

**U.S. DEPARTMENT OF LABOR  
Occupational Safety and Health Administration**

Form Approved  
OMB No. 44-R1287

# MATERIAL SAFETY DATA SHEET

Required under USDL Safety and Health Regulations for Ship Repairing,  
Shipbuilding, and Shipbreaking (29 CFR 1915, 1916, 1917)

## SECTION I

|                                                            |                |                                |
|------------------------------------------------------------|----------------|--------------------------------|
| <b>MANUFACTURER'S NAME</b>                                 |                | <b>EMERGENCY TELEPHONE NO.</b> |
| UNITED STATES BIOCHEMICAL CORPORATION                      |                | 216-765-8217                   |
| <b>ADDRESS (Number, Street, City, State, and ZIP Code)</b> |                |                                |
| P.O. BOX 22400 Cleveland, Ohio 44122 216-765-5000          |                |                                |
| <b>CHEMICAL NAME AND SYNONYMS</b>                          |                | <b>TRADE NAME AND SYNONYMS</b> |
| Methylene Blue (Chloride)                                  |                | BASIC BLUE 9, Swiss blue       |
| <b>CHEMICAL FAMILY</b>                                     | <b>FORMULA</b> |                                |
| Thionine                                                   | C16 H18 Cl N3  |                                |

## SECTION II - HAZARDOUS INGREDIENTS

| PAINTS, PRESERVATIVES, & SOLVENTS                            | % | TLV (Units) | ALLOYS AND METALLIC COATINGS              | %        | TLV (Units)        |
|--------------------------------------------------------------|---|-------------|-------------------------------------------|----------|--------------------|
| PIGMENTS                                                     |   |             | BASE METAL                                |          |                    |
| CATALYST                                                     |   |             | ALLOYS                                    |          |                    |
| VEHICLE                                                      |   |             | METALLIC COATINGS                         |          |                    |
| SOLVENTS                                                     |   |             | FILLER METAL<br>PLUS COATING OR CORE FLUX |          |                    |
| ADDITIVES                                                    |   |             | OTHERS                                    |          |                    |
| OTHERS                                                       |   |             |                                           |          |                    |
| <b>HAZARDOUS MIXTURES OF OTHER LIQUIDS, SOLIDS, OR GASES</b> |   |             |                                           | <b>%</b> | <b>TLV (Units)</b> |
| Section II not applicable                                    |   |             |                                           |          |                    |
|                                                              |   |             |                                           |          |                    |
|                                                              |   |             |                                           |          |                    |
|                                                              |   |             |                                           |          |                    |

## SECTION III - PHYSICAL DATA

|                                |         |                                            |         |
|--------------------------------|---------|--------------------------------------------|---------|
| <b>BOILING POINT (°F.)</b>     | No data | <b>SPECIFIC GRAVITY (H<sub>2</sub>O=1)</b> | No data |
| <b>VAPOR PRESSURE (mm Hg.)</b> | No data | <b>PERCENT VOLATILE BY VOLUME (%)</b>      | No data |
| <b>VAPOR DENSITY (AIR=1)</b>   | No data | <b>EVAPORATION RATE (— = 1)</b>            | No data |
| <b>SOLUBILITY IN WATER</b>     | 1g/25ml |                                            |         |
| <b>APPEARANCE AND ODOR</b>     |         |                                            |         |
| dark green odorless crystals   |         |                                            |         |

## SECTION IV - FIRE AND EXPLOSION HAZARD DATA

|                                                                                        |         |                         |     |     |
|----------------------------------------------------------------------------------------|---------|-------------------------|-----|-----|
| <b>FLASH POINT (Method used)</b>                                                       | No data | <b>FLAMMABLE LIMITS</b> | LEL | UEL |
|                                                                                        |         | No data                 |     |     |
| <b>EXTINGUISHING MEDIA</b>                                                             |         |                         |     |     |
| Suitable to extinguish supporting fire                                                 |         |                         |     |     |
| <b>SPECIAL FIRE FIGHTING PROCEDURES</b>                                                |         |                         |     |     |
| Wear self contained breathing apparatus                                                |         |                         |     |     |
| <b>UNUSUAL FIRE AND EXPLOSION HAZARDS</b>                                              |         |                         |     |     |
| May form sulfur dioxide if involved in fire                                            |         |                         |     |     |
| As with all organic dusts, may be explosive if mixed with air in critical proportions. |         |                         |     |     |

## SECTION V - HEALTH HAZARD DATA

### THRESHOLD LIMIT VALUE

lowest published toxic level dose (1974) LD<sub>50</sub> 100 mg/kg intraperitoneal mouse  
**EFFECTS OF OVEREXPOSURE** Unknown - see attached.

### EMERGENCY AND FIRST AID PROCEDURES

Wash infected area/contact physician. See attached.

## SECTION VI - REACTIVITY DATA

### STABILITY

UNSTABLE

### CONDITIONS TO AVOID

STABLE

X

### INCOMPATIBILITY (Materials to avoid)

caustic alkali; dichromates; alkali iodides; reducing agents

### HAZARDOUS DECOMPOSITION PRODUCTS

possible SO<sub>2</sub>; NO<sub>x</sub>; aromatics

### HAZARDOUS POLYMERIZATION

MAY OCCUR

### CONDITIONS TO AVOID

WILL NOT OCCUR

X

## SECTION VII - SPILL OR LEAK PROCEDURES

### STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

Wear appropriate protective clothing. Sweep or vacuum up material.

### WASTE DISPOSAL METHOD

Bury in landfill, in accordance with local, state and federal regulations.

## SECTION VIII - SPECIAL PROTECTION INFORMATION

### RESPIRATORY PROTECTION (Specify type)

Dust Mask

### VENTILATION

LOCAL EXHAUST

SPECIAL

MECHANICAL (General)

OTHER

X

### PROTECTIVE GLOVES

Recommended

### EYE PROTECTION

Safety glasses

### OTHER PROTECTIVE EQUIPMENT

## SECTION IX - SPECIAL PRECAUTIONS

### PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING

Normal care required for chemical reagents.

### OTHER PRECAUTIONS

## USE PRODUCT INFORMATION

METHYLENE BLUE

MSDS DATA

HEALTH EFFECTS

SKIN: No toxicity data found, but contact may cause bluish skin, irritation and/or allergic reaction.

EYES: No toxicity data found, but contact may cause irritation and slight corneal injury.

INHALATION: No toxicity data found, but excessive dust may cause irritation if inhaled.

INGESTION: May cause nausea, abdominal pain, chest pain, headache, profuse sweating, mental confusion, painful urination and bluish skin, urine, feces and saliva. Glucose - 6 - phosphate dehydrogenase patients may be susceptible to delayed hemolysis and methemoglobinemia.

FIRST AID

INHALATION: Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Keep victim quiet and warm. Call the poison control center or physician immediately.

SKIN: Flush with water, then wash thoroughly with soap and water. Remove contaminated clothing and wash before reuse. Call physician if irritation persists.

EYES: Flush with water for 15 minutes and call physician if irritation persists.

INGESTION: Drink water and call collect (216)765-8217 or consult a physician immediately. Avoid alcoholic beverages. Never give anything by mouth to an unconscious person.

FOR 24 HOUR EMERGENCY MEDICAL INFORMATION CALL COLLECT (216)765-8217