluoride.

11 - Toxicological Information

SENSITIZATION

Sensitization: Prolonged or repeated exposure may cause allergic reactions in certain sensitive individuals.

SIGNS AND SYMPTOMS OF EXPOSURE

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated. Repeated exposure may cause asthma. Symptoms of exposure may include burning sensation, coughing, wheezing, laryngitis, shortness of breath, headache, nausea, and vomiting.

ROUTE OF EXPOSURE

Multiple Routes: Harmful if swallowed, inhaled, or absorbed through skin. Vapor or mist is irritating to the eyes, mucous membranes, and upper respiratory tract.

12 - Ecological Information

No data available.

13 - Disposal Considerations

SUBSTANCE DISPOSAL

This combustible material may be burned in a chemical incinerator equipped with an afterburner and scrubber. Observe all federal, state, and local environmental regulations.

14 - Transport Information

RID/ADR

UN#: 2206

Class: 6.1

PG: II

Proper Shipping Name: Isocyanates, toxic, n.o.s.

IMDG

UN#: 3080
Class: 6.1
PG: II
Subrisk: 3
Proper Shipping Name: ISOCYANATES, TOXIC, FLAMMABLE,
N.O.S.
Marine Pollutant: No
Severe Marine Pollutant: No
Technical Name: Required

IATA

UN#: 3080
Class: 6.1
PG: II
Subrisk: 3
Proper Shipping Name: Isocyanates, toxic, flammable,
n.o.s.
Inhalation Packing Group I: No
Technical Name: Required

15 - Regulatory Information

CLASSIFICATION AND LABELING ACCORDING TO EU DIRECTIVES

INDICATION OF DANGER: Xn

Harmful.

R-PHRASES: 20/21/22-36-42

Harmful by inhalation, in contact with skin and if swallowed.

Irritating to eyes. May cause sensitization by inhalation.

S-PHRASES: 23-26-36/37

Do not breathe vapor. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear suitable protective clothing and gloves.

16 - Other Information

WARRANTY

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Inc., shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale. Copyright 2005 Sigma-Aldrich Co. License granted to make unlimited paper copies for internal use only.

DISCLAIMER

For R&D use only. Not for drug, household or other uses.