



PO Box 329 • 802 Washington Avenue • Chestertown, MD 21620 • USA  
Telephone Number For Information 410-778-3100

**24 Hour Emergency Number (CHEM-TEL): USA, Canada, Puerto Rico 800-255-3924;**

**Outside North American continent 813-248-0585 (call collect)**

# MSDS

## Material Safety Data Sheet

### 1. Product Identification

#### Manufactured By:

LaMotte Company

#### Product Code:

**4508**

802 Washington Avenue

#### Product Description:

DS Indicator Reagent

Chestertown, MD 21620

### 2. Composition/Information on Ingredients

Hazardous	Name	CAS #	%	OSHA PEL TWA (airborne)	ACGIH TLV TWA (skin)
Yes	Toluene	108-88-3	>99	200 ppm	50 ppm
Yes	Hyamine 3500 (a quaternary ammonium salt)	68424-85-1	<0.1%	N/E	N/E
No	Bromphenol Blue	115-39-9	<0.1	N/E	N/E

### 3. Hazards Overview

**Primary Route of Entry:** Ingestion Inhalation Skin

**Poison! Danger! Harmful or fatal if swallowed. Inhalation of vapors may cause death by paralysis of respiratory center.** Flammable liquid and vapor. Causes irritation to skin, eyes and respiratory tract.

**HMIS Hazard:** (Scale: 4 = Extreme, 3 = High, 2 = Moderate, 1 = Slight, 0 = Least)

Health: 2      Flammability: 3      Reactivity: 1

**Carcinogenicity:**      None

**Other Health Related Comments:** See Section 11, Toxicity

### 4. First Aid Measures

**Eye Contact:** Immediately flush with water for 15 minutes. Get prompt medical attention.

**Skin Contact:** Remove affected clothing and rinse skin thoroughly. Wash skin with soap and water. Consult physician.

**Ingestion:** Aspiration hazard if swallowed. Do not induce vomiting. Drink water. Call a doctor immediately.

**Inhalation:** Remove to fresh air. Give artificial respiration if breathing has stopped. If breathing is difficult give oxygen.

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## **5. Fire Fighting Measures**

**Flash Point: 7 deg C (45 deg F)-closed cup      LEL: 1.1%    UEL: 7.1%**

Flammable liquid and vapor!

### **Fire Rating**

**Extinguishing Media:** Dry chemical, CO<sub>2</sub>, or water spray to dilute spills to non-flammable mixtures.

**Special Fire Fighting Procedures:** Wear goggles and self contained breathing apparatus.

**Hazardous Combustion and/or Decomposition Products:** CO<sub>x</sub>

**Unusual Fire & Explosion Hazard:** Vapor is heavier than air and can flow along surfaces to distant ignition source and flash back. Closed containers exposed to heat may explode.

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## **6. Accidental Release Measures**

Ventilate area of leak or spill. Eliminate all sources of ignition and flammables. Absorb on inert material, vermiculite, or spill pads. Place in clean, dry plastic pail and allow to evaporate in fume hood. Or, cover pail with lid and hold for disposal as hazardous waste. Do NOT flush toluene to sewer!

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## **7. Handling & Storage**

Store in cool, dry, well-ventilated location--away from ignition sources. Bond & ground containers when transferring liquid to avoid static sparks.

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## **8. Exposure Controls/Personal Protection**

### **Ventilation**

A system of local and/or general exhaust is recommended. Work with toluene in a chemical fume hood.

### **Protection When Handling**

Gloves   Eye Protection   Lab Coat   Other: Apron or coveralls to prevent skin contact.

**Work/Hygienic Practices:** Avoid skin contact and inhalation of vapor. Respiratory protection is required if airborne concentration exceeds the TLV.

