MATERIAL SAFETY DATA SHEET

1. *CHEMICAL IDENTITY:*

Chemical Name : TOLUENE, Methyl Benzene
Chemical classification: Aromatic hydrocarbon
Synonyms: Toluol, Phenyl Methane, Methyl Benzene
Formula: C_7H_8 **C.A.S.No.**108-88-3 UN No. 1294
Regulated Identification: Shipping Name: Toluene (Hazchem Code 3E)
Codes/Label: Flammable Liquid. Class 3
Hazardous Waste ID No.5
Hazardous Ingredients: C.A.S. No.108-88-3 .
End Use : Used as Raw material for manufacturing Benzaldehyde, Benzoic

2. *PHYSICAL/CHEMICAL DATA:*

Boiling Pt/Range : 110.4°C
Physical State : Liquid : Appearance: Colourless
Vapour Pressure Odour : Pleasant Odour
Melting/Freezing Pt. 95-94.5°C @ 30°C 100 mm Hg at 36.7°C
Vapour Density 3.14 (Air=1) Solubility in water at 30°C
Specific Gravity 0.866 at:20°C (Liq) (Water =1) pH : Neutral
Soluble in acetone, Slightly soluble miscible in absolute alcohol, ether, Benzene

3. *FIRE/EXPLOSION HAZARD DATA:*

Flammability YES	: LEL 1.2%	: Flash Point °C 12.7 (OC)
TDG Flammability 3	: UEL 7 %	: Flash Point °C 4.5 (CC)
Autoignition Temperature		: 535.5
Explosion sensitivity to impact		: Stable
Explosion sensitivity to static electricity		: Not Applicable
Hazardous Combustion Products		: Emits acrid smoke and irritating fumes.
Hazardous Polymerization		: Will not occur

Combustible Liquid : YES	Explosive Material : No	Corrosive Material : No
Flammable Material : YES	Oxidiser : No	Others
Pyrophoric Material : NO	Organic Peroxide : No	

4. REACTIVITY DATA :

Chemical Stability : Stable
Incompatibility with other material : Strong Oxidisers
Reactivity :Reacts vigorously with oxidizing materials. Reacts explosively with N_2O4,$AgClO_4$, H_2SO_4 + HNO_3, conc. HNO_3, UF6 and 1.3 dischloro-5,5, dimethyl-2, 4-imidiazolidione.
Hazardous Reaction Products : Forms an explosive mixture with tetranitromethane.

5. HEALTH HAZARD DATA :

Routes of entry : Inhalation, Ingestion, Skin and Eyes
Effects of Exposure Symptoms : Vapor irritates eyes and upper respiratory tract, causes dizziness, headache, Symptoms anesthesia, respiratory arrest. Liquid irritates eyes and causes drying of skin. If aspirated, causes coughing, gagging, distress and rapidly developing pulmonary edema. If ingested, cause vomiting, griping, diarrhea, depressed respiration.
Emergency Treatment : Inhalation : Remove the victim to fresh air area. Give artificial respiration or oxygen if required.
Ingestion : Do not induce vomiting.
Skin : Wipe off. Wash with soap and water.
Eyes : Flush with water for 15 mins. Seek medical aid immediately.
LD50 (Oral-Rat) 500 mg/kg STEL: 150 ppm 560 mg/m3
Permissible Exposure Limit : 100 ppm mg/m3
Odour Treshold 0.17 ppm 0.64 mg/m3
TLV (ACGIH) :100 ppm mg/m3

NFPA Hazard Signals :	**Health**	**: Flamability :**	**Reactivity :**	**Special**
	2	**3**	**0**	

6. PREVENTIVE MEASURES :

Personal Protective :Avoid contact with liquid or vapors.
Equipment :Provide air-supplied mask, safety goggles/face shield, PVC hand gloves.
Handling and Storage: Precautions Store in a well ventilated, cool, dry area, away from heat, spark, flame and oxidizing materials

7. EMERGENCY/FIRST AIR MEASURES :

FIRE : Fire Extinguishing Media : Foam Carbon Dioxide, : Dry Chemical Powder.
Special Procedure : Keep the containers cool by spraying water if exposed to fire
Unusual hazards : Flash back along vapour trail may Occur.

EXPOSURE : First Aid Measures Inhalation : Remove the victim to fresh air, Start resuscitation. Skin: remove the wetted clothes and wash the affected area thoroughly with water and soap. Eyes: wash thoroughly for 15 minutes with water Seek medical Aid immediately.

: Antidotes/Dosages : Not Available

SPILLS : Steps to be taken : Shut off leaks if without risk. Contain leaking ,Leaking liquid on sand or earth. Prevent.

8. ADDITIONAL INFORMATION/REFERENCES :

Toluene derived from coal tar usually contains small amount of benzene as impurity. In the few cases, acute toluene poisoning reported. The effect has been that of a narcotic, the workman passing through a stage of intoxication into one of coma. Recovery following removal from the exposure has been the rule. Physical examination is recommended practically. A very dangerous fire hazard when exposed to heat, flame or oxidizers. Explosive in the form of vapors, when exposed to heat or flame

9. MANUFACTURERS/SUPPLIERS DATA:

Name of Firm : JAY ENTERPRISE, Contact Office in Emergency
Mailing Address:Plot No.1, N.I.D.C.,Stovac Road,Lambha, Ahmedabad-382405 (Gujarat) INDIA
Telephone No. : 079-25733486,32989556
Fax : 079-25733484

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