

1: Identification of substance / mixture

1. Product Identifier

Substance

Product Name **3-Fluorophenyl isothiocyanate**
 Product Code 001386
 CAS Number 404-72-8
 Other Names
 IUPAC
 MFCD Number MFCD00004804
 EC/EINECS 206-967-7
 REACH Number

2. Relevant identified uses of the substance or mixture and uses advised against

Research and Development

3. Details of the supplier of the safety data sheet

Fluorochem Ltd
 Unit 14, Graphite Way
 Hadfield
 Derbyshire
 SK13 1QH
 United Kingdom

Telephone: +44(0)1457 860111
 Fax number: +44(0)1457 892799
 Email: MSDS@fluorochem.co.uk



4. Emergency telephone number

07855 268577

2. Hazards Identification

1. Classification of the substance or mixture

H302	Acute Tox. 4	R22
H312	Acute Tox. 4	R21
H314	Skin Corr. 1B	R34
H332	Acute Tox. 4	R20
H335	STOT SE 3a	R37

* The risk codes have been generated using Annex VII of directive 67/548/EEC. Risk code combinations are not included.

2. Label elements

Signal Word **Danger**

Hazard Statements

H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.

Precautionary Phrases

P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P301 + P330 + P331	IF SWALLOWED: rinse mouth. Do NOT induce vomiting.

Safety Data Sheet

Revision: 1.00
Modified: 14/11/2012

P303 + P361 + P353	IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304 + P340	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

3. Other Hazards

Additional precautionary phrases are located throughout the safety data sheet

3. Composition / Information on Ingredients

1. Substances

3-Fluorophenyl isothiocyanate

Assay:100% CAS Number :404-72-8

2. Mixtures

Not Relevant

4. First Aid Measures

1. Description of first aid measures

<i>Skin Contact</i>	IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
<i>Eye Contact</i>	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
<i>Ingestion</i>	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
<i>Inhalation</i>	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

2. Most important symptoms and effects

There may be irritation and redness.

3. Indication of any immediate medical attention

No additional measures required

5. Firefighting measures

1. Extinguishing Media

<i>Suitable</i>	Carbon dioxide. Dry chemical powder. Water. fight larger fires with water jet or alcohol resistant foam
<i>Unsuitable</i>	no data

2. Special Hazards arising from the substance or mixture

In combustion emits toxic fumes of carbon dioxide / carbon monoxide.
In combustion emits toxic fumes of hydrogen fluoride.

3. Advice for Fire Fighters

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

6. Accidental Release Measures

1. Personal Precautions

Safety Data Sheet

Revision: 1.00
Modified: 14/11/2012

Refer to section 8 of SDS for personal protection details.

2.Environmental Precautions

Do not discharge into drains or rivers.
Contain the spillage using bunding.

3.Methods & Materials

Absorb into dry earth or sand.
Use neutralising agent.
Transfer to a closable, labelled salvage container for disposal by an appropriate method.

7.Handling and Storage

1.Personnal Precautions

<i>Safe Handling</i>	Ensure there is sufficient ventilation of the area. Do not eat, drink or smoke when using this product. Wash handsoughly after handling.
<i>Protection against explosions and fires</i>	Wash contaminated clothing before reuse. Keep ignition sources away- do not smoke (smoking kills)

2.Conditions for safe storage, including any incompatibilities

<i>Managing Storage Risks</i>	Store in cool, well ventilated area. Keep away from sources of ignition. Keep container tightly closed. Store at 2-8° C.
<i>Storage Controls</i>	Refrigerate
<i>Maintaining Integrity</i>	Store away from oxidising agents Keep in tightly closed container in cool area away from direct sunlight or heat sources.
<i>Other advice</i>	no further information available

3.Specific End Uses

The end use(s) have not been fully determined. The substance is supplied for Research and Development purposes by professionals only.

8.Exposure Controls/Personal Protection

1. Control Parameters

No Data Available

Safety Data Sheet

Revision: 1.00
Modified: 14/11/2012

2.Exposure Controls

<i>General protective and hygiene measures</i>	Wear protective gloves/protective clothing/eye protection/face protection. . Wash hands during breaks and at the end of handling the material Immediately remove any contaminated clothing
<i>Engineering measures</i>	Use only outdoors or in a well-ventilated area. Use only in a chemicals fume hood.
<i>Eye / Face Protection</i>	Safety Glasses with side-shields. Face-shield.
<i>Hand protection</i>	The selected Gloves have to satisfy the specifications of EU directive 89/686/EEC and the standard EN 374 derived from it.
<i>Respiratory protection</i>	Avoid breathing dust/fume/gas/mist/vapours/spray..
<i>Skin protection</i>	Gloves must be inspected prior to use. Use proper glove removal technique to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practice. Wash and dry hands. Protective clothing.
<i>Other personal protection advice</i>	no data

9.Physical and Chemical Properties

1. Physical and Chemical Properties

Appearance	Yellow liquid
Odour	Not Applicable
Odour threshold	Not Applicable
PH	Not Applicable
Melting point / Freezing point	Not Applicable
Initial boiling point and boiling range	227 °C - lit.
Flash point	85 °C - closed cup
Evaporation rate	Not Applicable
Flammability(solid,gas)	Not Applicable
Upper/lower flammability or explosive limits	Not Applicable
Vapour pressure	Not Applicable
Vapour density	Not Applicable
Relative density	1.27 g/cm ³ at 25 °C
Solubility(ies):	Not Applicable
Partition coefficient: n-octanol/water	Not Applicable
Auto-ignition temperature	Not Applicable
Decomposition temperature	Not Applicable
Viscosity	Not Applicable
Explosive properties	Not Applicable
Oxidising properties	Not Applicable

2.Other Information

Moisture sensitive

10. Stability and Reactivity**1. Reactivity**

no unusual reactivity

2. Stability

Stable under normal conditions.

