

**FOR FURTHER INFORMATION, PLEASE REFER TO THE SDS**

Issue: November 2016

**PRODUCT:** Toluene  
**Other Names:** Methyl Benzol  
**Uses:** Industrial solvent

<b>UN No.</b>	1294
<b>Dangerous Goods Class</b>	3
<b>Subsidiary Risk</b>	None
<b>Pack Group</b>	II
<b>Hazchem</b>	3YE
<b>Poison Schedule</b>	6

<b>Hazardous Nature:</b>	This product is classified as hazardous under GHS for Australia criteria
<b>Hazardous Classification:</b>	Flammable Liquids: 2; Acute Toxicity - Oral: 3; Serious Eye Damage/Irritation: 2A; Specific Target Organ Toxicity (Central Nervous System): 3; Acute Aquatic Toxicant: 3
<b>Hazardous Statement:</b>	Highly Flammable liquid and vapour
<b>Exposure Standards:</b>	TWA: 191 mg/m <sup>3</sup> (50 ppm); STEL: 574 mg/m <sup>3</sup> (150 ppm)

**Physical Characteristics (Typical) Section 9 of SDS**

Appearance	Clear, colourless liquid
Boiling Point/ Range (°C):	110
Flash Point (°C):	4
Specific Gravity/ Density (g/ml @ 15°C):	0.871
Chemical Stability:	Stable at room temperature and pressure

**Product Ingredients Section 3 of SDS**

Toluene	108-88-3	100
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For further ingredients information, please refer to the full SDS.

**GHS Pictograms Section 2 of SDS**



For further Risk and Safety information, please refer to the full SDS.

**DEFINITIONS**

Dangerous Goods	Products that are classified as Dangerous for Storage and Transport: these products are allocated a UN No., with accompanying Class, Pack Group, and Sub. Risk, if required. Products that do not have a specific description under the code, but have low flash points, or such, must be classified under their most significant risk, eg. Flammable Goods N.O.S. (Not otherwise specified), UN 1993
Poisonous Substance	Products that are classified under the poisons schedule are a poisonous substance. The proportion of the poison in the product will determine its numerical classification.
Hazardous Substance	Products are considered to be Hazardous if they pose an intrinsic risk to human or environmental health, such as mutagens (able to change DNA), teratogens (able to result in birth defects), carcinogens (able to generate cell abnormalities), etc. Materials are not hazardous substances if they pose risks such as potential for misuse, like flammability, or explosions when heated and ignited.

**1. IDENTIFICATION**

<b>Product Name:</b>	<b>Toluene</b>
<b>Other Names:</b>	Dimethyl Benzene, Xylenes (Mixed Isomers)
<b>Chemical Family:</b>	Aromatic Solvent
<b>Recommended Use:</b>	Industrial solvent, coatings ingredient, thinner component
<b>Supplier:</b>	Sydney Solvents Pty. Ltd.
<b>ABN:</b>	51 104 642 695
<b>Street Address:</b>	3/10 Production Place, Jamisontown NSW 2750
<b>Telephone:</b>	02 4722 5060
<b>Fax:</b>	02 4722 5070
<b>Emergency phone:</b>	<b>CHEMCALL: 1800 127 406</b>
<b>All other inquiries:</b>	1800 60 50 40

**2. HAZARDS IDENTIFICATION****Hazardous Nature**

This product is classified as hazardous under GHS for Australia criteria

**Hazardous Classification**

Flammable Liquids: 2; Acute Toxicity - Oral: 3; Serious Eye Damage/Irritation: 2A; Specific Target Organ Toxicity (Central Nervous System): 3; Acute Aquatic Toxicant: 3

**Hazardous Statement**

Highly Flammable liquid and vapour

**GHS Pictograms**

Flame



Silhouette/star



Exclamation Mark



Dead fish/tree

**Hazard Statements**

H225: Highly flammable liquid and vapour

H372: Causes damage to organs through prolonged or repeated exposure

H332: Harmful if inhaled

H315: Causes skin irritation

H360: May damage fertility or the unborn child

H305: May be harmful if swallowed and enters airways

AUH066: Repeated exposure may cause skin dryness or cracking

H336: May cause drowsiness or dizziness

H411: Toxic to aquatic life with long lasting effects

**Precautionary Statements**

P102: Keep out of reach of children.

P210: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. [As modified by IV ATP]

P260: Do not breathe dust/fume/gas/mist/vapours/spray.

P262: Do not get in eyes, on skin, or on clothing.

P273: Avoid release to the environment.

P243: Take precautionary measures against static discharge.

P280: Wear protective gloves/protective clothing/eye protection/face protection. [As modified by IV ATP]

P301+330+331: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P311: Call a POISON CENTER/ doctor/... [As modified by IV ATP]

**Dangerous Goods Classification 3**

**Poisons Schedule 6**

### 3. COMPOSITION: Information on Ingredients

Chemical Ingredient	CAS No.	Proportion (%v/v)
Toluene	108-88-3	100

### 4. FIRST AID MEASURES

For advice, contact Poisons Information Centre (Phone Australia: 13 1126) or a doctor.

#### Ingestion

If swallowed, DO NOT induce vomiting. Keep at rest. Seek immediate medical attention.

#### Eye Contact

Flush eyes with large amounts of water until irritation subsides. Seek immediate medical attention.

#### Skin Contact

Flush area with large amounts of water and wash area with soap if available. Remove contaminated clothing, including shoes, and launder before reuse. Seek medical attention for skin irritations.

#### Inhalation

Using proper respiratory protection, immediately remove the affected victim from exposure. Administer artificial respiration if breathing is stopped. Keep at rest. Seek immediate medical attention.

#### First Aid facilities

Provide eye baths and safety showers.

#### Medical Attention

Treat according to symptoms. Avoid gastric lavage: risk of aspiration of product to the lungs with the potential to cause chemical pneumonitis.

### 5. FIRE FIGHTING MEASURES

Shut off product that may 'fuel' a fire if safe to do so. Allow trained personnel to attend a fire in progress, providing firefighters with this Safety Data Sheet. Prevent extinguishing media from escaping to drains and waterways.

#### Suitable extinguishing media

Dry chemical or foam. Do not use water jet

#### Hazards from combustion products

A complex mixture of airborne solids, liquids and gases, including carbon monoxide, carbon dioxide and other organic compounds will evolve.

#### Precautions for fire fighters and special protective equipment

Full protective clothing and self-contained breathing apparatus

**Hazchem Code:** 3YE

### 6. ACCIDENTAL RELEASE MEASURES

#### Emergency Procedures

Prevent fluid from escaping to drains and waterways. Contain leaking packaging in a containment drum. Prevent vapours from building up in confined areas. Ensure that drain valves are closed at all times. Clean up and report spills immediately.

#### Methods and materials for containment

##### **Major Land Spill**

- Eliminate sources of ignition.

- Warn occupants of downwind areas of possible fire and explosion hazard.
- Prevent liquid from entering sewers, watercourses, or low-lying areas.
- Keep the public away from the area.
- Shut off the source of the spill if possible and safe to do so.
- Advise authorities if substance has entered a watercourse or sewer or has contaminated soil or vegetation.
- Take measures to minimise the effect on the ground water.
- Contain the spilled liquid with sand or earth.
- Recover by pumping – use explosion proof pump or hand pump – or with a suitable absorbent material.
- Consult an expert on disposal of recovered material and ensure conformity to local disposal regulations.
- See “First Aid Measures” and “Stability and Reactivity”

**Major Water Spill**

- Eliminate any sources of ignition.
- Warn occupants and shipping in downwind areas of possible fire and explosion hazard.
- Notify the port or relevant authority and keep the public away from the area.
- Shut off the source of the spill if possible and safe to do so.
- Confine the spill if possible.
- Remove the product from the surface by skimming or with suitable absorbent material.
- Consult an expert on disposal of recovered material and ensure conformity to local disposal regulations.
- See “First Aid Measures” and “Stability and Reactivity”.

