



Material Safety Data Sheet

NFPA	HMS	Personal Protective Equipment						
	<table border="1"> <tr> <td style="background-color: #00FFFF;">Health Hazard</td> <td style="text-align: center; background-color: #00FFFF;">1</td> </tr> <tr> <td style="background-color: #FFC0CB;">Fire Hazard</td> <td style="text-align: center; background-color: #FFC0CB;">0</td> </tr> <tr> <td style="background-color: #FFFF00;">Reactivity</td> <td style="text-align: center; background-color: #FFFF00;">0</td> </tr> </table>	Health Hazard	1	Fire Hazard	0	Reactivity	0	
Health Hazard	1							
Fire Hazard	0							
Reactivity	0							
		See Section 15.						

Section 1. Chemical Product and Company Identification		<i>Page Number: 1</i>
Common Name/ Trade Name	Toluidine Blue, 1%	
Manufacturer	SPECTRUM LABORATORY PRODUCTS INC. 14422 S. SAN PEDRO STREET GARDENA, CA 90248	
Commercial Name(s)	Not available.	
Synonym	Toluidine Blue, 1% aqueous solution	
Chemical Name	Not applicable.	
Chemical Family	Coloring material.	
Chemical Formula	Not applicable.	
Supplier	SPECTRUM LABORATORY PRODUCTS INC. 14422 S. SAN PEDRO STREET GARDENA, CA 90248	
	Catalog Number(s)	T-140
	CAS#	Mixture.
	RTECS	Not applicable.
	TSCA	TSCA 8(b) inventory: Toluidine Blue O; Water
	CI#	Not available.
<u>IN CASE OF EMERGENCY</u> <u>CHEMTREC (24hr) 800-424-9300</u> CALL (310) 516-8000		

Section 2. Composition and Information on Ingredients					
Name	CAS #	<i>Exposure Limits</i>			% by Weight
		TWA (mg/m ³)	STEL (mg/m ³)	CEIL (mg/m ³)	
1) Toluidine Blue O	92-31-9				1
2) Water	7732-18-5				99
Toxicological Data on Ingredients					

Section 3. Hazards Identification	
Potential Acute Health Effects	Slightly hazardous in case of skin contact (irritant), of eye contact (irritant), of ingestion.
Potential Chronic Health Effects	CARCINOGENIC EFFECTS: Not available. MUTAGENIC EFFECTS: Mutagenic for bacteria and/or yeast. [Toluidine Blue O]. TERATOGENIC EFFECTS: Not available. DEVELOPMENTAL TOXICITY: Not available.

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Section 4. First Aid Measures

Eye Contact	Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. Get medical attention if irritation occurs.
Skin Contact	Wash with soap and water. Cover the irritated skin with an emollient. Get medical attention if irritation develops. Cold water may be used.
Serious Skin Contact	Not available.
Inhalation	If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.
Serious Inhalation	Not available.
Ingestion	Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If large quantities of this material are swallowed, call a physician immediately. Loosen tight clothing such as a collar, tie, belt or waistband.
Serious Ingestion	Not available.

Section 5. Fire and Explosion Data

Flammability of the Product	Non-flammable.
Auto-Ignition Temperature	Not applicable.
Flash Points	Not applicable.
Flammable Limits	Not applicable.
Products of Combustion	Not available.
Fire Hazards in Presence of Various Substances	Not applicable.
Explosion Hazards in Presence of Various Substances	Non-explosive in presence of open flames and sparks, of shocks.
Fire Fighting Media and Instructions	Not applicable.
Special Remarks on Fire Hazards	Not available.
Special Remarks on Explosion Hazards	Not available.

Section 6. Accidental Release Measures

Small Spill	Dilute with water and mop up, or absorb with an inert dry material and place in an appropriate waste disposal container. Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority requirements.
Large Spill	Absorb with an inert material and put the spilled material in an appropriate waste disposal. Finish cleaning by spreading water on the contaminated surface and allow to evacuate through the sanitary system.

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Section 7. Handling and Storage

Precautions	Keep locked up.. Do not breathe gas/fumes/ vapor/spray. Wear suitable protective clothing. If you feel unwell, seek medical attention and show the label when possible.
Storage	Keep container tightly closed. Keep container in a cool, well-ventilated area.

Section 8. Exposure Controls/Personal Protection

Engineering Controls	Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value.
Personal Protection	Safety glasses. Lab coat.
Personal Protection in Case of a Large Spill	Splash goggles. Full suit. Boots. Gloves. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.
Exposure Limits	Not available.

