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**MSDS****Material Safety Data Sheet**

From: Mallinckrodt Baker, Inc.  
222 Red School Lane  
Phillipsburg, NJ 08865



24 Hour Emergency Telephone: 800-369-2151  
CHEMTREC: 1-800-424-9300

National Response in Canada  
CANUTEC: 015-893-4060

Outside U.S. and Canada  
Chemtrec: 202 488 7816

NOTE: CHEMTREC, CANUTEC and national  
Response Center emergency numbers to be  
used only in the event of chemical emergencies  
involving a spill, loss, fire, exposure or accident  
involving chemicals

All non-emergency questions should be directed to Customer Service (1-800-582-2537) for assistance

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## Toluidine Blue O

MSDS Number: T4212 --- Effective Date: 06/16/97

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### 1. Product Identification

Synonyms: C.I. 52040; Tolonium Chloride

CAS No.: 92-31-9

Molecular Weight: 305.83

Chemical Formula: C15H16ClN3S

Product Codes: W143, W144

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### 2. Composition/Information on Ingredients

| Ingredient       | CAS No  | Percent   | Hazardous |
|------------------|---------|-----------|-----------|
| Toluidine Blue O | 92-31-9 | 90 - 100% | Yes       |

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### 3. Hazards Identification

#### Emergency Overview

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**WARNING! HARMFUL IF SWALLOWED, INHALED OR ABSORBED  
THROUGH SKIN. CAUSES IRRITATION.**

#### Potential Health Effects

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**Inhalation:**

None identified.

**Ingestion:**

None identified.

**Skin Contact:**

None identified.

**Eye Contact:**

None identified.

**Chronic Exposure:**

No information found.

**Aggravation of Pre-existing Conditions:**

No information found.

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## 4. First Aid Measures

**Inhalation:**

If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Prompt action is essential.

**Ingestion:**

Induce vomiting immediately as directed by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention.

**Skin Contact:**

In case of contact, flush skin with water.

**Eye Contact:**

In case of eye contact, immediately flush with plenty of water for at least 15 minutes.

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## 5. Fire Fighting Measures

**Fire:**

Not expected to be a fire hazard.

**Explosion:**

No information found.

**Fire Extinguishing Media:**

Use extinguishing media appropriate for surrounding fire.

**Special Information:**

Firefighters should wear proper protective equipment and self-contained breathing apparatus with full facepiece operated in positive pressure mode.

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## 6. Accidental Release Measures

Wear self-contained breathing apparatus and full protective clothing. With clean shovel, carefully place material into clean, dry container and cover; remove from area. Flush spill area with water.

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## 7. Handling and Storage

Keep container tightly closed. Suitable for any general chemical storage area. Containers of this material may be hazardous when empty since they retain product residues (dust, solids); observe all warnings and precautions listed for the product.

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## 8. Exposure Controls/Personal Protection

**Airborne Exposure Limits:**

None established.

**Ventilation System:**

A system of local and/or general exhaust is recommended to keep employee exposures as low as possible. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Please refer to the ACGIH document, *Industrial Ventilation, A Manual of Recommended Practices*, most recent edition, for details.

**Personal Respirators (NIOSH Approved):**

For conditions of use where exposure to the dust or mist is apparent, a half-face dust/mist respirator may be worn. For emergencies or instances where the exposure levels are not known, use a full-face positive-pressure, air-supplied respirator. WARNING: Air-purifying respirators do not protect workers in oxygen-deficient atmospheres.

**Skin Protection:**

Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.

**Eye Protection:**

Use chemical safety goggles and/or full face shield where dusting or splashing of solutions is possible. Maintain eye wash fountain and quick-drench facilities in work area.

**Other Control Measures:**

There is insufficient data in the published literature to assign complete numerical SAF-T-DATA\* ratings and laboratory protective equipment for this product. Special precautions must be used in storage, use and handling. Protective equipment for laboratory bench use should be chosen using professional judgment based on the size and type of reaction or test to be conducted and the available ventilation, with overriding consideration to minimize contact with the chemical.

