



## Material Safety Data Sheet

Product No. 19451 Toluidine Blue O, Certified, CI#: 52040

Issue Date (07-24-08)

Review Date (05-22-12)

### Section 1: Product and Company Identification

Product Name: Toluidine Blue O, Certified, CI#: 52040

Synonym: Tolonium Chloride, Basic Blue 17

Chemical Name: 3-Amino-7-(dimethylamino)-2-Methylphenothiazin-5-ium Chloride

Chemical Family: Thiazin Dye

Chemical Formula: C<sub>15</sub>H<sub>16</sub>N<sub>3</sub>S.Cl

#### Company Name

Ted Pella, Inc., P.O. Box 492477, Redding, CA 96049-2477

Domestic Phone (800) 237-3526 (Mon-Thu. 6:00AM to 4:30PM PST; Fri 6:00AM to 4:00PM PST)

International Phone (01) (530) 243-2200 (Mon-Thu. 6:00AM to 4:30PM PST; Fri 6:00AM to 4:00PM PST)

Chemtrec Emergency Number 1-800-424-9300 24 hrs a day.

### Section 2: Composition / Information on Ingredients

Principle Hazardous Component(s) (chemical and common name(s)) (Cas. No)	%	OSHA PEL mg/m <sup>3</sup>	ACGIH TLV mg/m <sup>3</sup>	NTP	IARC	OSHA regulated
Toluidine Blue O (92-31-9)	100	NE	NE	No	No	No

### Section 3: Hazard Identification

#### Emergency overview

Appearance: Dark green powder.

Immediate effects: Hazardous in case of skin contact (irritant), of eye contact (irritant), of inhalation. Slightly hazardous in case of skin contact. To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

#### Potential health effects

Primary Routes of entry: Inhalation, ingestion, eye and skin contact.

Target Organs: Blood, central nervous system.

Signs and Symptoms of Overexposure: ND

Eyes: Hazardous in case of skin contact (irritant), of eye contact (irritant), of inhalation.

Skin: Slightly hazardous in case of skin contact.

Ingestion: May cause irritation of the digestive tract. May be harmful if swallowed.

Inhalation: Hazardous in case of inhalation.

Chronic Exposure: Laboratory experiments have resulted in mutagenic effects. Chronic exposure may cause blood effects. Exposure to high concentrations may cause central nervous system depression.

Chemical Listed As Carcinogen Or Potential Carcinogen: No

See Toxicological Information (Section 11)

**Potential environmental effects**

See Ecological Information (Section 12)

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**Section 4: First Aid Measures**

**If accidental overexposure is suspected**

Eye(s) Contact: Check for and remove any contact lenses. Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. Cold water may be used. Do not use an eye

ointment. Seek medical attention

Skin Contact: After contact with skin, wash immediately with plenty of water. Gently and thoroughly wash the contaminated skin with running water and non-abrasive soap. Be particularly

careful to clean folds, crevices, creases and groin. Cold water may be used. Cover the irritated skin with an emollient. If irritation persists, seek medical attention. Wash contaminated clothing before reusing.

Inhalation: Allow the victim to rest in a well ventilated area. Seek immediate medical attention.

Ingestion: Do not induce vomiting. Loosen tight clothing such as a collar, tie, belt or waistband. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek immediate medical attention.

**Note to physician**

Treatment: Treat symptomatically and supportively.

Medical Conditions generally Aggravated by Exposure: Repeated or prolonged exposure is not known to aggravate medical condition.

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**Section 5: Fire Fighting Measures**

Flash Point: ND

Flammable Limits: ND

Auto-ignition point: ND

Fire Extinguishing Media: Small Fire: Use dry chemical powder. Large Fire: Use water spray, fog or foam. Do not use water jet.

Special Fire Fighting Procedures: As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear.

Unusual Fire and Explosion Hazards: ND

Hazardous combustion products: May be combustible at high temperature. These products are carbon oxides (CO, CO<sub>2</sub>), nitrogen oxides (NO, NO<sub>2</sub>...), sulfur oxides (SO<sub>2</sub>, SO<sub>3</sub>...).

DOT Class: Not regulated.

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## **Section 6: Accidental Release Measures**

Steps to be Taken in Case Material is Released or Spilled: Small spill: Use appropriate tools to put the spilled solid in a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and wipe up. Large spill: Consult a specialist before handling this product. Use a shovel to put the material into a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and clean up for proper disposal.

