

## BBC Biochemical

## MATERIAL SAFETY DATA SHEET

**Section 1. Chemical Product and Company Information**

Common Name:	Toluene	Code:	RW0098
Supplier:	BBC Biochemical	MSDS#:	RW0098
Synonym:	Methylbenzene; Toluol; Methylbenzol; Phenylmethane; Metacide	Validation Date:	3-27-09
Trade Name:	Not available	Print Date:	3-27-09
Material Uses:	Clearing Agent	Responsible Name:	Dr. B
Manufacturer:	BBC Biochemical PO Box 1320 409 Eleanor Lane Mount Vernon, WA 98273 1-800-635-4477	<b>In Case of Emergency: 1-800-424-9300 Chemtrec USA 1-202-483-7616 Chemtrec Intrl 1-800-635-4477</b>	

**Section 2. Composition and Information on Ingredients**

Name	CAS#	% by Weight	OSHA PEL	ACGIH TWA
1) Toluene	108-88-3	60-100%	500 ppm	50 ppm

**Section 3. Hazards Identification**

<b>Physical State and Appearance</b>	Clear, colorless liquid with aromatic sweet odor.
<b>Emergency Overview</b>	May cause respirator tract irritation, skin irritation, eye irritation, aspiration hazard, central nervous system depression, nerve damage. Flammable liquid and vapor. Vapor may cause flash fire.
<b>Routes of Entry</b>	Not available.
<b>Potential Acute Health Effects</b>	
<b>Eyes</b>	Liquid is moderately irritating to the eyes. High vapor concentrations may also be irritating.
<b>Skin</b>	Liquid is mildly irritating to the skin. Prolonged or repeated contact can result in defatting and drying of the skin which may result in skin irritation and dermatitis (rash).
<b>Inhalation</b>	Vapors may be irritating to the nose, throat, and respiratory tract. High vapor concentrations may cause central nervous system (CNS) depression.
<b>Ingestion</b>	Liquid is moderately toxic and may be harmful if swallowed; may produce CNS depression. Ingestion of product may result in vomiting; aspiration (breathing) of vomitus into the lungs must be avoided as even small quantities may result in aspir. pneumontis.
<b>Potential Chronic Health Effects</b>	
<b>Medical Conditions Aggravated by Overexposure</b>	Preexisting eye, skin and respiratory disorders may be aggravated by exposure to this product. Impaired function from preexisting disorders may be aggravated by exposure to this product.
<b>Overexposure/Signs/Symptoms</b>	Early to moderate CNS depression may be evidenced by giddiness, headache, dizziness, and nausea; in extreme cases, unconsciousness and death may occur. Aspiration pneumontis may be evidenced by coughing, labored breathing and cyanosis (bluish skin). In severe cases death may result.

**Section 4. First Aid Measures**

<b>Eye Contact</b>	Immediately flush eyes with plenty of water for at least 15 minutes while holding eyelids open. Get medical attention.
<b>Skin Contact</b>	Remove contaminated clothing/shoes. Flush skin with water. If irritation occurs, get medical attention. Do not reuse clothing until cleaned.
<b>Inhalation</b>	Remove victim to fresh air. If not breathing, give artificial respiration. If breathing is difficult, oxygen should be administered by qualified personnel. Get medical attention.
<b>Ingestion</b>	Do not induce vomiting. If vomiting occurs spontaneously, keep head below hips to prevent aspiration of liquid into the lungs. Get medical attention.
<b>Notes to Physician</b>	Not available.

**Section 5. Fire Fighting Measures**

<b>Flammability of the Product</b>	Flammable.
<b>Auto-ignition Temperature</b>	422C (792 F)
<b>Flash Points</b>	7C (45F) CC
<b>Flammable Limits</b>	LEL: 1.1, UEL: 7.1

<b>Products of Combustion</b>	Not available.
<b>Fire Hazards in Presence Of Various Substances</b>	Not available.
<b>Explosion Hazards in Presence of Various Substances</b>	Not available.
<b>Fire Fighting Media and Instructions</b>	Use water fog, "alcohol" foam, dry chemical, or CO2. Clear fire area of unprotected personnel. Do not enter confined fire space without full bunker gear, including positive pressure NIOSH approved SCBA. Cool fire exposed containers with water.
<b>Protective Clothing (Fire)</b>	
<b>Special Remarks on Fire Hazards</b>	Fine mist or spray may be flammable at temperatures below the flash point. Carbon monoxide and unidentified organic compounds may be formed during combustion.
<b>Special Remarks on Explosion Hazards</b>	When heated above the flash point this material emits flammable vapors which, when mixed with air, can burn or be explosive.

### Section 6. Accidental Release Measures

<b>Small Spill and Leak</b>	Ventilate area of leak or spill. Remove all sources of ignition. Clean-up personnel require protective clothing and respiratory protection from vapors. Only specially trained or qualified personnel should handle the emergency.
<b>Large Spill and Leak</b>	Same as above.

### Section 7, Handling and Storage

<b>Handling</b>	Empty containers retain product residue and can be dangerous. Do not pressurize, cut weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, static electricity, or other sources of ignition.
<b>Storage</b>	Keep away from heat, sparks, and flame. Surfaces that are hot may ignite liquid product even in the absence of sparks or flame. Extinguish pilot lights, cigarettes and turn off other sources of ignition prior to use and until all vapors are gone.

