

1 - Product and Company Information

ProductName 4-BROMO-2-CHLOROPHENYL ISOCYANATE, 97%

2 - Hazards Identification

SPECIAL INDICATION OF HAZARDS TO HUMANS AND THE ENVIRONMENT

Harmful if swallowed. May cause sensitization by inhalation and skin contact. Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

3 - Composition/Information on Ingredients

Product Name	CAS #	EC no	Annex I
4-BROMO-2-CHLOROPHENYL ISOCYANATE, 97%	190774-47-1	None	None

Formula C7H3BrCINO

Molecular Weight 232.47 AMU

4 - First Aid Measures

AFTER INHALATION

If inhaled, remove to fresh air. If breathing becomes difficult, call a physician.

AFTER SKIN CONTACT

In case of skin contact, flush with copious amounts of water for at least 15 minutes. Remove contaminated clothing and shoes. Call a physician.

AFTER EYE CONTACT

In case of contact with eyes, flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Call a physician.

AFTER INGESTION

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

5 - Fire Fighting Measures

EXTINGUISHING MEDIA

Suitable: Water spray. Carbon dioxide, dry chemical powder, or appropriate foam.

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

PROCEDURE(S) OF PERSONAL PRECAUTION(S)

Wear respirator, chemical safety goggles, rubber boots, and heavy rubber gloves.

METHODS FOR CLEANING UP

Sweep up, place in a bag and hold for waste disposal. Avoid raising dust. Ventilate area and wash spill site after material pickup is complete.

7 - Handling and Storage

HANDLING

Directions for Safe Handling: Avoid breathing dust. Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated exposure.

STORAGE

Conditions of Storage: Keep tightly closed.

Store at 2-8°C

8 - Exposure Controls / Personal Protection

ENGINEERING CONTROLS

Mechanical exhaust required.

GENERAL HYGIENE MEASURES

Wash thoroughly after handling. Wash contaminated clothing before reuse.

PERSONAL PROTECTIVE EQUIPMENT

Respiratory Protection: Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). Where risk assessment shows air-purifying respirators are appropriate use a dust mask type N95 (US) or type P1 (EN 143) respirator.

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

9 - Physical and Chemical Properties

Appearance	Physical State: Solid Color: Almost white	
Property	Value	At Temperature or Pressure
pH	N/A	
BP/BP Range	78 °C	0.4 mmHg
MP/MP Range	71.0 - 76.0 °C	
Flash Point	N/A	
Flammability	N/A	
Autoignition Temp	N/A	
Oxidizing Properties	N/A	
Explosive Properties	N/A	
Explosion Limits	N/A	
Vapor Pressure	N/A	
Partition Coefficient	Log Kow: 3.739	
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

Stable: Stable.

Conditions to Avoid: Moisture.

Materials to Avoid: Strong oxidizing agents.

HAZARDOUS DECOMPOSITION PRODUCTS

Hazardous Decomposition Products: Carbon monoxide, Carbon dioxide, Nitrogen oxides, Hydrogen bromide gas, Hydrogen chloride gas, Hydrogen cyanide.

HAZARDOUS POLYMERIZATION

Hazardous Polymerization: Will not occur

11 - Toxicological Information

SENSITIZATION

Respiratory: May cause allergic respiratory reaction.

Skin: May cause allergic skin reaction.

SIGNS AND SYMPTOMS OF EXPOSURE

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

ROUTE OF EXPOSURE

Skin Contact: May cause skin irritation.

Skin Absorption: May be harmful if absorbed through the skin.

Eye Contact: May cause eye irritation. Lachrymator.

Inhalation: May be harmful if inhaled. Material may be irritating to mucous membranes and upper respiratory tract.

Ingestion: May be harmful if swallowed.

12 - Ecological Information

No data available.

13 - Disposal Considerations

SUBSTANCE DISPOSAL

Of this material: 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. Observe all federal, state, and local

14 - Transport Information

RID/ADR: 3077

UN#: 3077

PG: III

Proper Shipping Name: Environmentally hazardous substance, solid, n.o.s

MP: 22-42/43-51/52

SP: 22-36/37-61

TD: 22-36/37-61

TD6: 22-36/37-61

TD6A: 22-36/37-61

TD6B: 22-36/37-61

TD6C: 22-36/37-61

TD6D: 22-36/37-61

TD6E: 22-36/37-61

TD6F: 22-36/37-61

TD6G: 22-36/37-61

TD6H: 22-36/37-61

TD6I: 22-36/37-61

TD6J: 22-36/37-61

TD6K: 22-36/37-61

TD6L: 22-36/37-61

TD6M: 22-36/37-61

TD6N: 22-36/37-61

TD6O: 22-36/37-61

TD6P: 22-36/37-61

TD6Q: 22-36/37-61

TD6R: 22-36/37-61

TD6S: 22-36/37-61

TD6T: 22-36/37-61

TD6U: 22-36/37-61

TD6V: 22-36/37-61

TD6W: 22-36/37-61

TD6X: 22-36/37-61

TD6Y: 22-36/37-61

TD6Z: 22-36/37-61

TD6A1: 22-36/37-61

TD6B1: 22-36/37-61

TD6C1: 22-36/37-61

TD6D1: 22-36/37-61

TD6E1: 22-36/37-61

TD6F1: 22-36/37-61

TD6G1: 22-36/37-61

TD6H1: 22-36/37-61

TD6I1: 22-36/37-61

TD6J1: 22-36/37-61

TD6K1: 22-36/37-61

TD6L1: 22-36/37-61

TD6M1: 22-36/37-61

TD6N1: 22-36/37-61

TD6O1: 22-36/37-61

TD6P1: 22-36/37-61

TD6Q1: 22-36/37-61

TD6R1: 22-36/37-61

TD6S1: 22-36/37-61

TD6T1: 22-36/37-61

TD6U1: 22-36/37-61

TD6V1: 22-36/37-61

TD6W1: 22-36/37-61

TD6X1: 22-36/37-61

TD6Y1: 22-36/37-61

TD6Z1: 22-36/37-61

TD6A2: 22-36/37-61

TD6B2: 22-36/37-61

TD6C2: 22-36/37-61

TD6D2: 22-36/37-61

TD6E2: 22-36/37-