3. Possibility of Hazardous Reactions

no hazardous reactions known

4. Conditions to Avoid

Heat.

5. Incompatible Materials

Oxidising agents.
Water,
Alcohols,
Strong bases,
Amines,
Acids,

6. Hazardous Decomposition Products

In combustion emits toxic fumes of carbon dioxide / carbon monoxide.
In combustion emits toxic fumes of hydrogen fluoride.
In combustion emits toxic fumes of nitrogen oxides.
In combustion emits toxic fumes of sulphur oxides.

11. Toxicology information**1. Information**

<i>Acute Toxicity</i>	no data
<i>Skin corrosion/irritation</i>	irritant for skin and mucous membranes
<i>Serious eye Damage/irritation</i>	strong caustic effect. Lachrymator
<i>Respiratory or skin sensitisation</i>	No sensitizing effect known
<i>Germ Cell mutagenicity</i>	not known
<i>Carcinogenicity</i>	not known
<i>Reproductive toxicity</i>	not known
<i>STOT-single exposure</i>	not known
<i>STOT-repeated exposure</i>	not known
<i>Aspiration hazard</i>	not known

2. Additional

To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.
No classification data on carcinogenic properties of this material is available from the EPA, IARC, NTP, OSHA or ACGIH
swallowing will lead to a strong caustic effect on mouth and throat and the danger of perforation of oesophagus and stomach.

12. Ecological Information

1. Toxicity

not known

2. Persistence and degradability

not known

3. Bio-Accumulative Potential

not known

4. Mobility and Soil

not known

5. Results of PBT & vPvB assessment

not known

6. Other adverse effects

Do not allow product to reach ground water, water bodies or sewage system, even in small quantities.

13. Disposal Considerations

1. Waste Treatment Methods

Disposal Operations Hand over to authorised disposal company as hazardous waste.

Disposal of Packaging Disposal must be made according to official regulations.

14. Transport Information

Air (ICAO)

1. **UN Number:** 3265
2. **UN proper shipping name:** Corrosive liquid, acidic, organic, n.o.s. «
3. **Transport hazard class(es):** Class: 8 Sub Class :



4. **Packing group:** II
5. **Environmental hazards:**
6. **Special Precautions for user:**
7. **Transport in bulk:**

Road (ADR)

1. **UN Number:** 3265
2. **UN proper shipping name:** CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S.
3. **Transport hazard class(es):** Class: 8 Sub Class :



4. **Packing group:** II
5. **Environmental hazards:**
6. **Special Precautions for user:**

7. Transport in bulk:

Sea (IMDG)

1. **UN Number:** 3265
 2. **UN proper shipping name:** Corrosive liquid, acidic, organic, n.o.s. «
 3. **Transport hazard class(es):** Class: 8 Sub Class :



4. **Packing group:** II
 5. **Environmental hazards:**
 6. **Special Precautions for user:** This substance is toxic by inhalation.
 7. **Transport in bulk:** IBCINS: IBC02

UNTANKINS: T11
TANKPROV: TP2 TP27

15. Safety, health and environmental regulations

1. Safety, health and environmental regulations:

product is not subject to any additional regulations or provisions

2. Safety Assessment

No Chemical Safety Assessment

16. Other Information

1. Other Information:

ADR: Accord Europeen sur le transport des marchandises Dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by road)
 RID: Reglement International concernant le transport des marchandises dangereuses par chemin de fer (Regulations concerning the International transport of Dangerous Goods by Rail)
 IMDG: International Maritime Code for Dangerous Goods
 IATA: International Air Transport Association
 IATA-DGR: Dangerous Goods Regulations by the International Air Transport Association
 ICAO: International Civil Aviation Organization
 ICAO-TI: Technical Instructions by the ICAO
 GHS: Globally Harmonized System of Classification and Labelling of Chemicals
 CAS: Chemical Abstracts Service

2. Associated risk phrases according to european directive 67/548/EEC

R20	Harmful by inhalation.
R21	Harmful in contact with skin.
R22	Harmful if swallowed.
R34	Causes burns.
R37	Irritating to respiratory system.

3. Disclaimer

The product listed is for research and development purposes only and not for human or animal use. As such, in most cases, the toxicological, ecological and physicochemical properties have not been fully determined and the product should be treated with respect and always handled under suitable conditions by appropriately qualified personnel. The responsible party shall use this datasheet only in conjunction with other sources of information gathered by them, and should make an independent judgement of suitability, to ensure proper use and protect the health and safety of employees. This information is furnished without warranty and any use of the product not in conformance with this material safety data sheet, or in combination with any other product or process, is the responsibility of the user.