Material Safety Data Sheet
Tolylene-2,6-Diisocyanate, 97%

ACC# 66686

Section 1 - Chemical Product and Company Identification

MSDS Name: Tolylene-2,6-Diisocyanate, 97%
Catalog Numbers: AC208040000, AC208040010, AC208040050
Synonyms: 2-Methyl-1,3-phenylene diisocyanate; Toluene-2,6-diisocyanate.
Company Identification:

Acros Organics N.V.
One Reagent Lane
Fair Lawn, NJ 07410

For information in North America, call: 800-ACROS-01
For emergencies in the US, call CHEMTREC: 800-424-9300

Section 2 - Composition, Information on Ingredients

CAS#	Chemical Name	Percent	EINECS/ELINCS
91-08-7	Toluene-2,6-diisocyanate	97	202-039-0

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Appearance: clear, colorless liquid.
Danger! May be fatal if inhaled. Causes eye, skin, and respiratory tract irritation. May cause allergic respiratory and skin reaction.
Target Organs: Kidneys, central nervous system, liver, lungs, cardiovascular system, eyes, skin.

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. Organic isocyanates can cause local irritation and allergic reactions.
Ingestion: May cause gastrointestinal irritation with nausea, vomiting and diarrhea. May cause liver and kidney damage. May cause cardiac disturbances. May cause central nervous system effects.
Inhalation: Causes respiratory tract irritation. May cause liver and kidney damage. Central nervous system effects may include confusion, ataxia (failure of muscular coordination), vertigo, tinnitus, weakness, disorientation, lethargy, drowsiness, and finally coma. At high concentrations, isocyanates affect mucous membranes of the respiratory tract and may lead to fatal pulmonary edema. Exposure to low and often even unmeasurable isocyanate concentration results in sensitization. May cause cardiac damage. Can produce delayed pulmonary edema.
Chronic: Repeated or prolonged exposure may cause allergic reactions in sensitive individuals. Chronic overexposure to isocyanates has been reported to cause lung damage, including decreased lung fuction, which may be permanent.

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. Do NOT allow victim to rub eyes or keep eyes closed.
Skin: Get medical aid. Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse.
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 and move to fresh air immediately. If breathing is difficult, give oxygen. Get medical aid. Do NOT use mouth-to-mouth resuscitation. If breathing has ceased apply artificial respiration using oxygen and a suitable mechanical device such as a bag and a mask.
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. Vapors may be heavier than air. They can spread along the ground and collect in low or confined areas. Containers may explode when heated. Contact with water forms corrosive vapors. Contact with water liberates highly flammable gases. Reacts with water, steam or acid to produce toxic and flammable vapors of hydrogen cyanide. Runoff from fire control or dilution water may cause pollution.
Extinguishing Media: Use dry chemical or carbon dioxide.
Flash Point: > 110 deg C (> 230.00 deg F)
Autoignition Temperature: Not available.
Explosion Limits, Lower:0.9%
Upper: 9.5%
NFPA Rating: (estimated) Health: 3; Flammability: 1; Instability: 3; Special Hazard: -W-

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. Avoid runoff into storm sewers and ditches which lead to waterways. Clean up spills immediately, observing precautions in the Protective Equipment section. Provide ventilation. Do not get water inside containers. Approach spill from upwind.

Section 7 - Handling and Storage

Handling: Avoid contact with eyes, skin, and clothing. Keep container tightly closed. Avoid ingestion and inhalation. Use with adequate ventilation. Do not allow contact with water. Wash clothing before reuse. Keep from contact with moist air and steam. Isocyanates react with water to form CO2 gas. This gas can cause sealed containers to expand and possibly rupture.
Storage: Store in a tightly closed container. Keep refrigerated. (Store below 4°C/39°F.) Sometimes packaged under dry nitrogen.

