



1. Identification of the material and supplier

Product name	BP Toluene
SDS no.	0000003660
Historic SDS no.	YSTUB
Product use	Solvent. For specific application advice see appropriate Technical Data Sheet or consult our company representative.
Supplier	BP Australia Pty Ltd (ABN 53 004 085 616) 717 Bourke Street Docklands VIC 3008 Australia Tel: +61 (03) 9268 4111 Fax: +61 (03) 9268 3321
EMERGENCY TELEPHONE NUMBER	1800 638 556
Product code	0000003660

2. Hazards identification

Statement of hazardous/dangerous nature	HAZARDOUS SUBSTANCE. DANGEROUS GOODS.
Risk phrases	R11- Highly flammable. R63- Possible risk of harm to the unborn child. R48/20- Harmful: danger of serious damage to health by prolonged exposure through inhalation. R65- Harmful: may cause lung damage if swallowed. R38- Irritating to skin. R67- Vapours may cause drowsiness and dizziness.
Safety phrases	S2- Keep out of the reach of children. S16- Keep away from sources of ignition - No smoking. S33- Take precautionary measures against static discharges. S36/37- Wear suitable protective clothing and gloves. S46- If swallowed, seek medical advice immediately and show this container or label.

3. Composition/information on ingredients

Ingredient name	CAS no.	%
Toluene	108-88-3	100

Other ingredients, determined not to be hazardous according to Safe Work Australia criteria, and not dangerous according to the ADG Code, make up the product concentration to 100%.

4. First-aid measures

Eye contact	In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Eyelids should be held away from the eyeball to ensure thorough rinsing. Check for and remove any contact lenses. Get medical attention if irritation occurs.
Skin contact	In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Drench contaminated clothing with water before removing. This is necessary to avoid the risk of sparks from static electricity that could ignite contaminated clothing. Contaminated clothing is a fire hazard. Contaminated leather, particularly footwear, must be discarded. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention immediately.
Inhalation	If inhaled, remove to fresh air. Get medical attention immediately. If exposure to vapour, mists or fumes causes drowsiness, headache, blurred vision or irritation of the eyes, nose or throat, remove immediately to fresh air. Keep patient warm and at rest. If any symptoms persist obtain medical advice. Unconscious casualties must be placed in the recovery position. Monitor breathing and pulse rate and if breathing has failed, or is deemed inadequate, respiration must be assisted, preferably by the mouth to mouth method. Administer external cardiac massage if necessary. Seek medical attention immediately.

Ingestion	If swallowed, do not induce vomiting. Never give anything by mouth to an unconscious person. Aspiration hazard if swallowed. Can enter lungs and cause damage. Get medical attention.
Advice to doctor	Treatment should in general be symptomatic and directed to relieving any effects. Product can be aspirated on swallowing or following regurgitation of stomach contents, and can cause severe and potentially fatal chemical pneumonitis, which will require urgent treatment. Because of the risk of aspiration, induction of vomiting and gastric lavage should be avoided. Gastric lavage should be undertaken only after endotracheal intubation. Monitor for cardiac dysrhythmias.

5. Fire-fighting measures

Extinguishing media	
Suitable	In case of fire, use water fog, foam, dry chemical or carbon dioxide extinguisher or spray.
Not suitable	Do not use water jet.
Hazardous decomposition products	Decomposition products may include the following materials: carbon dioxide carbon monoxide
Unusual fire/explosion hazards	Highly flammable liquid and vapour. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Vapours can form explosive mixtures with air. Vapours are heavier than air and can spread along the ground or float on water surfaces to remote ignition sources. Vapours may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back. Runoff to sewer may create fire or explosion hazard.
Special fire-fighting procedures	DO NOT FIGHT FIRE WHEN IT REACHES MATERIAL. Withdraw from fire and let it burn. Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. First move people out of line-of-sight of the scene and away from windows.
Protection of fire-fighters	Fire-fighters should wear positive pressure self-contained breathing apparatus (SCBA) and full turnout gear.
Hazchem code	3YE

6. Accidental release measures

Personal precautions	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see Section 8).
Environmental precautions	Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
Large spill	Eliminate all ignition sources. Stop leak if without risk. Move containers from spill area. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see section 13). Use spark-proof tools and explosion-proof equipment. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilt product. Note: see section 1 for emergency contact information and section 13 for waste disposal.
Small spill	Eliminate all ignition sources. Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Use spark-proof tools and explosion-proof equipment. Dispose of via a licensed waste disposal contractor.

