

SAFETY DATA SHEET

1. IDENTIFICATION

Product name: Tolylene Diisocyanate (2,4- ca. 80%, 2,6- ca. 20%)
Product code: T0264
Company: MIT-IVY INDUSTRY CO., LTD
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Revision number: 1

2. HAZARDS IDENTIFICATION

Classification of the substance or mixture

PHYSICAL HAZARDS

Not classified

HEALTH HAZARDS

Acute toxicity (Oral) Category 5
Acute toxicity (Inhalation) Category 1
Skin corrosion/irritation Category 1B
Serious eye damage/eye irritation Category 2A
Respiratory sensitization Category 1
Skin sensitization Category 1
Carcinogenicity Category 2
Specific target organ toxicity Respiratory system Central nervous system
 - Single exposure [Category 1]
Specific target organ toxicity Respiratory system
 - Repeated exposure [Category 1]
Specific target organ toxicity Liver
 - Repeated exposure [Category 2]

ENVIRONMENTAL HAZARDS

Acute aquatic hazard Category 1
Long-term aquatic hazard Category 1

Label elements

Pictograms or hazard symbols



Signal word

Danger

Hazard statements

May be harmful if swallowed
 Fatal if inhaled
 Causes severe skin burns and eye damage
 May cause allergy or asthma symptoms or breathing difficulties if inhaled
 May cause an allergic skin reaction
 Suspected of causing cancer
 Causes damage to organs : Respiratory system Central nervous system
 Causes damage to organs through prolonged or repeated exposure : Respiratory system

May cause damage to organs through prolonged or repeated exposure : Liver
 Very toxic to aquatic life
 Very toxic to aquatic life with long lasting effects

Precautionary statements
[Prevention]

Obtain special instructions before use.
 Do not handle until all safety precautions have been read and understood.
 Do not breathe mist, vapors or spray.
 Use only outdoors or in a well-ventilated area.
 Avoid release to the environment.
 Do not eat, drink or smoke when using this product.
 Contaminated work clothing should not be allowed out of the workplace.
 Wash hands and face thoroughly after handling.
 Wear respiratory protection.

[Response]

Wear protective gloves, protective clothing, face protection.
 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER or doctor.
 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. Immediately call a POISON CENTER or doctor. Wash contaminated clothing before reuse.
 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or doctor.
 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor.
 If exposed or concerned: Call a POISON CENTER or doctor.

[Storage]

Collect spillage.
 Store in a well-ventilated place. Keep container tightly closed.
 Store locked up.

[Disposal]

Dispose of contents and container in accordance with local, regional, national regulations.
 May cause polymerization.

Other hazards which do not result in classification

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance/mixture: Mixture
Components: Toluene Diisocyanate (2,4- ca. 80%, 2,6- ca. 20%)
Percent: >98.0%(GC)
CAS RN: 26471-62-5
Synonyms: Toluene Diisocyanate (2,4- ca. 80%, 2,6- ca. 20%)
Chemical Formula: C₉H₆N₂O₂

4. FIRST AID MEASURES

Inhalation: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor/physician.
Skin contact: Remove/Take off immediately all contaminated clothing. Gently wash with plenty of soap and water. Immediately call a POISON CENTER or doctor/physician.
Eye contact: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician.
Ingestion: Immediately call a POISON CENTER or doctor/physician. Rinse mouth. Do NOT induce vomiting.
Protection of first-aiders: A rescuer should wear personal protective equipment, such as rubber gloves and air-tight goggles.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media: Dry chemical, foam, water spray, carbon dioxide.

Unsuitable extinguishing media: Solid streams of water

Specific hazards arising from the chemical: This substance may polymerize explosively when heated or involved in a fire. Container may explode when heated. Combat fire from a sheltered position. Take care as it may decompose upon combustion or in high temperatures to generate poisonous fume.

Precautions for firefighters: Fire-extinguishing work is done from the windward and the suitable fire-extinguishing method according to the surrounding situation is used. Uninvolved persons should evacuate to a safe place. In case of fire in the surroundings: Keep containers cool by spraying with water. Eliminate all ignition sources if safe to do so.

Special protective equipment for firefighters: When extinguishing fire, be sure to wear personal protective equipment

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures: Use personal protective equipment. Keep people away from and upwind of spill/leak. Ensure adequate ventilation. Entry to non-involved personnel should be controlled around the leakage area by roping off, etc.

Environmental precautions: Be careful not to let it flow into rivers, etc., since adverse effects on the environment are concerned.

Methods and materials for containment and cleaning up: Absorb spilled material in dry sand or inert absorbent before recovering it into a covered container. In case of large amount of spillage, contain a spill by bunding. Adhered or collected material should be promptly disposed of, in accordance with appropriate laws and regulations.

7. HANDLING AND STORAGE**Precautions for safe handling**

Technical measures: Handling is performed in a well ventilated place. Wear suitable protective equipment. Prevent generation of vapour or mist. Wash hands and face thoroughly after handling. Use a closed system if possible. Use a ventilation, local exhaust if vapour or aerosol will be generated.

Advice on safe handling: Avoid all contact!

