



TRIANGLE BIOMEDICAL SCIENCES, INC.

3014 CROASDAILE DRIVE • DURHAM, NORTH CAROLINA 27705-2507 • USA • 919.384.9393 • FAX 919.384.9595 • E-MAIL: tbs@trianglebiomedical.com

Date Issued: **November 19, 2008**

Supersedes Date: **October 6, 2005**

MATERIAL SAFETY DATA SHEET

IDENTIFICATION AND EMERGENCY INFORMATION				
Product Name	TMD™ Tissue Marking Dye Black			
Product Code (Catalog Number)	TMD-BK (Black)			
Product Category (Chemical Name)	Dyes			
Product Appearance and Odor	Liquid of black color			
Emergency Notification	Chem-Tel 1-800-255-3924 International 813-248-0585			
COMPONENTS AND HAZARD INFORMATION				
Component	CAS No.	%	OSHA TWA ppm mg/m3	OSHA STEL ppm mg/m3
Ammonium hydroxide	001336216	<3.3	NE NE	NE NE
Formaldehyde	000050000	<1	NL 2/15	NL NL
Carbon black	001333864	<15	NA 3.5	NL NL
Water	007732185	<82	NE NE	NE NE
PHYSICAL DATA				
THE FOLLOWING DATA ARE APPROXIMATE OR TYPICAL VALUES AND SHOULD NOT BE USED FOR PRECISE DESIGN PURPOSES.				
Boiling Range >212	Specific Gravity 1.02	Molecular Weight NL		Viscosity NL
Percent Volatile by Volume NE	Vapor Pressure @20 C degrees NE	Vapor Density (Air = 1) NE		Pour, Congealing or Melting Point 32 F
Solubility in Water @1 ATM and 25°C (77°F) NE		Evaporation Rate @1 ATM and 25°C (77°F) (n-Butyl Acetate =1) NE		pH NE
FIRE AND EXPLOSION HAZARD INFORMATION				
Flash Point (Minimum) NE	Autoignition Temperature NE		Test Mode	LEL NE UEL NE
National Fire Protection Association (NFPA) — Hazard Identification				
Health NL	Flammability NE	Reactivity NE	Basis	

NA = not applicable NL = not listed NE = not established NNR = not normally required

Handling Precautions Use standard safety precautions.
Flammable or Explosive Limits (Approximate Percent by Volume in Air) NE
Extinguishing Media Water, carbon dioxide, dry chemical powder, foam.
Fire Fighting Procedures Firefighters must wear self-contained breathing apparatus and fully protective equipment. Fire water run-off should be diverted from adjacent waterways.
Decomposition Products Under Fire Condition NE
“Empty” Container Warning Use same applicable regulations as formaldehyde.
Unusual Fire and Explosion Hazards Use water spray to disperse vapor.
HEALTH AND HAZARD INFORMATION
Variability Among Individuals NE
Signs and symptoms of overexposure Chemical, physical and toxicological properties are not established for this material. Handle with the care required by good laboratory technique.
Effects of Overexposure Continual contact of the skin may cause discoloration of skin in contact area.
Nature of Hazard and Toxicity Information NL
Pre-existing Medical Conditions which may be Aggravated by Exposure Conditions of the skin.
Threshold Limit Value NL
Health Hazards Possible skin irritant.
Carcinogenicity Carbon black — IARC (animal sufficient evidence; human inadequate evidence).
PRIMARY ROUTES OF ENTRY AND EMERGENCY AND FIRST AID PROCEDURES
Eye Contact Flush eyes with water for at least 15 minutes while holding lids open. Do not remove contact lenses if worn. Contact physician immediately.

