



MATERIAL SAFETY DATA SHEET

SECTION 1 IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product Name: TOLUENE

Company: Recochem Inc. ABN: 69 010 485 999
Address : 1809 Lytton Road, Lytton, Queensland 4178
Phone: (07) 3308 5200 Fax: (07) 3308 5201
Emergency Telephone Number: (07) 3308 5200 Day, After Hours 1300 131 001

Other Names: Toluol, Methyl benzene
Manufacturer's Product Code: 16025
Recommended Use: Solvent, raw material for chemical industry

SECTION 2 HAZARDS IDENTIFICATION

**CLASSIFIED AS HAZARDOUS ACCORDING TO CRITERIA OF WORKSAFE AUSTRALIA
DANGEROUS ACCORDING TO THE CRITERIA OF THE ADG CODE**

Symbols: F Highly flammable
Xn Harmful
N Dangerous for the environment

Risk Phrases: R11 Highly flammable
R38 Irritating to skin
R48/20 Harmful: danger of serious damage to health by prolonged exposure through inhalation
R63 Possible Risk of harm to the unborn child
R65 Harmful: May cause lung damage if swallowed
R67 Vapours may cause drowsiness and dizziness.

Safety Phrases: S2 Keep out of the reach of children
S36/37 Wear suitable protective clothing and gloves
S62 – If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label.

SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

INGREDIENTS

<i>Chemical Entity</i>	<i>CAS Number</i>	<i>Proportion (%)</i>
Toluene	108-88-3	100

SECTION 4 FIRST AID MEASURES

FIRST AID TREATMENT

Swallowed: If swallowed, do NOT induce vomiting. Transport to nearest medical facility for additional treatment. If vomiting occurs spontaneously, keep head below hips to prevent aspiration.

Eye: If in eyes, hold eyes open, flood with water for at least 15 minutes. Transport to nearest medical facility for additional treatment.

Skin: If skin contact occurs, remove contaminated clothing and wash skin thoroughly with water and follow by washing with soap if available. If redness, swelling, pain and/or blisters occur, transport to the nearest medical facility for treatment.

Inhaled: Keep victim calm and remove to fresh air if safe to do so. Obtain medical treatment immediately.

First Aid facilities: Potable water should be available to rinse eyes or skin. Provide eye baths and safety showers.

Advice to Doctor: Treat symptomatically.

Additional Information: None available.

Product: TOLUENE

SECTION 5 FIRE FIGHTING MEASURES

Suitable Extinguishing Media: Foam, water spray or fog. Dry chemical powder, carbon dioxide.
Do not use water in a jet.

Hazards from combustion products: Carbon monoxide may be evolved if incomplete combustion occurs. Will float and can be reignited on surface water. Vapour is heavier than air, can spread along ground and distant ignition is possible.

Precautions for Fire Fighters and Special Protective Equipment: Wear full protective clothing and self-contained breathing apparatus.

Additional Information: Hazchem code 3[Y]E

SECTION 6 ACCIDENTAL RELEASE MEASURES

Observe all local and national regulations

Spills and Disposal: Avoid contact with spilled or released material. Shut off leaks, if possible without personal risks. Remove all sources of ignition in the surrounding area. Use appropriate containment to avoid environmental contamination. Prevent from spreading and entering waterway using sand, earth or other appropriate barriers. Take precautionary measure against static discharge. Ensure electrical continuity by bonding and earthing all equipment.

Methods and Materials for Containment and Clean Up Procedures: For small spills (<1 drum), transfer by mechanical means to a labelled, sealable container for product recovery or safe disposal. Allow any residues to evaporate or use an appropriate absorbent material and dispose of safely.

For larger spills (> 1 drum), transfer by means such as a vacuum truck to a salvage tank for recovery or disposal. Do not flush residues with water. Retain as contaminated waste. Allow any residues to evaporate or use an appropriate absorbent material and dispose of safely.

SECTION 7 HANDLING AND STORAGE

Precautions for Safe Handling and Storage: Avoid breathing of or contact with material. Use in well ventilated areas. Wash thoroughly after handling. Avoid contact with skin and eyes and clothing. Handle open containers in well ventilated area. Ensure that the workplace is ventilated such that the Occupational Exposure limit is not exceeded. Avoid contact with skin, eyes, and clothing. Do not empty into drains.

Do not eat, drink or smoke in contaminated areas. Before eating, drinking or smoking, remove contaminated clothing and wash hands. Do not store near strong oxidants.

Dispensing: Electrostatic charges may be generated during transfer. Electrostatic discharge may cause fire. Ensure electrical continuity by earthing all equipment.