7. Handling and storage

Handling	Aspiration hazard if swallowed. Can enter lungs and cause damage. Do not ingest. If ingested, do not induce vomiting. Avoid contact with skin and clothing. Use only with adequate ventilation. Avoid breathing vapour or mist. Do not breathe vapour or mist. Keep away from heat, sparks and flame. To avoid fire or explosion, dissipate static electricity during transfer by earthing and bonding containers and equipment before transferring material. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Eating, drinking and smoking should be prohibited in area where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Wash thoroughly after handling.
Storage	Store in a segregated and approved area. Keep container in a cool, well-ventilated area. Keep container tightly closed and sealed until ready for use. Avoid all possible sources of ignition (spark or flame). Store and use only in equipment/containers designed for use with this product. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Keep away from heat and direct sunlight.
Additional information- Storage	This product must be handled in compliance with Australian Standard: The storage and handling of flammable and combustible liquids [Standard 1940-2004 as amended and adapted]. Light hydrocarbon vapours can build up in the headspace of tanks. These can cause flammability/explosion hazards even at temperatures below the normal flash point (note: flash point must not be regarded as a reliable indicator of the potential flammability of vapour in tank headspaces). Tank headspaces should always be regarded as potentially flammable and care should be taken to avoid static electrical discharge and all ignition sources during filling, ullaging and sampling from storage tanks. Do not enter storage tanks. If entry to vessels is necessary, follow permit

to work procedures. Entry to any tanks or other confined space requires a full risk assessment and appropriate control measures to be put in place in conformance with appropriate regulations and industry practice on confined space entry.

When the product is pumped (e.g. during filling, discharge or ullaging) and when sampling, there is a risk of static discharge. Ensure equipment used is properly earthed or bonded to the tank structure. Electrical equipment should not be used unless it is intrinsically safe (i.e. will not produce sparks). Explosive air/vapour mixtures may form at ambient temperature. If product comes into contact with hot surfaces, or leaks occur from pressurised fuel pipes, the vapour or mists generated will create a flammability or explosion hazard. Product contaminated rags, paper or material used to absorb spillages, represent a fire hazard, and should not be allowed to accumulate. Dispose of safely immediately after use.

Empty containers represent a fire hazard as they may contain flammable product residues and vapour. Never weld, solder or braze containers unless they are cleaned and do not contain flammable vapours and residues.

8 . Exposure controls/personal protection

Ingredient name

Toluene

Occupational exposure limits

Safe Work Australia (Australia). Absorbed through skin.

STEL: 574 mg/m³ 15 minute(s). Issued/Revised: 8/2005

STEL: 150 ppm 15 minute(s). Issued/Revised: 8/2005

TWA: 191 mg/m³ 8 hour(s). Issued/Revised: 8/2005

TWA: 50 ppm 8 hour(s). Issued/Revised: 8/2005

Whilst specific OELs for certain components are included in this SDS, it should be noted that other components of the preparation will be present in any mist, vapour or dust produced. For this reason, the specific OELs may not be applicable to the product and are provided for guidance purposes.

Biological Limit Values

o-Cresol in urine - End of shift: 0.3 mg/L (ACGIH)

Toluene in blood - Prior to last shift of workweek: 0.02 mg/L (ACGIH)

Exposure controls

Occupational exposure controls

Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapours below their respective occupational exposure limits.

Hygiene measures

Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period.

Personal protective equipment

Respiratory protection

Use with adequate ventilation. Do not breathe vapour or mist.

Select and use respirators in accordance with AS/NZS 1715/1716. When mists or vapours exceed the exposure standards then the use of the following is recommended: Approved respirator with organic vapour and dust/mist filters. Filter capacity and respirator type depends on exposure level.

Skin and body

Avoid contact with skin and clothing. Wear clothing and footwear that cannot be penetrated by chemicals or oil.

Hand protection

Wear gloves that cannot be penetrated by chemicals or oil.

Recommended: Gloves made from fluoroelastomer resistant to hydrocarbons and a wide range of chemicals.

The correct choice of protective gloves depends upon the chemicals being handled, the conditions of work and use, and the condition of the gloves (even the best chemically resistant glove will break down after repeated chemical exposures). Most gloves provide only a short time of protection before they must be discarded and replaced. Because specific work environments and material handling practices vary, safety procedures should be developed for each intended application. Gloves should therefore be chosen in consultation with the supplier/manufacturer and with a full assessment of the working conditions.

Eye protection

Safety glasses with side shields.

9 . Physical and chemical properties

Physical state

Liquid.

Colour

Colourless.

Odour

Aromatic hydrocarbon.