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

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Toluene-2,6-diisocyanate	0.005 ppm TWA; 0.02 ppm STEL	none listed	none listed

OSHA Vacated PELs: Toluene-2,6-diisocyanate: No OSHA Vacated PELs are listed for this chemical.
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: Liquid
Appearance: clear, colorless
Odor: None reported.
pH: Not available.
Vapor Pressure: 0.01 mm Hg @ 20 deg C
Vapor Density: 6.0 (air=1)
Evaporation Rate: Not available.
Viscosity: Not available.
Boiling Point: 246-247 deg C
Freezing/Melting Point:13 deg C
Decomposition Temperature: Not available.
Solubility: Reacts.
Specific Gravity/Density:1.22 g/ml
Molecular Formula:C9H6N2O2
Molecular Weight:174.16

Section 10 - Stability and Reactivity

Chemical Stability: Stable at room temperature in closed containers under normal storage and handling conditions. Hazardous polymerization and/or hazardous decomposition may occur on contact with water or on exposure to heat.
Conditions to Avoid: Light, moisture, heat.
Incompatibilities with Other Materials: Oxidizing agents, acids, strong bases, alcohols, amines, moisture, organometallic compounds.
Hazardous Decomposition Products: Hydrogen cyanide, nitrogen oxides, carbon monoxide, irritating and toxic fumes and gases, carbon dioxide.
Hazardous Polymerization: May occur.

Section 11 - Toxicological Information

RTECS#:
CAS# 91-08-7: CZ6310000
LD50/LC50:
Not available.

Carcinogenicity:
CAS# 91-08-7: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

Epidemiology: No information found
Teratogenicity: No information found

Reproductive Effects: No information found
Mutagenicity: Mutagenic effects have occurred in experimental animals.
Neurotoxicity: No information found
Other Studies:

Section 12 - Ecological Information

No information available.

Section 13 - Disposal Considerations

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.
RCRA P-Series: None listed.
RCRA U-Series: None listed.

Section 14 - Transport Information

	US DOT	Canada TDG
Shipping Name:	DOT regulated - small quantity provisions apply (see 49CFR173.4)	TOLUENE DIISOCYANATE
Hazard Class:		6.1
UN Number:		UN2078
Packing Group:		II

Section 15 - Regulatory Information

US FEDERAL

TSCA
CAS# 91-08-7 is listed on the TSCA inventory.
Health & Safety Reporting List
CAS# 91-08-7: Effective 6/1/87, Sunset 12/19/95
Chemical Test Rules
None of the chemicals in this product are under a Chemical Test Rule.
Section 12b
None of the chemicals are listed under TSCA Section 12b.
TSCA Significant New Use Rule
None of the chemicals in this material have a SNUR under TSCA.
CERCLA Hazardous Substances and corresponding RQs
CAS# 91-08-7: 100 lb final RQ (Listed under Toluene diisocyanate); 45.4 kg final RQ (Listed un
SARA Section 302 Extremely Hazardous Substances
CAS# 91-08-7: 100 lb TPQ
Section 313
This material contains Toluene-2,6-diisocyanate (CAS# 91-08-7, 97%),which is subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR
Clean Air Act:
This material does not contain any hazardous air pollutants.
This material does not contain any Class 1 Ozone depletors.
This material does not contain any Class 2 Ozone depletors.
Clean Water Act:
None of the chemicals in this product are listed as Hazardous Substances under the CWA.
None of the chemicals in this product are listed as Priority Pollutants under the CWA.
None of the chemicals in this product are listed as Toxic Pollutants under the CWA.
OSHA:
None of the chemicals in this product are considered highly hazardous by OSHA.
STATE
CAS# 91-08-7 can be found on the following state right to know lists: California, New Jersey, Pennsylvania, Massachusetts.

California Prop 65

California No Significant Risk Level: None of the chemicals in this product are listed.

European/International Regulations
European Labeling in Accordance with EC Directives
Hazard Symbols:
T+
Risk Phrases:
R 26 Very toxic by inhalation.
R 36/37/38 Irritating to eyes, respiratory system and skin.
R 40 Limited evidence of a carcinogenic effect.
R 42/43 May cause sensitization by inhalation and skin contact.
R 52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Safety Phrases:

S 23 Do not inhale gas/fumes/vapour/spray.
S 36/37 Wear suitable protective clothing and gloves.
S 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
S 61 Avoid release to the environment. Refer to special instructions /safety data sheets.

WGK (Water Danger/Protection)
CAS# 91-08-7: 2

Canada - DSL/NDSL
CAS# 91-08-7 is listed on Canada's DSL List.

Canada - WHMIS
This product has a WHMIS classification of D1A, D2A.
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.

Canadian Ingredient Disclosure List
CAS# 91-08-7 is listed on the Canadian Ingredient Disclosure List.

Section 16 - Additional Information

MSDS Creation Date: 9/02/1997
Revision #9 Date: 7/23/2004