Flammability: Highly flammable

SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Standards: Worksafe Australia has set an exposure standard 191mg/m³ (50ppm) TWA (8hr), 574mg/m³ (150ppm) STEL

Biological Limit Values: No biological limit allocated

Personal Protective Equipment:

Respiratory Protection: If work practices do not maintain airborne level below the exposure standard, use appropriate respiratory protection equipment. When using respirators, select an appropriate combination of mask and filter and select a filter for organic gases and vapours (boiling point > 65 Deg C). Respirators should comply with AS1716 or an equivalent approved by a state/territory authority.

Hand Protection: Use solvent resistant gloves. Nitrile for longer term protection or PVC and neoprene for incidental splashes.

Eye Protection: Wear safety Goggles.

Protective Clothing: Use chemical resistant glove/gauntlets, boots and apron.

Engineering Controls: Ensure that adequate ventilation is provided. Maintain air concentrations below recommended exposure standards. Avoid generating and inhaling mists. Keep containers closed when not in use.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL DESCRIPTION / CHEMICAL PROPERTIES

Appearance

Colourless Liquid

Odour

Aromatic - odour threshold 1.74ppm

Product: TOLUENE

pH:	N/A
Vapour Pressure (mmHg @ 20°C):	Typical 3-3.5 kPa
Vapour Density (air = 1)	3.1
Boiling Point (°C):	110-111
Freezing/Melting Point (°C):	-95
Solubility in Water	0.515 kg/m ³
Specific Gravity (g/ml @ 15°C):	0.871
Flashpoint (°C):	4 (Abel)
Flammability Limits (%):	1.2 – 8
Auto Ignition Temperature (°C):	Typical 480-536
Percent Volatiles	100

SECTION 10 STABILITY AND REACTIVITY

Chemical Stability: Stable under normal conditions of use.

Conditions to Avoid: Avoid heat, sparks, open flames and other ignition sources.

Incompatible Materials: Strong oxidising agents.

Hazardous Decomposition Products: Thermal decomposition is highly dependant on conditions. A complex mixture of airborne solids, liquids, gases, including carbon monoxide, carbon dioxide and other organic compounds will be evolved when this material undergoes combustion or thermal or oxidative degradation.

SECTION 11 TOXICOLOGICAL INFORMATION

HEALTH EFFECTS

Acute:

Swallowed: Expected to be of low toxicity: LD₅₀>2000mg/kg, Rat. Aspiration into lungs when swallowed or vomited may cause chemical pneumonitis which can be fatal.

Eye: Irritating to eyes.

Skin: May cause moderate skin irritation (but insufficient to classify). Prolonged contact may cause defatting of skin which can lead to dermatitis.

Inhaled: Inhalation of vapours or mists may cause irritation to the respiratory system. High concentrations may cause central nervous system depression resulting in headaches, dizziness and nausea; continued inhalation may result in unconsciousness and/or death.

Chronic: Central nervous system: repeated exposure affects the nervous system. Effects seen at high doses only.
Respiratory system: repeated exposure affects the respiratory system. Effects seen at high doses only.

SECTION 12 ECOLOGICAL INFORMATION

Ecotoxicity:

Fish	: Toxic 1<LC/EC/IC50 <= 10mg/l
Aquatic Invertebrates	: Harmful: 10<LC/EC/IC50 <= 100mg/l
Algae	: Low toxicity: LC/EC/IC50 > 100mg/l

Mobility : Floats on water, highly mobile and may contaminate groundwater.

Persistence/degradability : Readily Biodegradable. Oxidises by photo-chemical reactions in air.

Bioaccumulation : Does not bioaccumulate significantly

SECTION 13 DISPOSAL CONSIDERATIONS

Disposal Methods: Ensure waste disposal conforms to local waste disposal regulations.

SECTION 14 TRANSPORT INFORMATION

UN Number:	1294	Proper Shipping Name:	TOLUENE
Class:	3	Subsidiary Risk:	None allocated
Packing Group:	II	Hazchem Code:	3[Y]E
Special Precautions for User:	None		

Product: TOLUENE

SECTION 15 REGULATORY INFORMATION

Poisons Schedule : 6

AICS : Listed

Dangerous Goods Initial Emergency Response Guide (SA HB76:2004) : 16

SECTION 16 OTHER INFORMATION

Further Information may be obtained by contacting Recochem on (07) 3308 5200

The information sourced for the preparation of this document was correct and complete at the time of writing to the best of the writer's knowledge. The document represents the commitment to the company's responsibilities surrounding the supply of this product, undertaken in good faith. This document should be taken as a safety guide for the product and its recommended uses but is in no way an absolute authority. Please consult the relevant legislation and regulations governing the use and storage of this type of product.