Flash point

4 °C (Closed cup)

Auto-ignition temperature

>480°C (>896°F)

Explosion limits

Lower: 1.3%

Upper: 7%

Vapour pressure

3.089 kPa (23.227 mm Hg) at 21.1°C

Vapour density

3.1 [Air = 1]

Evaporation rate

2 (butyl acetate = 1)

Critical temperature

318.7°C (605.7°F)

Viscosity

Dynamic: 0.001 Pa·s (0.56 cP) at 25°C

Kinematic: <7 mm²/s (<7 cSt) at 40°C

pH

Not available.

Boiling point / range

110°C (230°F)

Melting point / range

-95°C (-139°F)

Relative density/Specific gravity	Not available.
Density	870 kg/m ³ (0.87 g/cm ³) at 15°C
Solubility	Very slightly soluble in water
Solubility at room temperature (g/l)	0.573 to 0.587 g/l
Partition coefficient (LogKow)	2.73

10 . Stability and reactivity

Stability	The product is stable.
Conditions to avoid	Avoid extreme temperatures, strong oxidizers, fire.
Incompatibility with various substances/Hazardous Reactions	Reactive or incompatible with the following materials: oxidising materials and acids.
Hazardous decomposition products	Decomposition products may include the following materials: carbon dioxide carbon monoxide

11 . Toxicological information

Eyes	No significant health hazards identified.
Skin	Causes skin irritation. Contains material which may cause birth defects based on animal data.
Inhalation	Harmful if inhaled. Contains material which may cause birth defects based on animal data.
Ingestion	Aspiration hazard if swallowed -- harmful or fatal if liquid is aspirated into lungs.
Acute toxicity	Unlikely to cause more than transient stinging or redness if accidental eye contact occurs. Vapour, mist or fume may cause eye irritation. Exposure to vapour, mist or fume may cause stinging, redness and watering of the eyes. Likely to result in chemical burns following prolonged wetting of the skin. (eg. after a road traffic accident). May be harmful by inhalation if exposure to vapour, mists or fumes resulting from thermal decomposition products occurs. Vapour, mist or fume may irritate the nose, mouth and respiratory tract. Inhalation of vapour, mist or fume may cause a sore throat, coughing and shortness of breath. Solvent "sniffing" (abuse) or intentional overexposure to vapours can produce serious central nervous system effects, including unconsciousness, and possibly death. If swallowed, may irritate the mouth, throat and digestive system. If swallowed, may cause abdominal pain, stomach cramps, nausea, vomiting, diarrhoea, dizziness and drowsiness.
Chronic toxicity	
Carcinogenic effects	No component of this product at levels greater than or equal to 0.1% is identified as a carcinogen by ACGIH, the International Agency for Research on Cancer (IARC), the European Commission (EC), or the National Occupational Health and Safety Commission (Australia).
Mutagenic effects	No known significant effects or critical hazards.
Other information	Toluene: Aspiration of this material into the lungs can cause chemical pneumonia and can be fatal. Aspiration into the lungs can occur while vomiting after ingestion of this material. Deliberate inhalation of high concentrations of toluene has been linked to damage of the brain, liver and kidney. Inhalation of very high concentrations of toluene, such as in cases of solvent abuse, has resulted in sudden death which may be a result of cardiac arrhythmia or central nervous system depression. Mental and/or growth retardation has been reported in children of women who deliberately inhale toluene during pregnancy (usually at thousands of ppm). Foetal developmental toxicity was observed when pregnant rats were exposed to toluene at levels of 1500 ppm. Maternal toxicity was also observed at this concentration. Prolonged, high level exposure to toluene in laboratory animals has resulted in hearing loss. Exposure studies in rats have resulted in adverse effects on the kidney, liver and central nervous system. Studies in occupationally exposed individuals indicate that toluene exposure has been associated with impaired colour vision and decreased performance in some neurobehavioural tests. There are occupational studies which report an association between inhalation exposure to toluene and adverse effects on reproduction including spontaneous abortion. The methodology of these studies and the reliability of the results have been questioned. In a two-generation study in rats, inhalation of toluene at levels up to 2000 ppm did not produce adverse effects on fertility or reproductive performance.

12 . Ecological information

Ecotoxicity	Not classified as environmentally hazardous in accordance with the 'Approved Criteria for Classifying Hazardous Substances' [NOHSC (1008)/2004 as amended and adapted].
Biodegradability	
Persistence/degradability	Readily biodegradable
Mobility	Spillages may penetrate the soil causing ground water contamination. This product is likely to volatilise rapidly into the air because of its high vapour pressure.
Bioaccumulative potential	This product is not expected to bioaccumulate through food chains in the environment.
Other ecological information	Spills may form a film on water surfaces causing physical damage to organisms. Oxygen transfer could also be impaired.