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## **Section 7: Handling and Storage**

Precautions to be taken in Handling and Storage: Keep away from heat. Keep away from sources of ignition. Ground all equipment containing material. Do not breathe dust. Wear suitable protective clothing. In case of insufficient ventilation, wear suitable respiratory equipment. If you feel unwell, seek medical attention and show the label when possible. Avoid contact with skin and eyes. Keep container dry and container tightly closed. Combustible materials should be stored away from extreme heat and away from strong oxidizing agents.

Storage temperature: Keep in a cool place.

Storage Pressure: NA

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## **Section 8: Exposure Controls / Personal Protection**

### **Engineering Controls**

Ventilation required: Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

### **Personal Protection Equipment**

Respiratory protection: Dust respirator. Be sure to use an approved/certified respirator or equivalent.

Protective gloves: Wear protective impervious chemical gloves.

Skin protection: Wear lab coat and gloves.

Eye protection: Splash goggles or face shield.

Additional clothing and/or equipment: Eye wash station.

### **Exposure Guidelines**

See Composition/Information on Ingredients (Section2)

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## **Section 9 Physical and Chemical Properties**

Appearance and Physical State: Green (dark) solid powder or flakes.

Odor (threshold): ND

Specific Gravity (H<sub>2</sub>O=1): ND

Vapor Pressure (mm Hg): ND

Vapor Density (air=1): ND

Percent Volatile by volume: ND

Evaporation Rate (butyl acetate=1): ND

Boiling Point: ND

Freezing point / melting point: > 200 °C

pH: ND

Solubility in Water: Partially soluble in cold water, hot water.

Molecular Weight: 305.83 g/mole

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### **Section 10: Stability and Reactivity**

Stability: Stable

Conditions to Avoid: ND

Materials to Avoid (Incompatibility): Strong oxidizing agents.

Hazardous Decomposition Products: These products are carbon oxides (CO, CO<sub>2</sub>), nitrogen oxides (NO, NO<sub>2</sub>...), sulfur oxides (SO<sub>2</sub>, SO<sub>3</sub>...).

Hazardous Polymerization: Will not occur

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### **Section 11: Toxicological Information**

Results of component toxicity test performed: LD<sub>50</sub> Intraperitoneal - rat - 215 mg/kg

Human experience: Has been used as a hemostatic, a biological stain, and a dye for wool and silk. Tolonium chloride has also been used as a diagnostic aid for oral and gastric neoplasm's and in the identification of the parathyroid gland in thyroid surgery.

This product **does not** contain any compounds listed by NTP or IARC or regulated by OSHA as a carcinogen.

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### **Section 12: Ecological Information**

Ecological Information: Toxicity of the products of biodegradation: The products of degradation are more toxic.

Chemical Fate Information: ND

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### **Section 13 Disposal Considerations**

RCRA 40 CFR 261 Classification: ND. Recycle to process, if possible.

Federal, State and local laws governing disposal of materials can differ. Ensure proper disposal compliance with proper authorities before disposal.

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### **Section 14: Transportation Information**

US DOT Information: Proper shipping name: Not regulated.

IATA: Proper shipping name: Not regulated.

IMO: Proper shipping name: Not regulated.

Marine Pollutant: No

Canadian TDG: Not regulated.

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### **Section 15: Regulatory Information**

#### **United States Federal Regulations**

MSDS complies with OSHA's Hazard Communication Rule 29, CFR 1910.1200.

SARA: None

SARA Title III: None

RCRA: None

TSCA: 8(b) Inventory: Toluidine Blue O

CERCLA: None

RTECS: SP5670000

**State Regulations**

California Proposition 65: No

**International Regulations**

Canada WHMIS: CAS# 92-31-9 has a WHMIS classification of D2B. DSL/NDSL:

CAS# 92-31-9 is listed on the DSL List. CAS# 92-31-9 is not listed on the NDSL List.

Europe EINECS Numbers: 202-146-2

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**Section 16: Other Information**

Label Information: Irritant.

European Risk and Safety Phrases: R36/38-Irritating to eyes and skin.

European symbols needed: ND

Canadian WHMIS Symbols: ND

HMIS® Hazard Rating: Health: **2**; Flammability: **1**; Physical Hazard: **0**; Personal

Protection: **E**

NFPA Hazard Rating: Health: **2**; Flammability: **1**; Instability: **0**; Special Hazards **ND**

(0=least, 1=Slight, 2=Moderate, 3=High, 4=Extreme)

**Abbreviations used in this document**

NE= Not established

NA= Not applicable

NIF= No Information Found

ND= No Data

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**Disclaimer**

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