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## **9. Physical & Chemical Properties**

<b>Appearance:</b>	Blue Liquid	<b>Boiling Point:</b>	111C (231 deg F)
		<b>Melting Point:</b>	N/A
		<b>pH:</b>	N/A
<b>Odor:</b>	Aromatic benzene-like	<b>Vapor Density:</b>	3 (Air=1)
<b>Solubility in Water:</b>	<0.1% @74 deg F	<b>Vapor Pressure:</b>	22 mm Hg@20C (68 deg F)

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## **10. Stability & Reactivity**

<b>Stable:</b>	Yes
<b>Conditions to Avoid:</b>	Heat, flames, sources of ignition, and incompatibles
<b>Materials to Avoid:</b>	Incompatibles: Strong acids, oxidizers, chlorine; toluene will attack some forms of plastics, rubber, coatings.

**Hazardous Decomposition Products:** CO<sub>x</sub>

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**11. Toxicological Information****For toluene- inhalation human TCLo: 200 ppm; oral rat LD50: 636 mg/kg**

Toluene investigated as a tumorigen, mutagen, and reproductive effector.

**Target Organs:** Skin, Respiratory System, Liver, Kidneys, Blood System, or Central Nervous System

Pre-existing conditions which may be aggravated by contact with toluene: respiratory ailments, or skin disorders

**12. Ecological Information**

This material is not expected to significantly bioaccumulate.

This material is expected to be toxic to aquatic life. The LC50/96-hour values for fish are between 10 and 100 mg/l.

**13. Disposal Considerations**

Do NOT flush to sewer! Small quantity: Allow to evaporate in fume hood. (Slow to evaporate at room temperature). Large quantity: Atomize into a RCRA approved incinerator or send to a RCRA approved waste facility. Dispose of as hazardous waste, according to federal, state and local regulations.

**14. Transport Information****Proper Shipping Name:** TOLUENE**Hazard Class/Div:** 3**UN1294****Packing Group:** II**15. Regulatory Information****Chemical Inventory Status**

<b>Ingredient</b>	<b>USA</b>	<b>Europe</b>	<b>---Canada---</b>		<b>Australia</b>	<b>Japan</b>
	<b>TSCA</b>	<b>EC</b>	<b>DSL</b>	<b>NDSL</b>		
Toluene 108-88-3	Yes	Yes	Yes	No	Yes	Yes
Hyamine 3500	Yes	Yes	Yes	No	Yes	Yes
Quaternary ammonium salt						
Bromphenol Blue	Yes	Yes	Yes	No	Yes	Yes

**Federal, State, & International Regulations**

<b>Ingredient</b>	<b>---SARA 302---</b>		<b>----- SARA 313 -----</b>		<b>CERCLA</b>	<b>RCRA</b>	<b>TSCA</b>
	<b>RQ</b>	<b>TPQ</b>	<b>Listed</b>	<b>Chemical Category</b>		<b>261.33</b>	<b>8(D)</b>
Toluene 108-88-3	No	No	Yes	No	1000	U220	No
Hyamine 3500	No	No	No	No	No	No	No
Quaternary ammonium salt							
Bromphenol Blue	No	No	No	No	No	No	No

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<b>Ingredient</b>	<b>----- SARA 311/312 ----- Hazard Categories</b>	<b>----- Australia -----</b>		<b>This MSDS is WHMIS Compliant</b>
		<b>Hazchem Code</b>	<b>Poison Schedule</b>	
Toluene 108-88-3	Acute: Yes Chronic: Yes Fire: Yes Pressure: No Reactivity: No (Pure/Liquid)	3[Y]E	S6	
Hyamine 3500 Quaternary ammonium salt	Acute: Yes Chronic: No Fire: Yes Pressure: No Reactivity: No (Liquid/Mixture)	?	?	Class D1b, E
Bromphenol Blue	Acute: No Chronic: No Fire: No Pressure: No Reactivity: No (Pure/Solid))	None allocated	None allocated	
<b>For product #4508 liquid mixture, taken as a whole.</b>	Acute: Yes Chronic: Yes Fire: Yes Pressure: No Reactivity: No	3[Y]E	S6	<b>Yes</b>

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## **16. Other Information**

**Warning! This product contains toluene, a chemical known to the the state of California to cause birth defects or other reproductive harm.**

**Prepared By:** IP

**Revised:** 5/28/2008  
Sections revised: 11, 13