### Section 8. Exposure Controls / Personal Protection

<b>Engineering Controls</b>	Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Provide exhaust ventilation sufficient to keep the airborne concentration of this product below its exposure limits. Exhaust air may need to be cleaned by scrubbers or filters to reduce environmental contamination.
<b>Personal Protection</b>	
<b>Eyes</b>	Use chemical safety goggles and/or full face shield where splashing is possible. Contact lenses should not be worn when working with this material. Maintain eye wash fountain and quick-drench facilities in work areas.
<b>Body</b>	Where splashing is possible, full chemically resistant protective clothing (e.g., acid suit) and boots are required.
<b>Respiratory</b>	If exposure may or does exceed occupational exposure limits (Sec. 2) use a NIOSH approved respirator to prevent overexposure. In accord with 29 CFR 1910.134 use either an atmosphere-supplying respirator or an air-purifying respirator for organic vapors.
<b>Hands</b>	Test data indicate the best protection is provided by neoprene, nitrile, and natural rubber gloves.
<b>Feet</b>	Impervious footwear is required in areas where splashing is possible.
<b>Personal Protection in Case of a Large Spill</b>	See above.
<b>Product Name</b>	<b>Exposure Limits</b>
1)	
2)	
3)	
<b>Consult Local authorities before acceptable exposure limits.</b>	

### Section 9. Physical and Chemical Properties

<b>Physical State and Appearance</b>	Clear, colorless liquid.	<b>Odor:</b>	Aromatic benzene-like
<b>Molecular Weight</b>	Not available	<b>Taste:</b>	Not available
<b>Molecular Formula</b>	Not applicable.	<b>Color:</b>	Colorless.
<b>pH (1%/Water)</b>	Not available		
<b>Boiling/Condensation Point</b>	111C (232F)		
<b>Melting/Freezing Point</b>	-95C (-139F)		
<b>Critical Temperature</b>	Not applicable.		
<b>Specific Gravity</b>	0.86 @20C		
<b>Vapor Pressure</b>	22 @ 20C (68F)		
<b>Vapor Density</b>	3.14		
<b>Volatility</b>	100% volatiles		

<b>Odor Threshold</b>	Not applicable.
<b>Evaporation Rate</b>	2.24 BuAC=1
<b>VOC</b>	Not available.
<b>Viscosity</b>	Not available.
<b>Ionicity (in water)</b>	Not available.
<b>Dispersion Properties</b>	Not available.
<b>Solubility</b>	0.05 gm/100gm water @20C
<b>Physical Chemical Comments</b>	Not available.

### Section 10. Stability and Reactivity

<b>Stability and Reactivity</b>	Stable.
<b>Conditions of Instability</b>	Stable under normal conditions. Avoid heat, flame, and other sources of ignition.
<b>Incompatibility with Various Substances</b>	Avoid strong oxidizers.
<b>Hazardous Decomposition Products</b>	Carbon monoxide and unidentified organic compounds may be formed during combustion.
<b>Hazardous Polymerization</b>	Will not occur.

### Section 11. Toxicological Information

<b>Toxicity to Animals</b>	LD50: skin,Rabbit: 14100 ul/kg; oral rat: 636 mg/kg. LC50: inhalation rat: 49 gm/m3/4h
<b>Chronic Effects on Humans</b>	
<b>Other Toxic Effects on Humans</b>	
<b>Special Remarks on Toxicity to Animals</b>	Not available.
<b>Special Remarks on Chronic Effects on Humans</b>	Not available.
<b>Special Remarks on Other Toxic Effects on Humans</b>	Not available.

### Section 12. Ecological Information

<b>Ecotoxicity</b>	Fish toxicity : 8110 ug/L 96 hour(s) LC50 (Mortality) Coho salmon, silver salmon (Oncorhynchus kisutch). Invertebrate toxicity : 6000 ug/L 48 hour(s) EC50 (Immobilization) Water flea (Daphnia magna). Algal toxicity : 9400 ug/L 8 hour(s) EC50 (Growth) Green algae (Selenastrum capricornutum).
<b>BODS and COD</b>	Not available.
<b>Biodegradable/OECD Mobility</b>	Bioconcentration : 1716 ug/L 6 hour(s) BCF (Residue) Water flea (Daphnia magna) 1.5 ug/L. Not available.
<b>Toxicity of the Products of Biodegradation</b>	Not available.
<b>Special Remarks on The Products of Biodegradation</b>	Not available.

### Section 13. Disposal Considerations

<b>Waste Information</b>	Not available.
<b>Waste Stream</b>	Not available.
<b>Consult your local or regional authorities.</b>	

### Section 14. Transport Information

<b>DOT Classification</b>	Flammable liquid. Toluene; Class 3, Packing Group II, UN1294
<b>Marine Pollutant</b>	Not available.
<b>Hazardous Substances Reportable Quantity</b>	Not available.
<b>Special Provisions for Transport</b>	Not applicable.
<b>TDG Classification</b>	Flammable liquid. Toluene; Class 3, Packing Group II, UN1294
<b>ADR/RID Classification</b>	ADR (Europe) Information not available.
<b>IMO/IMDG Classification</b>	IMDG Information not available.

ICAO/IATA Classification See IATA Regulations, Flammable liquid. Toluene; Class 3, Packing Group II, UN1294.

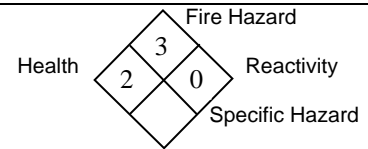
### Section 15. Other Information

#### Label requirements

**Hazardous Material Information System (U.S.A.)**

<b>Health</b>	2
<b>Fire Hazard</b>	3
<b>Reactivity</b>	0
<b>Personal Protection</b>	

**National Fire Protection Association (U.S.A.)**



#### References

**Other Special Considerations**

#### Notice to Reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein.