

Samuel Banner & Co. Ltd.

SAFETY DATA SHEET

TOLUENE

1 IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY

PRODUCT NAME: TOLUENE
PART No.: 0081
APPLICATIONS: Solvent
SUPPLIER: SAMUEL BANNER & Co Ltd ,
 HAMPTON COURT
 TUDOR ROAD, MANOR PARK
 RUNCORN WA7 1TU
TEL: 01928-597000
FAX: 01928-597001
EMERGENCY TELEPHONE(S): 0207 405 5375 (24 HOUR)

2 COMPOSITION/INFORMATION ON INGREDIENTS

INGREDIENT NAME	EINECS No.	CAS No.	CONTENTS	SYMBOL	RISK (R No.)
TOLUENE	203-625-9	108-88-3	99-100 %	F, Xn	11, 38, 48/20, 63, 65, 67

The full text for all R-phrases are shown in section 16

EU INDEX No.: 601-021-00-3
FORMULA: C7-H8
CAS No: 108-88-3

3 HAZARDS IDENTIFICATION

Highly flammable
 Irritating to skin
 Harmful: danger of serious damage to health by prolonged exposure through inhalation
 Possible risk of harm to the unborn child.
 Harmful: may cause lung damage if swallowed.
 Vapours may cause drowsiness and dizziness.

4 FIRST AID MEASURES

GENERAL: Consult a physician for specific advice
INHALATION: Move the exposed person to fresh air at once Keep the affected person warm and at rest Get prompt medical attention.
INGESTION: DO NOT induce vomiting Get medical attention immediately Rinse mouth thoroughly Give water to drink

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SKIN: Remove affected person from source of contamination. Promptly wash contaminated skin with soap or mild detergent and water. Promptly remove clothing if soaked through and wash as above. Get medical attention immediately.

EYES: Promptly wash eyes with plenty of water while lifting the eye lids. Continue to rinse for at least 15 minutes and get medical attention.

5 FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA: Foam, Carbon dioxide (CO₂), Dry chemicals, sand, dolomite etc

SPECIAL FIRE FIGHTING PROCEDURES: Keep run-off water out of sewers and water sources. Dike for water control. Cool containers exposed to flames with water until well after the fire is out. If risk of water pollution occurs, notify appropriate authorities.

UNUSUAL FIRE & EXPLOSION HAZARDS: May travel considerable distance to source of ignition and flash back. May develop highly toxic or corrosive fumes if heated. May explode when heated or when exposed to flames or sparks. Vapour explosion and poison hazard indoors, outdoors and in sewers.

PROTECTIVE MEASURES IN FIRE: Wear suitable respiratory protection when dealing with a fire.

6 ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS DURING SPILL: Wear appropriate protective clothing and respiratory protection. Avoid breathing vapour. Ensure good ventilation.

PRECAUTIONS TO PROTECT ENVIRONMENT: Do not let the product or washing down water enter natural water courses or the sewers.

SPILL CLEANUP METHODS: Clean-up personnel should use respiratory and/or liquid contact protection. Extinguish all ignition sources. Avoid sparks, flames, heat and smoking. Ventilate. Collect with absorbent, non-combustible material into suitable containers. Cover with foam. Contain spillage - Do not wash spillage down drain. If it has entered drains, inform authorities (Fire Service).

7 HANDLING AND STORAGE

USAGE PRECAUTIONS: Keep away from heat, sparks and open flame. Avoid spilling, skin and eye contact. Ventilate well, avoid breathing vapours. Use approved respirator if air contamination is above accepted level. Wear full protective clothing for prolonged exposure and/or high concentrations. Follow the principles of good occupational hygiene to control personal exposures.

USAGE DESCRIPTION: Storage tanks must be positioned within bunded area. Use only containers, pipes, joints and seals that are resistant to hydrocarbons.

STORAGE PRECAUTIONS: Flammable/combustible - Keep away from oxidizers, heat and flames. May attack some plastics, rubber and coatings. Keep in cool, dry, ventilated storage and closed containers. Ground container and transfer equipment to eliminate static electric sparks.

STORAGE CRITERIA: Flammable liquid storage.

8 EXPOSURE CONTROLS AND PERSONAL PROTECTION

INGREDIENT NAME	CAS No	STD	LT EXP (8 hrs)	ST EXP (15 min)
TOLUENE	108-88-3	OES	50 ppm(Sk)	150 ppm(Sk)

PROTECTIVE EQUIPMENT:



PROCESS CONTROL MEASURES: Use engineering controls to reduce air contamination to permissible exposure level. Provide eyewash, quick drench. Wash all splashes from the skin immediately.

VENTILATION: Provide adequate general and local exhaust ventilation.

RESPIRATORS: In case of insufficient ventilation, wear suitable respiratory equipment. Respirator type: organic vapour.

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PROTECTIVE GLOVES:	Use suitable protective gloves if risk of skin contact. Ensure gloves are manufactured/tested in accordance with BS EN 374. Determined penetration times carried out in accordance with EN 374 part III are not performed under practical conditions. Therefore a maximum wearing time corresponding to 50% of the penetration time is recommended.
EYE PROTECTION:	Wear approved chemical safety goggles where eye exposure is reasonably probable. Ensure safety glasses conform to EN 166.
OTHER PROTECTION:	Use engineering controls to reduce air contamination to permissible exposure level. Provide eyewash, quick drench. Wear appropriate clothing to prevent any possibility of skin contact.
HYGIENIC WORK ROUTINES:	Wash at the end of each work shift and before eating, smoking and using the toilet. Wash promptly if skin becomes wet. Promptly remove any clothing that becomes wet or contaminated.

9 PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE:	Clear Liquid.	COLOUR:	Colourless
ODOUR/TASTE:	Aromatic		
SOLUBILITY DESCRIPTION:	Insoluble in water. Miscible with many organic solvents.		
BOILING POINT (°C):	110 - 111	MELTING POINT (°C):	-95
SPECIFIC GRAVITY (Water=1):	0.87 @ 15 °C	VAPOUR DENSITY (air=1):	3.20
VAPOUR PRESSURE:	1.92kPa @ 13 °C	EVAPORATION RATE:	1.72
pH-VALUE:	N/A	ODOUR THRESHOLD (lower):	2.00ppm
ODOUR THRESHOLD (upper):	3.00ppm	FLASH POINT (°C):	4
FLASH POINT METHOD:	CC (Closed cup)		
AUTO IGNITION TEMPERATURE (°C):	480	FLAMMABILITY LIMIT (lower %):	1.20
FLAMMABILITY LIMIT (upper %):	7.10		

10 STABILITY AND REACTIVITY

STABILITY:	Avoid: Heat, sparks, flames.
CONDITIONS TO AVOID:	Avoid contact with oxidisers or reducing agents.
HAZARDOUS POLYMERIZATION:	Will not polymerize.
MATERIALS TO AVOID:	NITRIC ACID Strong oxidizing agents.
HAZARDOUS DECOMPOSITION PRODUCTS:	None known.

11 TOXICOLOGICAL INFORMATION

TOXIC DOSE1- LD50:	5000mg/kg (oral rat)
HEALTH WARNINGS:	Gas or vapour is toxic or extremely irritating even on brief exposure. This chemical may cause skin/eye irritation and burns (corrosive). Toxic through skin absorption (percutaneous). Narcotic effect. CNS depressant. May cause chemical eye burns. Swallowing concentrated chemical may cause severe internal injury. Unconsciousness, death.
ROUTE OF ENTRY:	Inhalation. Skin absorption. Ingestion. Skin and/or eye contact.
TARGET ORGANS:	Central nervous system. Eyes. Gastro-intestinal tract. Respiratory system, lungs. Skin.
MEDICAL SYMPTOMS:	Extreme irritation of eyes and mucous membranes, including burning and tearing. Severe skin irritation. Nausea, vomiting. Unconsciousness, possibly death. Central nervous system depression. Drowsiness, dizziness, disorientation, vertigo. Pulmonary oedema, frothy sputum.
MEDICAL CONSIDERATIONS:	Skin disorders and allergies. Convulsive disorders, CNS problems.

12 ECOLOGICAL INFORMATION

LC50 96 HRS FISH (mg/Kg):	34
ENVIRONMENTAL HAZARDS:	Harmful to aquatic organisms.
ACUTE FISH TOXICITY:	EC50 Daphnia magna 96hour = 60mg/l (Toluene)

13 DISPOSAL CONSIDERATIONS

GENERAL/CLEANING:	Contaminated packages must be completely emptied before sending away for laundering and re-use.
DISPOSAL METHODS:	Do not allow runoff to sewer, waterway or ground. Confirm disposal procedures with environmental engineer and local regulations. EWC Number: Allocation of a waste code number in accordance with the European Waste catalogue, should be carried out in agreement with an EA authorised.

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waste disposal company These goods and packaging must be disposed of in accordance with the Special Waste Regulations 1996

14 TRANSPORT INFORMATION

LABEL FOR CONVEYANCE:



ROAD:

UN No:	1294	ADR CLASS No:	3
HAZARD CLASS (ADR):	Class 3: Flammable liquids	HAZARD No. (ADR):	33
ADR PACK GR:	II	HAZCHEM CODE:	3YE
ADR LABEL No:	3		
CEPIC TEC(R) No:	31		

RAIL:

SEA:		IMDG Page No:	3108
SEA TRANSPORT CLASS No:	3		
SEA PACK GR:	II		

AIR:

AIR TRANSPORT CLASS No:	3	AIR PACK GR:	II
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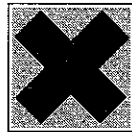
15 REGULATORY INFORMATION

EEC (EINECS) No.: 203-625-9

LABEL FOR SUPPLY:



HIGHLY FLAMMABLE



HARMFUL

RISK PHRASES:

R-11	Highly flammable
R-38	Irritating to skin.
R-48/20	Harmful: danger of serious damage to health by prolonged exposure through inhalation
R-63	Possible risk of harm to the unborn child
R-65	Harmful: may cause lung damage if swallowed
R-67	Vapours may cause drowsiness and dizziness

SAFETY PHRASES:

S-36/37	Wear suitable protective clothing and gloves.
S-46	If swallowed seek medical advice immediately and show this container label
S-62	If swallowed, do not induce vomiting. Seek medical advice immediately and show the container or label

16 OTHER INFORMATION

USER NOTES:

Since emptied containers retain product residue, follow label warnings even after container is emptied. Residual vapours may explode on ignition; do not cut, drill, grind or weld on or near this container. Labels should not be removed from containers until they have been cleaned and no product remains within. For further Health and Safety information contact: Health and Safety Officer.

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REVISION COMMENTS: Amendment to section/s :- Classification Packaging and Labelling of Chemicals: CHIP 3 (2), (3)
(15), (16)

REVISION DATE: 01/10/05

REVISION No. /REPLACES SDS ISSUED: 2-02/01/04

SDS No.: 0081

R-PHRASES (Full Text):

R-11	Highly flammable
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SAFETY DATA SHEET STATUS: Approved.

DATE: 01/10/05

SIGNATURE: DDalton

DISCLAIMER

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