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

This product is flammable. Do not open near open flame, sources of heat or ignition. No smoking. Keep container closed. Handle containers with care. Open slowly to control possible pressure release. Material will accumulate static charge. Use grounding leads to avoid discharge (electrical spark).

**Conditions for safe storage**

Store in a cool, dry place away from direct sunlight. Do not pressurise, cut, heat or weld containers - residual vapours are flammable. This product is flammable and will fuel a fire in progress.

**Incompatible materials**

Natural Rubber, Butyl Rubber, EPDM, Polystyrene

**8. EXPOSURE CONTROLS: PERSONAL PROTECTION****National Exposure Standards**

The time weighted average concentration (TWA) for this product is: 191 mg/m<sup>3</sup> (50 ppm), which means the highest allowable exposure concentration in an eight-hour day for a five-day working week. The short-term exposure limit (STEL) is: 574 mg/m<sup>3</sup> (150 ppm), which is the maximum allowable exposure concentration at any time.

**Biological limit values**

BEI: Biological Exposure Index - 0.5 mg/l o-Cresol in urine at end of shift.

**Engineering Controls: Ventilation**

The use of local exhaust ventilation is recommended to control process emissions near the source. Laboratory samples should be handled in a fume hood. Provide mechanical ventilation of confined spaces. Use explosion-proof ventilation equipment.

**Personal Protective Equipment**

**Respiratory Protection:** Where concentrations in air may exceed the limits described in the National Exposure Standards, it is recommended to use a half-face filter mask to protect from overexposure by inhalation. A type “A” filter material is considered suitable for this product.

**Eye Protection:** Always use safety glasses or a face shield when handling this product.

**Skin/ Body Protection:** Always wear long sleeves and long trousers or coveralls, and enclosed footwear or safety boots when handling this product. It is recommended that chemical resistant gloves (e.g. PVC) be worn when handling this product.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

Property	Unit of measurement	Typical value
Appearance	-	Clear, colourless liquid
Boiling Point/ Range	°C	110
Flash Point	°C	4
Density @ 15°C	g/ml	0.871
Vapour Pressure @ 20°C	kPa	3.5
Explosive Limits (LEL – UEL)	%	1.2 – 8.0
Vapour Density @ 20°C	kPa	3.1
Autoignition Temperature	°C	480 - 536
Viscosity @ 20°C	cSt	Not applicable
Percent Volatiles	%	100
Solubility with Water	% w/w	0.515 kg/m3

The values listed are indicative of this product's physical and chemical properties. For a full product specification, please consult the Product Data Sheet.

**10. STABILITY AND REACTIVITY****Chemical Stability**

Stable at room temperature and pressure

**Conditions to avoid**

Sources of heat and ignition, open flames.

**Hazardous decomposition products**

Carbon monoxide, carbon dioxide and other organic complexes on incomplete burning or oxidation.

**Hazardous reactions**

Oxidizing agents, mineral acids, halogenated organic compounds and peroxides. Combination with Ethanol will result in potentiated (greatly increased) health effects similar to those in ingestion and inhalation.

**Hazardous Polymerisation**

Will not occur

**11. TOXICOLOGICAL INFORMATION****Acute Effects*****Ingestion***

This material will cause irritation to the throat and tube to the stomach and may cause nausea. Vomiting may cause the product to be aspirated to the lungs possibly resulting in chemical pneumonitis.

***Eye Contact***

Eye contact with this product will cause redness and swelling with a burning sensation and blurred vision.

***Skin Contact***

Harmful in contact with skin. Symptoms include burning sensation, redness, swelling and possible blistering

***Inhalation***

Harmful by inhalation. Vapours will cause dizziness and drowsiness. There is the possibility of organ damage over prolonged use or exposure. Central Nervous System depression includes nausea, headaches, dizziness, and possibly loss of consciousness, coma and even death.