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## 9. Physical and Chemical Properties

**Appearance:**

Dark green Powder.

**Odor:**

No information found.

**Solubility:**

Moderate (1-10%)

**Specific Gravity:**

No information found.

**pH:**

No information found.

**% Volatiles by volume @ 21C (70F):**

0

**Boiling Point:**

No information found.

**Melting Point:**

No information found.

**Vapor Density (Air=1):**

Not applicable.

**Vapor Pressure (mm Hg):**

Not applicable.

**Evaporation Rate (BuAc=1):**

No information found.

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## 10. Stability and Reactivity

**Stability:**

Stable under ordinary conditions of use and storage.

**Hazardous Decomposition Products:**

No information found.

**Hazardous Polymerization:**

Will not occur.

**Incompatibilities:**

No information found.

**Conditions to Avoid:**

No information found.

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## 11. Toxicological Information

|                            |                      |             |               |
|----------------------------|----------------------|-------------|---------------|
| -----\Cancer Lists\-----   |                      |             |               |
| Ingredient                 | ---NTP Carcinogen--- |             | IARC Category |
|                            | Known                | Anticipated |               |
| -----                      |                      |             |               |
| Toluidine Blue O (92-31-9) | No                   | No          | None          |

## 12. Ecological Information

**Environmental Fate:**

No information found.

**Environmental Toxicity:**

No information found.

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## 13. Disposal Considerations

Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste disposal facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

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## 14. Transport Information

Not regulated.

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## 15. Regulatory Information

| -----\Chemical Inventory Status - Part 1\-----                  |            |            |            |                |
|-----------------------------------------------------------------|------------|------------|------------|----------------|
| Ingredient                                                      | TSCA       | EC         | Japan      | Australia      |
| Toluidine Blue O (92-31-9)                                      | Yes        | Yes        | No         | Yes            |
| -----\Chemical Inventory Status - Part 2\-----                  |            |            |            |                |
| Ingredient                                                      | Korea      | --Canada-- |            | Phil.          |
|                                                                 |            | DSL        | NDSL       |                |
| Toluidine Blue O (92-31-9)                                      | Yes        | Yes        | No         | Yes            |
| -----\Federal, State & International Regulations - Part 1\----- |            |            |            |                |
| Ingredient                                                      | -SARA 302- |            | -SARA 313- |                |
|                                                                 | RQ         | TPQ        | List       | Chemical Catg. |
| Toluidine Blue O (92-31-9)                                      | No         | No         | No         | No             |
| -----\Federal, State & International Regulations - Part 2\----- |            |            |            |                |
| Ingredient                                                      | CERCLA     | -RCRA-     |            | -TSCA-         |
|                                                                 |            | 261.33     | 8(d)       |                |
| Toluidine Blue O (92-31-9)                                      | No         | No         | No         | No             |

Chemical Weapons Convention: No      TSCA 12(b): No      CDTA: No  
 SARA 311/312: Acute: No      Chronic: No      Fire: No      Pressure: No  
 Reactivity: No      (Pure / Solid)

**Australian Hazchem Code:** No information found.

**Poison Schedule:** No information found.

### WHMIS:

This MSDS has been prepared according to the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

## 16. Other Information

### Label Hazard Warning:

WARNING! HARMFUL IF SWALLOWED, INHALED OR ABSORBED THROUGH SKIN. CAUSES IRRITATION.

### Label Precautions:

No SAF-T-DATA Ratings have been developed for this product. Read and follow all warnings, precautions, instructions and other safety and handling information on the label and MSDS. Avoid contact with eyes, skin, clothing. Keep in tightly closed container. Wash thoroughly after handling.

**Label First Aid:**

If swallowed, induce vomiting immediately as directed by medical personnel. Never give anything by mouth to an unconscious person. If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Prompt action is essential. In case of contact, immediately flush eyes or skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse.

**Product Use:**

Laboratory Reagent.

**Revision Information:**

Pure. New 16 section MSDS format, all sections have been revised.

**Disclaimer:**

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