



Material Safety Data Sheet

Phenyl isothiocyanate

MSDS# 96278

Section 1 - Chemical Product and Company Identification

MSDS Name: Phenyl isothiocyanate

Catalog Numbers: AC160970000, AC160970050, AC160971000, AC160975000, AC417620000, AC417620075

Synonyms: PITC; Phenyl mustard oil; Isothiocyanatobenzene; Thiocarbanil; Isothiocyanic acid, phenyl ester.

Company Identification:

Acros Organics BVBA
Janssen Pharmaceuticaaan 3a
2440 Geel, Belgium

Company Identification: (USA)

Acros Organics
One Reagent Lane
Fair Lawn, NJ 07410

For information in the US, call:

800-ACROS-01

For information in Europe, call:

+32 14 57 52 11

Emergency Number, Europe:

+32 14 57 52 99

Emergency Number US:

201-796-7100

CHEMTREC Phone Number, US:

800-424-9300

CHEMTREC Phone Number, Europe:

703-527-3887

Section 2 - Composition, Information on Ingredients

CAS#: 103-72-0
Chemical Name: Phenyl isothiocyanate
%: >97
EINECS#: 203-138-1

Hazard Symbols:



Risk Phrases:

T C



23/24/25 34 42/43 63

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Danger! Combustible liquid and vapor. May cause allergic respiratory reaction. May cause allergic skin reaction. Harmful if swallowed, inhaled, or absorbed through the skin. Causes eye and skin irritation and possible burns. Causes digestive and respiratory tract irritation with possible burns. Possible risk of harm to the unborn child. Target Organs: Respiratory system, gastrointestinal system, eyes, skin.

Potential Health Effects

Eye: Vapors cause eye irritation. Lachrymator (substance which increases the flow of tears). Liquid will cause burns.

Skin: Harmful if absorbed through the skin. May cause skin sensitization, an allergic reaction, which becomes evident upon re-exposure to this material. Causes severe skin irritation and possible burns.

Ingestion: Harmful if swallowed. May cause burns to the digestive tract.

Inhalation: Harmful if inhaled. Causes respiratory tract irritation. May cause allergic respiratory reaction.

Repeated exposure may cause sensitization dermatitis. Repeated exposure may cause allergic respiratory

Chronic: reaction (asthma). Chronic exposure may cause effects similar to those of acute exposure. This substance has caused adverse reproductive and fetal effects in laboratory animals.

Section 4 - First Aid Measures

Eyes: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical aid immediately.

Skin: In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid immediately. Wash clothing before reuse.

Ingestion: If swallowed, do NOT induce vomiting. Get medical aid immediately. If victim is fully conscious, give a cupful of water. Never give anything by mouth to an unconscious person.

Inhalation: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.

Notes to Physician: Treat symptomatically and supportively.

Section 5 - Fire Fighting Measures

General Information: As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Use water spray to keep fire-exposed containers cool. Combustible liquid and vapor. Vapors are heavier than air and may travel to a source of ignition and flash back. Vapors can spread along the ground and collect in low or confined areas.

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

Autoignition Temperature: Not available

Flash Point: 87 deg C (188.60 deg F)

Explosion Limits: Lower: Not available

Explosion Limits: Upper: Not available

NFPA Rating: health: 3; flammability: 2; instability: 0;

Section 6 - Accidental Release Measures

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

Spills/Leaks: Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container. Remove all sources of ignition. Provide ventilation. Evacuate unnecessary personnel. Approach spill from upwind.

Section 7 - Handling and Storage

Handling: Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Use with adequate ventilation. Do not get in eyes, on skin, or on clothing. Keep container tightly closed. Avoid ingestion and inhalation. Do not breathe vapor. Keep away from heat and flame.

Storage: Keep away from sources of ignition. Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances.

Section 8 - Exposure Controls, Personal Protection

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Phenyl isothiocyanate	none listed	none listed	none listed

OSHA Vacated PELs: Phenyl isothiocyanate: None listed

Engineering Controls:

Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use process enclosure, local exhaust ventilation, or other engineering controls to control airborne levels.

Exposure Limits

Personal Protective Equipment

Eyes: Wear chemical splash goggles and face shield.
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 - Physical and Chemical Properties

Physical State: Liquid

Color: clear slightly yellow

Odor: mustard-like - penetrating odor

pH: Not applicable

Vapor Pressure: 0.17 mm Hg @ 20 deg C

Vapor Density: 4.68 (air=1)

Evaporation Rate: Not available

Viscosity: Not available

Boiling Point: 221 deg C @ 760 mm Hg (429.80°F)

Freezing/Melting Point: -21 deg C (-5.80°F)

Decomposition Temperature:

Solubility in water: insoluble

Specific Gravity/Density: 1.1300 g/cm³

Molecular Formula: C₇H₅NS

Molecular Weight: 135.19

Section 10 - Stability and Reactivity

Chemical Stability:

Stable under normal temperatures and pressures.

Conditions to Avoid:

Ignition sources, excess heat.

Incompatibilities with Other Materials

Strong oxidizing agents, acids.

Hazardous Decomposition Products

Nitrogen oxides, carbon monoxide, oxides of sulfur, carbon dioxide.

Hazardous Polymerization

Will not occur.

Section 11 - Toxicological Information

RTECS#: CAS# 103-72-0: NX9275000

RTECS:

LD50/LC50: CAS# 103-72-0: Oral, mouse: LD50 = 87 mg/kg;

Carcinogenicity: Phenyl isothiocyanate - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.

Other: See actual entry in RTECS for complete information.

Section 12 - Ecological Information

Not available

Section 13 - Disposal Considerations

Dispose of in a manner consistent with federal, state, and local regulations.

Section 14 - Transport Information

US DOT

Shipping Name: TOXIC LIQUIDS, CORROSIVE, ORGANIC, N.O.S.

Hazard Class: 6.1

UN Number: UN2927

Packing Group: II

Canada TDG

Shipping Name: Toxic Liquid, Corrosive, Organic, N.O.S. (PHENYL ISOTHIOCYANATE)

Hazard Class: 6.192

UN Number: UN2927

Packing Group: II

Section 15 - Regulatory Information

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols: T C

Risk Phrases:

R 23/24/25 Toxic by inhalation, in contact with skin and if swallowed.

R 34 Causes burns.

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

R 63 Possible risk of harm to the unborn child.

Safety Phrases:

S 23 Do not inhale gas/fumes/vapour/spray.

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

S 28A After contact with skin, wash immediately with plenty of water.

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

S 38 In case of insufficient ventilation, wear suitable respiratory equipment.

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# 103-72-0: 2

Canada

CAS# 103-72-0 is listed on Canada's DSL List

Canadian WHMIS Classifications: D1B, B3, E

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations.

CAS# 103-72-0 is not listed on Canada's Ingredient Disclosure List.

US Federal

TSCA

CAS# 103-72-0 is listed on the TSCA Inventory.

Section 16 - Other Information

MSDS Creation Date: 10/08/1997

Revision #5 Date 7/20/2009

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall the company be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential, or exemplary damages howsoever arising, even if the company has been advised of the possibility of such damages.