**Chronic Effects**

Repeated over exposure may cause hemolysis of the red blood cells leading to possible liver and kidney damage. Any existing dermatitis may be exacerbated by exposure to this product. Prolonged contact with this product will result in irritant contact dermatitis if care is not taken to wash affected areas. This product is regarded as a category 3 carcinogen which indicates that there have been reports of tumors in animal testing, but that there is no direct evidence of these effects in humans.

**Other Health Effects Information**

Persons with pre-existing liver, kidney, central nervous system or skin complaints should avoid unnecessary exposure to this product. Every effort to protect eyes, respiratory tract and skin exposure should be taken in these circumstances.

**Toxicological Information**

Oral LD<sub>50</sub>: Oral (rat): 636 mg/kg

Dermal TC<sub>Lo</sub>: Skin (rabbit) LD50: 14100 µL/kg

**12. ECOLOGICAL INFORMATION****Ecotoxicity****Aquatic Toxicity**

Fish Toxicity (rainbow trout, goldfish, bluegill): LC<sub>50</sub>(96hr): Rainbow Trout EC50: 7250 µg/L

Daphnia Magna EC<sub>50</sub> (24 hr): EC50: 6000 µg/L

Blue-green algae (Toxicity threshold 7-8 days): No data available

Green algae (Toxicity threshold 7-8 days): EC50: 400000 µg/L

**Persistence/ degradability**

Log P: 2.73 - volatilises in air.

**Mobility**

Floats on water. If product enters soil, it will be highly mobile and may contaminate groundwater.

**13. DISPOSAL CONSIDERATIONS****Disposal Methods**

Empty packaging should be taken for recycling, recovery or disposal through a suitably qualified or licensed contractor. Care should be taken to ensure compliance with national and local authorities. Packaging may still contain fumes and vapours that are flammable and harmful. Ensure that empty packaging is allowed to dry.

**Special Precautions for Landfill or Incineration**

This product is NOT suitable for disposal by either landfill or via municipal sewers, drains, natural streams or rivers. This product is ashless and can be burned directly in appropriate equipment.

**14. TRANSPORT INFORMATION**

Road and Rail Transport		Marine Transport		Air Transport	
UN No.	1294	UN No.	1294	UN No.	1294
Proper Shipping Name	Toluene	Proper Shipping Name	Toluene	Proper Shipping Name	Toluene
DG Class	3	DG Class	3	DG Class	3
Sub. Risk	None	Sub. Risk	None	Sub. Risk	None
Pack Group	II	Pack Group	II	Pack Group	II
Hazchem	3YE	Hazchem	3YE	Hazchem	3YE

**Dangerous Goods Segregation**

This product is classed as Dangerous Goods Class 3, packing group II. Please consult the Australian Dangerous Goods Code for Transport by Road and Rail for information.

**15. REGULATORY INFORMATION**

Country/ Region: Australia

Inventory: AICS

Status: Listed

Poisons Schedule: 6

**16. OTHER INFORMATION**

Reasons for Issue: Upgraded regulatory information and toxicity data. Amalgamated changes in all sections.

**Abbreviations:**

AICS: Australian Inventory of Chemical Substances

CAS Number: Chemical Abstracts Number

IARC: International Agency for Research on Cancer

NOHSC: National Occupational Health and Safety Council

**References:**

- Supplier Safety Data Sheets
- <http://chem.sis.nlm.nih.gov/chemidplus> (October 15)
- <http://hsis.ascc.gov.au/SearchHS.aspx> (October 15)
- Ecotoxicology data: [http://cfpub.epa.gov/ecotox/quick\\_query.htm](http://cfpub.epa.gov/ecotox/quick_query.htm) (October 15)
- Sax's Dangerous Properties of Industrial Materials, Richard J. Lewis Snr., pub. Canada (2000)

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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. For further information, please contact Sydney Solvents Pty. Ltd.