

MATERIAL SAFETY DATA SHEET

PRODUCT: **TOLUENE**

DATE: January, 2013

SUPPLIER: Hon-Mark Hardware,
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I. IDENTIFICATION

SYNONYMS: Methyl Benzene: Toluol

CHEMICAL NAME: Toluene

CHEMICAL FAMILY: Aromatic Hydrocarbons

CHEMICAL FORMULA: C₆H₅CH₃

C.A.S. NUMBER: 108-88-3

TRANSPORT: Classification: 3.2 (9.2)

P.I.N.: 1294

Packing Group II

Shipping Name: Toluene

WHMIS CLASSIFICATION: B-2; D-28

II. HAZARDOUS INGREDIENTS

1. Toluene	C.A.S. #: 108-88-3	Range % (w/w): 60-100
LD50-Oral: 5000 mg/kg (Rat)	LD50-Dermal: >2 g/kg (Rabbit)	
LC50: 8000 ppm (Rat)	T.L.V.: 100 ppm (ACGIH 1985/86)	

III. HEALTH HAZARDS

EFFECTS OF OVEREXPOSURE:

EYES: The vapour is moderately irritating. Liquid produces chemical conjunctivitis with mild transient corneal injury.

SKIN: Very low order of toxicity by skin absorption. However, frequent or prolonged contact may irritate the skin and cause dermatitis.

INHALATION: The vapours have low to moderate toxicity. In high concentrations vapours are irritating and may cause headache, nausea, fatigue, weakness, euphoria, drowsiness, double vision, ataxia and coma. The irritating properties give warning as anesthetic concentrations are approached.

INGESTION: Low order of toxicity. However, minute amounts aspirated into the lungs during swallowing or subsequent vomiting may cause severe lung irritation.

CHRONIC HEALTH HAZARDS: Repeated exposure to moderately high concentrations of toluene vapour may cause a toxic encephalopathy. Signs and symptoms include euphoria, hallucinations, behavioural disturbances, double vision, ataxia, convulsions, and coma. Repeated exposure will produce symptoms of chronic poisoning, associated with disturbance of the central nervous system, nervous irritability, insomnia, nausea and fatigue.

OTHER HEALTH HAZARDS: Studies in laboratory animals suggest that prolonged and repeated overexposure to toluene vapours may cause hearing loss. Both the narcotic effect and the effect on the blood system are aggravated if the exposed person uses alcohol in large quantities. The reaction is further increased if the exposed person has anemia, heart or lung disorder, or kidney or liver trouble. Persons with such conditions should not be allowed to work where they may be exposed to this solvent.

FIRST AID:

EYES: Flush with water for at least 15 minutes and get prompt medical attention.

SKIN: Wash with soap and water. Remove contaminated clothing and wash before reuse.

INHALATION: Rescuers should wear respiratory protection. Remove immediately from contaminated area. Apply artificial respiration if breathing has stopped. A qualified person should administer oxygen. Call a physician..

INGESTION: Give two glasses of water. Due to the possibility of aspiration into the lungs, do not induce vomiting, keep at rest and call a physician

NOTES TO PHYSICIAN: Permanent physiological disturbances have been described as a result of repeated exposure to high concentrations of toluene vapour, especially where associated with addictive sniffing of toluene or toluene-containing materials.

IV. FIRE & EXPLOSION HAZARDS

FLASH POINT & method (C): 6 (TCC)

FLAMMABLE LIMITS (% in air):

LOWER: 1.2

UPPER: 7.1

EXTINGUISHING MEDIA: Use dry chemical, carbon dioxide, alcohol foam, or water spray.

SPECIAL FIRE FIGHTING PROCEDURES: Respirators required for fire-fighting personnel. If possible to do so safely, shut off fuel to fire. Use water spray to cool fire-exposed surfaces and to protect personnel.

UNUSUAL FIRE & EXPLOSION HAZARDS: When using water spray, boil-over may occur when the product temperature reaches the boiling point of water..

respiratory protection. Pump up (explosion proof equipment) or soak up with sand, cotton waste or other absorbent.

V. PHYSICAL DATA

The following physical data are approximate only and do not represent specification values. They should only be used in the context of this Material Safety Data Sheet.

BOILING POINT (C): 110
SPECIFIC GRAVITY (20C): 0.87
VAPOUR PRESSURE (60C): 7.6 kPa
VAPOUR DENSITY (air=1): 3.1
WATER SOLUBILITY: Negligible
VOLATILITY (%): 100
EVAPORATION RATE (Butyl acetate=1): 2.1
APPEARANCE & ODOUR: Clear, colourless liquid with characteristic odour.

VI. REACTIVITY

STABILITY: Stable

CONDITIONS TO AVOID: Heat, sparks and sources of ignition.

INCOMPATIBILITY: Strong oxidizing agents.

HAZARDOUS DECOMPOSITION PRODUCTS: Carbon monoxide, carbon dioxide produced on burning.

HAZARDOUS POLYMERIZATION: Will not occur..

VII. SPILLS & LEAK PROCEDURES

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED: Remove all sources of ignition. Keep material away from sewers and waterways. Ventilate enclosed spaces or wear

WASTE DISPOSAL METHODS: Controlled incineration or use waste disposal service in accordance with federal, provincial and local regulations. In case of large spills warn public of downwind explosion hazard.

VIII. SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION: Approved organic canister mask or air supplied respirator.

VENTILATION: Local exhaust recommended. General mechanical ventilation suggested to maintain below TLV. Electrical and mechanical equipment should be explosion-proof.

PROTECTIVE GLOVES: Viton, neoprene, or nitrile.

EYE PROTECTION: Goggles to prevent eye contact.

ADDITIONAL PROTECTIVE EQUIPMENT: Eye-wash facility, safety shower, apron.

IX. ADDITIONAL INFORMATION

HANDLING & STORAGE: Keep container closed. Store in a cool well ventilated area, away from oxidizing agents and all sources of ignition. Product is a static accumulator. Transfer equipment should be properly grounded.

OTHER INFORMATION: Empty containers may retain hazardous residues and containers should be commercially cleaned before reuse.

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