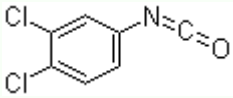
- **Detail of 102-36-3**
- **Molecular Structure:**
- 
- **Name:**3,4-DICHLOROPHENYL ISOCYANATE
- **CAS Number:**102-36-3
- **Molecular Formula:**$C_7H_3Cl_2NO$
- **Molecular Weight:**188.01 . CODE
- **EINECS:**203-026-2
- **Density:**1.37g/cm^3
- **Melting Point:**40 - 44 C
- **Boiling Point:**118 - 120 C
- **Flash Point:**> 110 C
- **Solubility:**Decomposes AUTOIGNITION Risk Codes:R23;R36/37/38;R42

Details

- **Appearance:**Clear waxy solid
- **liansport Information:**200kgs
- **Hazard Symbols: 6.1 (Packing Group: II) UN NO.**

MATERİAL SAFETY DATA SHEET

3,4-Dichlorophenyl isocyanate, 99+%

Section 1 - Chemical Product and Company Identification

MSDS Name:	3,4-Dichlorophenyl isocyanate, 99+%
Catalog Numbers:	29223-0000, 29223-0050, 29223-0250, 29223-0500
Synonyms:	
Company Identification:	Acros Organics BVBA Janssen Pharmaceuticalaan 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#	Chemical Name:	%	EINECS#
102-36-3	3,4-Dichlorophenyl isocyanate	99+%	203-026-2

Hazard Symbols: T

Risk Phrases: 20 25 36/37/38 42

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Toxic if swallowed. Irritating to eyes, respiratory system and skin. May cause sensitization by inhalation. Harmful by inhalation.Moisture sensitive.

Potential Health Effects

Eye: Causes eye irritation. Lachrymator (substance which increases the flow of tears).

Skin: Causes skin irritation. May be harmful if absorbed through the skin.

Ingestion: May cause irritation of the digestive tract. Toxic if swallowed.

Inhalation: Harmful if inhaled. Causes respiratory tract irritation. May cause burning sensation, coughing, wheezing, laryngitis, shortness of breath, headache, nausea, and vomiting.

Chronic: Repeated exposure may cause allergic respiratory reaction (asthma).

Section 4 - First Aid Measures

Eyes: Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid immediately.

Skin: Get medical aid immediately. Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.

Ingestion: Get medical aid immediately. Wash mouth out with water.

Inhalation: Get medical aid immediately. Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.

Notes to Physician:

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.

Extinguishing Media: Use carbon dioxide or dry chemical.

Section 6 - 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 7 - Handling and Storage

Handling: Do not breathe dust, vapor, mist, or gas. Do not get in eyes, on skin, or on clothing. Use only in a chemical fume hood.

Storage: Store in a cool, dry place. Store in a tightly closed container.

Section 8 - Exposure Controls, Personal Protection

Engineering Controls:

Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits.

Exposure Limits

CAS# 102-36-3:

Personal Protective Equipment

Eyes: Wear chemical splash goggles.

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:	Solid
Color:	white
Odor:	unpleasant odor
pH:	Not available
Vapor Pressure:	0.2 mm Hg @ 20 deg C
Viscosity:	Not available
Boiling Point:	118.0 - 120.0 deg C @ 18.00mm
Freezing/Melting Point:	40.00 - 43.00 deg C
Autoignition Temperature:	Not available
Flash Point:	110 deg C (230.00 deg F)
Explosion Limits: Lower:	2.00 vol %
Explosion Limits: Upper:	Not available
Decomposition Temperature:	Not available
Solubility in water:	Decomposes.

Specific Gravity/Density:	
Molecular Formula:	C7H3Cl2NO
Molecular Weight:	188.01

Section 10 - Stability and Reactivity

Chemical Stability:	Not available
Conditions to Avoid:	Incompatible materials, exposure to moist air or water, heat.
Incompatibilities with Other Materials	Strong oxidizing agents, acids, bases, alcohols, amines.
Hazardous Decomposition Products	Hydrogen chloride, hydrogen cyanide, nitrogen oxides, carbon monoxide, carbon dioxide.
Hazardous Polymerization	Has not been reported.

Section 11 - Toxicological Information

RTECS#:	CAS# 102-36-3: NQ8760000
LD50/LC50:	RTECS: **CAS# 102-36-3:** Inhalation, mouse: LC50 = 140 mg/m3/2H; Inhalation, rat: LC50 = 2700 mg/m3/4H; Oral, rat: LD50 = 91 mg/kg; .
Carcinogenicity:	3,4-Dichlorophenyl isocyanate - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.
Other:	See actual entry in RTECS for complete information. The toxicological properties have not been fully investigated.

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

	IATA	IMO	RID/ADR
Shipping Name:	DICHLOROPHENYL ISOCYANATES	DICHLOROPHENYL ISOCYANATES	DICHLOROPHENYL ISOCYANATES

Hazard Class:	6.1	6.1	6.1
UN Number:	2250	2250	2250

Packing Group:	II	II	II

Section 15 - Regulatory Information

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols: T

Risk Phrases:

R 20 Harmful by inhalation.

R 25 Toxic if swallowed.

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

R 42 May cause sensitization by inhalation.

Safety Phrases:

S 22 Do not breathe dust.

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 37/39 Wear suitable 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# 102-36-3: 2

Canada

CAS# 102-36-3 is listed on Canada's NDSL List

US Federal

TSCA

CAS# 102-36-3 is listed on the TSCA Inventory.