Conditions for safe storage, including any incompatibilities

Storage conditions: Keep container tightly closed. Store in a refrigerator. Store under inert gas. Protect from moisture. Store locked up. Store away from incompatible materials such as oxidizing agents. Heat-sensitive, Light-sensitive, Moisture-sensitive

Packaging material: Comply with laws.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering controls: Install a closed system or local exhaust. Also install safety shower and eye bath.

Personal protective equipment

Respiratory protection: Half or full facepiece respirator, self-contained breathing apparatus(SCBA), supplied air respirator, etc. Use respirators approved under appropriate government standards and follow local and national regulations.

Hand protection: Impervious gloves.

Eye protection: Safety goggles. A face-shield, if the situation requires.

Skin and body protection: Impervious protective clothing. Protective boots, if the situation requires.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state (20°C):	Liquid
Form:	Clear
Colour:	Colorless - Slightly pale yellow
Odour:	Pungent
pH:	No data available
Melting point/freezing point:	14°C
Boiling point/range:	251°C
Flash point:	137°C
Flammability or explosive limits:	
Lower:	No data available
Upper:	No data available
Vapour pressure:	67Pa/25°C
Relative density:	1.22
Solubility(ies):	
[Water]	No data available
[Other solvents]	
Miscible:	Ether, Benzene, Acetone, Carbon tetrachloride
Log Pow:	0.21 (2,4-form)

10. STABILITY AND REACTIVITY

Chemical stability:	Polymerization may occur under the influences of heat, light or on contact with polymerization initiators such as peroxides etc.
Possibility of hazardous reactions:	No special reactivity has been reported.
Conditions to avoid:	Heat, Light
Incompatible materials:	Oxidizing agents, Acids, Bases, Water, Alcohols, Amines
Hazardous decomposition products:	Carbon dioxide, Carbon monoxide, Nitrogen oxides (NOx)

11. TOXICOLOGICAL INFORMATION

Acute Toxicity:	ihl-mus LC50:9700 ppb/4H ihl-rat LCLo:600 ppm/6H ihl-rbt LC50:11 ppm/4H orl-mus LD50:1950 mg/kg orl-rat LD50:4130 mg/kg skn-rbt LD50:>10 mL/kg
Skin corrosion/irritation:	skn-rbt 500 mg open SEV
Serious eye damage/irritation:	No data available
Germ cell mutagenicity:	cyt-hmn-lym 92 mg/L mmo-sat 100 ug/plate (-S9)
Carcinogenicity:	orl-mus TDLo:63 g/kg/2Y-I orl-rat TD:63600 mg/kg/2Y-I orl-rat TDLo:31800 mg/kg/2Y-I
IARC =	Group 2B (Possibly carcinogenic to humans)
NTP =	b (Reasonably anticipated to be carcinogens)
Reproductive toxicity:	No data available
RTECS Number:	NQ9490000

12. ECOLOGICAL INFORMATION

Ecotoxicity:

Fish:	No data available
Crustacea:	No data available
Algae:	No data available
Persistence / degradability:	No data available
Bioaccumulative potential(BCF):	No data available
Mobility in soil	
Log Pow:	0.21 (2,4-form)
Soil adsorption (Koc):	No data available
Henry's Law (PaM³/mol):	No data available

13. DISPOSAL CONSIDERATIONS

Recycle to process, if possible. Consult your local regional authorities. You may be able to burn in a chemical incinerator equipped with an afterburner and scrubber system. Observe all federal, state and local regulations when disposing of the substance.

14. TRANSPORT INFORMATION

Hazards Class:	6.1: Toxic substance.
UN-No:	2078
Proper shipping name:	Toluene diisocyanate
Packing group:	II
Marine pollutant	Y

15. REGULATORY INFORMATION

Regulations on the Control over Safety of Dangerous Chemicals (State Council announces on January 26, 2002 and revised on February 16,2011): Safe use and production, the storage of a dangerous chemical, transport, loading and unloading were prescribed.

This product is included in the list of dangerous chemicals(2015)/Serial No.: 1017

16. OTHER INFORMATION

The reference company name of written contents

Company:	MIT-IVY INDUSTRY CO., LTD.
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This SDS was prepared sincerely on the basis of the information we could obtained, however, any warranty shall not be given regarding the data contained and the assessment of hazards and toxicity. Prior to use, please investigate not only the hazards and toxicity information but also the laws and regulations of the organization, area and country where the products are to be used, which shall be given the first priority. The products are supposed to be used promptly after purchase in consideration of safety. Some new information or amendments may be added afterwards. If the products are to be used far behind the expected time of use or you have any questions, please feel free to contact us. The stated cautions are for normal handling only. In case of special handling, sufficient care should be taken, in addition to the safety measures suitable for the situation. All chemical products should be treated with the recognition of "having unknown hazards and toxicity", which differ greatly depending on the conditions and handling when in use and/or the conditions and duration of storage. The products must be handled only by those who are familiar with specialized knowledge and have experience or under the guidance of those specialists throughout use from opening to storage and disposal. Safe usage conditions shall be set up on each user's own responsibility.