NA = not applicable

NL = not listed

NE = not established

NNR = not normally required

<p>Skin Wash affected area with copious amounts of water for at least 15 minutes. Wash contaminated clothing.</p>		
<p>Inhalation Remove to fresh air. Give oxygen or artificial respiration, as needed. Contact emergency personnel</p>		
<p>Ingestion Induce vomiting as directed by medical personnel.</p>		
<p>SEEK MEDICAL TREATMENT IF DISCOMFORT PERSISTS.</p>		
<p>REACTIVITY</p>		
<p>Stability Stable</p>	<p>Incompatibility NE</p>	<p>Hazardous Decomposition Products NE</p>
<p>Conditions to Avoid High temperature</p>	<p>Hazardous Polymerization Will not occur</p>	<p>Materials to Avoid</p>
<p>ENVIRONMENTAL INFORMATION</p>		
<p>Steps to be Taken in Case Material is Released or Spilled Contain spilled liquid with non-combustible materials. This product contains formaldehyde (50-00-0) 0.05% of which is RCRA U122. Fire water run-off should be diverted from adjacent waterways.</p>		
<p>Waste Disposal Method Regualtions – RCRA U122 listed waste. Discard supplied material according to Federal Regulations (40 CFR 261). It is to be determined by the user weather material at the time of disposal is subject to RCRA restrictions.</p>		
<p>Disposal Responsibility for proper disposal of waste lies with the party generating the waste. Transportation, storage and disposal of waste material must comply with 40 CFR 262, 263, 264, 268 and 270. Check with all federal, state and local regulations for applicable requirements.</p>		
<p>Protective Gear Ware gloves, goggles and appropriate clothing during handling. Practice good hygine.</p>		
<p>Precautions to be taken in handling and storage Store material at 25°C. Keep storage container tightly closed. Avoid contact with skin and eyes. Do not inhale dried material. Wash thoroughly after handling. Do not cut, grind, weld, or reuse container unless adequate measures are taken. Do not eat, drink or smoke in storage areas.</p>		
<p>THE FOLLOWING INFORMATION MAY BE USEFUL IN COMPLYING WITH VARIOUS STATE AND FEDERAL LAWS AND REGULATIONS UNDER VARIOUS ENVIRONMENTAL STATUTES.</p>		
<p>Reportable Quantity (RQ), EPA Regulation 40 CFR 302 (CERCLA Section 102) NE</p>		

NA = not applicable NL = not listed NE = not established NNR = not normally required

Threshold Planning Quantity (TPQ), EPA Regulation 40 CFR 355 (SARA Sections 301-304) NNR					
Toxic Chemical Release Reporting, EPA Regulation 40 CFR 372 (SARA Section 313) Ammonia 7664-41-7 <2%					
Hazardous Chemical Reporting, EPA Regulation 40 CFR 370 (SARA Sections 311-312)					
Acute Hazard	Chronic Hazard	Fire Hazard	Pressure Hazard	Reactive Hazard	Not Applicable
NE	NE	NL	NL	NE	
SPECIAL STATE NOTIFICATIONS					
California: This product contains a substance known to the state of California to cause cancer.					
PROTECTION AND PRECAUTIONS					
Ventilation Mechanical ventilation sufficient to keep below TLVs					
Respiratory Protection OSHA/MHSA approved respirator if needed.					
Protective Gloves Rubber					
Eye Protection Safety goggles.					
Other Protective Equipment Safety shower, eye bath.					

TRANSPORTATION AND OSHA RELATED LABEL INFORMATION	
Transportation Incident Information NL	
U.S. DOT Hazardous Materials Shipping Description Non-Regulate, dye	
OSHA Required Label Information NL	

TRIANGLE BIOMEDICAL SCIENCES (TBS) provides the information contained herein in good faith, but makes no representation as to its comprehensiveness or accuracy. Individuals receiving this information must exercise their independent judgement in determining its appropriateness for a particular purpose. TBS makes no representation or warranties, either expressed or implied of merchantability, fitness for particular purposes with respect to the information set forth herein or to which the information refers.

NA = not applicable NL = not listed NE = not established NNR = not normally required

Accordingly, TBS will not be responsible for damages resulting from the use of or reliance upon this information.

NA = not applicable

NL = not listed

NE = not established

NNR = not normally required