13 . Disposal considerations

Disposal considerations / Waste information	The generation of waste should be avoided or minimised wherever possible. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe way. Significant quantities of waste product residues should not be disposed of via the foul sewer but processed in a suitable effluent treatment plant. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.
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Special Precautions for Landfill or Incineration	No additional special precautions identified.
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14 . Transport information

International transport regulations

Regulatory information	UN number	Proper shipping name	Class	PG*	Label	Additional information
ADG Classification	UN 1294	TOLUENE	3	II		Hazchem code 3YE Initial emergency response guide 16
IMDG Classification	UN 1294	Toluene	3	II		Emergency schedules (EmS) F-E, S-D
IATA/ICAO Classification	UN 1294	Toluene	3	II		-

PG* : Packing group

Special precautions for user	No known special precautions required. See Section: "Handling and storage" for additional information.
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15 . Regulatory information

Standard for the Uniform Scheduling of Drugs and Poisons

6

Control of Scheduled Carcinogenic Substances

Ingredient name

No Listed Substance

Schedule

Australia Regulations

Labelling requirements for SUSDP do not apply to a poison that is packed and sold solely for industrial, laboratory or manufacturing use. However, this product is labelled in accordance with NOSH National Code of Practice for labelling of workplace substances.

Other regulations

REACH Status

For the REACH status of this product please consult your company contact, as identified in Section 1.

United States inventory (TSCA 8b)

All components are listed or exempted.

Australia inventory (AICS)

All components are listed or exempted.

Canada inventory

All components are listed or exempted.

China inventory (IECSC)

All components are listed or exempted.

Japan inventory (ENCS)

All components are listed or exempted.

Korea inventory (KECI)

All components are listed or exempted.

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Product code 0000003660

Page: 5/6

Version 1 **Date of issue** 25 March 2011

Format Australia
(Australia)

Language ENGLISH
(ENGLISH)

16 . Other information

Key to abbreviations

AMP = Acceptable Maximum Peak
ACGIH = American Conference of Governmental Industrial Hygienists, an agency that promulgates exposure standards.
ADG = Australian Code for the Transport of Dangerous Goods by Road and Rail
ADG Code = Australian Code for the Transport of Dangerous Goods by Road and Rail
CAS Number = Chemical Abstracts Service Registry Number
HAZCHEM Code = Emergency action code of numbers and letters which gives information to emergency services. Its use is required by the ADG Code for Dangerous Goods in bulk.
ICAO = International Civil Aviation Organization.
IATA = International Air Transport Association, the organization promulgating rules governing shipment of goods by air.
IMDG = International Maritime Organization Rules, rules governing shipment of goods by water.
IP 346 = A chemical screening assay for dermal toxicity. The European Commission has recommended that Method IP 346 be used as the basis for labelling certain lubricant oil base stocks for carcinogenicity. The EU Commission has stipulated that the classification as a carcinogen need not apply if it can be shown that the substance contains less than 3% DMSO extract as measured by IP 346. (See Note L, European Commission Directive 67/548/EEC as amended and adapted.) DMSO is a solvent.
NOHSC = National Occupational Health & Safety Commission, Australia
TWA = Time weighted average
STEL = Short term exposure limit
UN Number = United Nations Number, a four digit number assigned by the United Nations Committee of Experts on the Transport of Dangerous Goods.

History

Date of issue 25/03/2011.
Date of previous issue No previous validation.
Prepared by LIVE Rafal Kozlowski Author (04Feb2011)

Notice to reader

All reasonably practicable steps have been taken to ensure this data sheet and the health, safety and environmental information contained in it is accurate as of the date specified below. No warranty or representation, express or implied is made as to the accuracy or completeness of the data and information in this data sheet.

The data and advice given apply when the product is sold for the stated application or applications. You should not use the product other than for the stated application or applications without seeking advice from us.

It is the user's obligation to evaluate and use this product safely and to comply with all applicable laws and regulations. The BP Group shall not be responsible for any damage or injury resulting from use, other than the stated product use of the material, from any failure to adhere to recommendations, or from any hazards inherent in the nature of the material. Purchasers of the product for supply to a third party for use at work, have a duty to take all necessary steps to ensure that any person handling or using the product is provided with the information in this sheet. Employers have a duty to tell employees and others who may be affected of any hazards described in this sheet and of any precautions that should be taken.