Section 16 - Other Information

MSDS Creation Date:	7/16/1996
Revision #1 Date	5/22/2002

245607

Aldrich

3,4-Dichlorophenyl isocyanate

97%

Price and Availability

Click For Pricing and Availability

CAS Number:	102-36-3
Linear Formula:	$Cl_2C_6H_3NCO$
Molecular Weight:	188.01
Beilstein Registry Number:	608325
EC Number:	203-026-2
MDL number:	MFCD00002017
PubChem Substance ID:	24854744

Description

Packaging 10, 50 g in glass btl

Properties

vapor pressure	0.2 mmHg (20 ℃)
assay	97%
bp	118-120 ℃/18 mmHg(lit.)
mp	41-43 ℃(lit.)

Safety

Hazard Codes	T
Risk Statements	23-36/37/38-42
Safety Statements	22-26-36/37/39-45
RIDADR	UN 2250 6.1/PG 2
WGK Germany	2
RTECS	NQ8760000
Flash Point(F)	253 ℉
Flash Point(C)	123 ℃

【Product Name】

Isocyanic acid 3,4-dichlorophenyl ester

【Synonyms】

3,4-Dichlorophenyl isocyanate

【CAS】

102-36-3

【Formula】

C7H3Cl2NO

【Molecular Weight】

188.01

【EINECS】

203-026-2

【RTECS】

NQ8760000

【RTECS Class】

Other

【Beilstein/Gmelin】

608325

【Beilstein Reference】

3-12-00-01405

【EC Class】

toxic, irritant, sensitizing

Physical and Chemical Properties

Back to Contents

【Appearance】

White to yellow crystalline solid with an irritating odor, lachrymator.

【Solubility in water】

Insoluble

【Melting Point】

38 - 41

【Boiling Point】

234

【Vapor Pressure】

0.06 (25 C)

【Partition Coefficient】

4.01

【Heat Of Vaporization】

47.0 kJ/mol

【Usage】

Chemical intermediate, organic synthesis.

【Saturation Concentration】

263 ppm (0.03%) at 20 C (calculated)

First Aid Measures

Back to Contents

【Ingestion】

Never give anything by mouth to an unconscious person. Get medical aid. Do NOT induce vomiting. If conscious and alert, rinse mouth and drink 2-4 cupfuls of milk or water.

【Inhalation】

Remove from exposure to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.

【Skin】

Get medical aid. Flush skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse.

【Eyes】

Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.

Handling and Storage

Back to Contents

【Storage】

Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances.

【Handling】

Avoid contact with eyes, skin, and clothing. Keep container tightly closed. Avoid ingestion and inhalation. Use with adequate ventilation. Wash clothing before reuse.

Hazards Identification

Back to Contents

【Inhalation】

Causes respiratory tract irritation. Can produce delayed pulmonary edema.

【Skin】

Causes skin irritation.

【Eyes】

Causes eye irritation. May cause chemical conjunctivitis.

【Ingestion】

May cause gastrointestinal irritation with nausea, vomiting and diarrhea.

【Hazards】

Inhalation of dust is poisonous; fire may produce irritating or poisonous gases.

【EC Risk Phrase】

R 23/25 36/37/38 42

【EC Safety Phrase】

S 22 26 36/37/39 45

【UN (DOT)】

2250

Exposure Controls/Personal Protection

Back to Contents

【Personal Protection】

Eyes: Wear safety glasses and chemical goggles if splashing is possible. 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 and clothing to prevent skin exposure. Wear appropriate protective gloves to prevent skin exposure. Clothing: Wear appropriate protective clothing to minimize contact with skin. Wear appropriate protective clothing to prevent skin exposure.

【Respirators】

A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant a respirator's use. Wear a NIOSH/MSHA or European Standard EN 149 approved full-facepiece airline respirator in the positive pressure mode with emergency escape provisions.

【Exposure Effects】

Effects may be delayed.

Fire Fighting Measures

Back to Contents

【Flash Point】

106

【Fire Fighting】

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. To extinguish fire use water spray, dry chemical, carbon dioxide, or appropriate foam.

【Upper exp. limit】

8.6

【Lower exp. limit】

1.6

【Fire Potential】

Combustible material: may burn but does not ignite readily.

Accidental Release Measures

Back to Contents

【Small spills/leaks】

Clean up spills immediately, using the appropriate protective equipment. Sweep up, then place into a suitable container for disposal. Sweep up or absorb material, then place into a suitable clean, dry, closed container for disposal. Provide ventilation.

Stability and Reactivity

Back to Contents

【Disposal Code】

9

【Incompatibilities】

Incompatible with many classes of compounds, reacting exothermically to release toxic gases Reactions with amines, aldehydes, alcohols, alkali metals, ketones, mercaptans, strong oxidizers, hydrides, phenols, and peroxides can cause vigorous releases of heat.

【Stability】

Stable under normal temperatures and pressures. Stable at room temperature in closed containers under normal storage and handling conditions.

【Decomposition】

Hydrogen chloride, hydrogen cyanide, nitrogen oxides, carbon monoxide, carbon dioxide, nitrogen.

【Combustion Products】

Fire will produce irritating, corrosive and/or toxic gases.

Transport Information

Back to Contents

【UN Number】

2250

【Hazard Class】

6.1

【Packing Group】

II

【HS Code】

2929 10 90