## 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

Product name : Tolylene 2,5-diisocyanate

## 2. HAZARDS IDENTIFICATION

**Classification of the substance or mixture**

According to Regulation (EC) No1272/2008
Acute toxicity, Inhalation (Category 2)
Skin sensitization (Category 1)
Carcinogenicity (Category 1B)

According to European Directive 67/548/EEC as amended.
May cause cancer. May cause heritable genetic damage. Very toxic by inhalation. May cause sensitization by inhalation and skin contact.

**Label elements**

Pictogram

Signal word Danger

Hazard statement(s)
H317 May cause an allergic skin reaction.
H330 Fatal if inhaled.
H350 May cause cancer.

Precautionary statement(s)
P201 Obtain special instructions before use.
P260 Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.
P280 Wear protective gloves.
P284 Wear respiratory protection.
P310 Immediately call a POISON CENTER or doctor/ physician.

Hazard symbol(s)
T+ Very toxic

R-phrase(s)
R45 May cause cancer.
R46 May cause heritable genetic damage.
R26 Also very toxic by inhalation.
R42/43 May cause sensitization by inhalation and skin contact.

S-phrase(s)
S53 Avoid exposure - obtain special instructions before use.
S22 Do not breathe dust.
S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S28 After contact with skin, wash immediately with plenty of water.
S38 In case of insufficient ventilation, wear suitable respiratory equipment.
S45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

Restricted to professional users.

**Other hazards**

Lachrymator.

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

Formula : C9H6N2O2
Molecular Weight : 174,16 g/mol

| CAS-No. | EC-No. | Classification | Concentration |
|---|---|---|---|
| **Tolylene 2,5-diisocyanate** | | | |
| 614-90-4 | - | - | Acute Tox. 2; Skin Sens. 1; Carc. 1B; H317, H330, H350 T+; R45 - R46 - R26 - R42/43 | - |

For the full text of the H-Statements mentioned in this Section, see Section 16.

## 4. FIRST AID MEASURES

**General advice**
Consult a physician. Show this safety data sheet to the doctor in attendance.

**If inhaled**
If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

**In case of skin contact**
Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.

**In case of eye contact**
Flush eyes with water as a precaution.

**If swallowed**
Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

## 5. FIRE-FIGHTING MEASURES

**Suitable extinguishing media**
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

**Special protective equipment for fire-fighters**
Wear self contained breathing apparatus for fire fighting if necessary.

## 6. ACCIDENTAL RELEASE MEASURES

**Personal precautions**
Wear respiratory protection. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.

**Environmental precautions**
Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

**Methods and materials for containment and cleaning up**
Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

## 7. HANDLING AND STORAGE

**Precautions for safe handling**
Avoid contact with skin and eyes. Avoid formation of dust and aerosols.Avoid exposure - obtain special instructions before use.
Provide appropriate exhaust ventilation at places where dust is formed. Normal measures for preventive fire protection.

**Conditions for safe storage**
Keep container tightly closed in a dry and well-ventilated place.

Recommended storage temperature: 2 - 8 °C

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**Personal protective equipment**

**Respiratory protection**
Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

**Hand protection**
Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

**Eye protection**
Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

**Skin and body protection**
Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

**Hygiene measures**
Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

**Appearance**

| | |
|---|---|
| Form | powder |
| Colour | white |

**Safety data**

| | |
|---|---|
| pH | no data available |
| Melting point | 35 - 39 °C - lit. |
| Boiling point | 138 - 139 °C at 20 hPa - lit. |
| Flash point | 113 °C - closed cup |
| Ignition temperature | no data available |
| Lower explosion limit | no data available |
| Upper explosion limit | no data available |
| Water solubility | no data available |

## 10. STABILITY AND REACTIVITY

**Chemical stability**
Stable under recommended storage conditions.

**Conditions to avoid**
Heat.

**Materials to avoid**
Alcohols, Strong bases, Amines, acids, Strong oxidizing agents

**Hazardous decomposition products**
Hazardous decomposition products formed under fire conditions. - Carbon oxides, nitrogen oxides (NOx)

## 11. TOXICOLOGICAL INFORMATION

**Acute toxicity**
no data available

**Skin corrosion/irritation**
no data available

**Serious eye damage/eye irritation**
no data available

**Respiratory or skin sensitization**
May cause allergic skin reaction.

**Germ cell mutagenicity**

no data available

**Carcinogenicity**

Possible human carcinogen

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

**Reproductive toxicity**

no data available

**Specific target organ toxicity - single exposure**
no data available

**Specific target organ toxicity - repeated exposure**
no data available

**Aspiration hazard**
no data available

**Potential health effects**

| | |
|---|---|
| **Inhalation** | May be fatal if inhaled. May cause respiratory tract irritation. |
| **Ingestion** | May be harmful if swallowed. |
| **Skin** | May be harmful if absorbed through skin. May cause skin irritation. |
| **Eyes** | May cause eye irritation. |

**Signs and Symptoms of Exposure**
burning sensation, Cough, wheezing, laryngitis, Shortness of breath, Headache, Nausea, Vomiting, spasm, inflammation and edema of the larynx, spasm, inflammation and edema of the bronchi, pneumonitis, pulmonary edema

**Additional Information**
RTECS: Not available

## 12. ECOLOGICAL INFORMATION

**Toxicity**
no data available

**Persistence and degradability**
no data available

**Bioaccumulative potential**
no data available

**Mobility in soil**
no data available

**PBT and vPvB assessment**
no data available

**Other adverse effects**
no data available

## 13. DISPOSAL CONSIDERATIONS

**Product**
Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

**Contaminated packaging**
Dispose of as unused product.

## 14. TRANSPORT INFORMATION

**ADR/RID**
UN-Number: 2811 Class: 6.1 Packing group: II
Proper shipping name: TOXIC SOLID, ORGANIC, N.O.S. (Tolylene 2,5-diisocyanate)

**IMDG**
UN-Number: 2811 Class: 6.1 Packing group: II EMS-No: F-A, S-A
Proper shipping name: TOXIC SOLID, ORGANIC, N.O.S. (Tolylene 2,5-diisocyanate)
Marine pollutant: No

**IATA**
UN-Number: 2811 Class: 6.1 Packing group: II
Proper shipping name: Toxic solid, organic, n.o.s. (Tolylene 2,5-diisocyanate)

## 15. REGULATORY INFORMATION

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

## 16. OTHER INFORMATION

**Text of H-code(s) and R-phrase(s) mentioned in Section 3**

| | |
|---|---|
| Acute Tox. | Acute toxicity |
| Carc. | Carcinogenicity |
| H317 | May cause an allergic skin reaction. |
| H330 | Fatal if inhaled. |
| H350 | May cause cancer. |
| Skin Sens. | Skin sensitization |
| T+ | Very toxic |
| R26 | Very toxic by inhalation. |
| R42/43 | May cause sensitization by inhalation and skin contact. |
| R45 | May cause cancer. |
| R46 | May cause heritable genetic damage. |

**Further information**

For R&D use only. Not for drug, household or other uses.
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