Section 9. Physical and Chemical Properties

Physical state and appearance	Liquid.	Odor	Not available.
Molecular Weight	Not applicable.	Taste	Not available.
pH (1% soln/water)	Neutral.	Color	Blue. (Dark.)
Boiling Point	The lowest known value is 100°C (212°F) (Water).		
Melting Point	Not available.		
Critical Temperature	Not available.		
Specific Gravity	The only known value is 1 (Water = 1) (Water).		
Vapor Pressure	The highest known value is 2.3 kPa (@ 20°C) (Water).		
Vapor Density	The highest known value is 0.62 (Air = 1) (Water).		
Volatility	Not available.		
Odor Threshold	Not available.		
Water/Oil Dist. Coeff.	Not available.		
Ionicity (in Water)	Not available.		
Dispersion Properties	See solubility in water, methanol.		
Solubility	Easily soluble in cold water, hot water, methanol.		

Section 10. Stability and Reactivity Data

Stability	The product is stable.
Instability Temperature	Not available.
Conditions of Instability	Incompatible materials
Incompatibility with various substances	Slightly reactive to reactive with oxidizing agents.
Corrosivity	Non-corrosive in presence of glass.
Special Remarks on Reactivity	Not available.

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Special Remarks on Corrosivity Not available.

Polymerization Will not occur.

Section 11. Toxicological Information

Routes of Entry Skin contact. Eye contact.

Toxicity to Animals LD50: Not available.
LC50: Not available.

Chronic Effects on Humans **MUTAGENIC EFFECTS:** Mutagenic for bacteria and/or yeast. [Toluidine Blue O].

Other Toxic Effects on Humans Slightly hazardous in case of skin contact (irritant), of ingestion.
Non-hazardous in case of inhalation.

Special Remarks on Toxicity to Animals Not available.

Special Remarks on Chronic Effects on Humans May affect genetic material (mutagenic) (Toluidine Blue O)

Special Remarks on other Toxic Effects on Humans Acute Potential Health Effects:
Skin: May cause skin irritation. Contact with skin may also give the skin a bluish tint.
Eyes: May cause eye irritation.
Inhalation: Not expected to be an inhalation hazard.
Ingestion: Expected to be a low hazard. This product contains Toluidine Blue O which may cause nausea, vomiting, abdominal pain, diarrhea, dyspnea (difficulty breathing), bluish tint of the skin. It may also cause burning on urination, and the urine to become dark blue to green depending on the concentration in the urine.
There have been reports on effects of Toluidine Blue O on the blood (hemolytic anemia, leukopenia, methemoglobinemia), on behavior/central nervous system (headache, convulsions), cardiovascular system (hypertension, dysrhythmia) as well as reports of acute renal failure and hematuria (only after hemolysis). However, these effects occurred only after intravenous dosage.

Section 12. Ecological Information

Ecotoxicity Not available.

BOD5 and COD Not available.

Products of Biodegradation Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

Toxicity of the Products of Biodegradation The product itself and its products of degradation are not toxic.

Special Remarks on the Products of Biodegradation Not available.

Section 13. Disposal Considerations

Waste Disposal Waste must be disposed of in accordance with federal, state and local environmental control regulations.

Section 14. Transport Information

DOT Classification Not a DOT controlled material (United States).

Identification Not applicable.

Special Provisions for Transport Not applicable.

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DOT (Pictograms)



Section 15. Other Regulatory Information and Pictograms

Federal and State Regulations

TSCA 8(b) inventory: Toluidine Blue O; Water

California Proposition 65 Warnings

California prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer which would require a warning under the statute: No products were found.

California prop. 65: This product contains the following ingredients for which the State of California has found to cause birth defects which would require a warning under the statute: No products were found.

Other Regulations

Not available.

Other Classifications

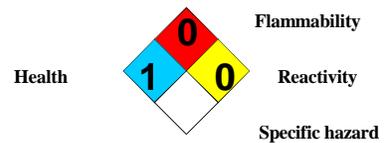
WHMIS (Canada) Not controlled under WHMIS (Canada).

DSCL (EEC) This product is not classified according to the EU regulations. Not applicable.

HMIS (U.S.A.)

Health Hazard	1
Fire Hazard	0
Reactivity	0
Personal Protection	a

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



WHMIS (Canada) (Pictograms)



DSCL (Europe) (Pictograms)



TDG (Canada) (Pictograms)



ADR (Europe) (Pictograms)



Protective Equipment

Not applicable.
Lab coat.



Not applicable.
Safety glasses.



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Section 16. Other Information**MSDS Code** T140S**References** Not available.**Other Special Considerations** Not available.

Validated by Sonia Owen on 8/11/2006.

Verified by Sonia Owen.

Printed 9/14/2006.

CALL (310) 516-8000

Notice to Reader

All chemicals may pose unknown hazards and should be used with caution. This Material Safety Data Sheet (MSDS) applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this MSDS. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this MSDS is based on technical data judged to be reliable, Spectrum Quality Products, Inc. assumes no responsibility for the completeness or accuracy of the information contained herein.