

MATERIAL SAFETY DATA SHEET

BROMOTHYMOL BLUE

PRODUCT CODE NUMBER(S): 2284-5, 2288-5

PRODUCT IDENTIFICATION

Chemical Name and Synonyms: *Bromothymol blue indicator*

Chemical Family: *Sulphonphthalein dye, triphenylmethane derivative*

Chemical Formula: $C_{27}H_{28}Br_2O_5S$ OR $C_{27}H_{27}Br_2O_5SNa$

Product Use: *Laboratory reagent - pH Indicator*

Manufacturer's Name and Address:

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HAZARDOUS INGREDIENTS OF MATERIALS

<i>Ingredients</i>	<i>%</i>	<i>TLV Units</i>	<i>CAS No.</i>
<i>Bromothymol blue</i>	<i><99</i>	<i>Not established</i>	<i>79-59-5</i>
<i>OR</i>			
<i>Bromothymol blue, sodium salt</i>	<i><99</i>	<i>Not established</i>	<i>34722-90-2</i>

PHYSICAL DATA

Physical State: *Solid*

Odour and Appearance: *Yellow-white or cream-coloured, crystalline solid; odourless*

Odour Threshold (ppm): *No warning properties, odourless*

Vapour Pressure (mm Hg): *Probably zero*

Vapour Density (Air = 1): *Not applicable*

Evaporation Rate: *Probably zero*

Boiling Point (degrees C): *Not applicable*

Melting Point (degrees C): *204°C (decomposes)*

pH: *Not available*

Specific Gravity: *Not available*

Coefficient of Water/Oil distribution: *Not available*

SHIPPING DESCRIPTION

UN: *Not regulated*

T.D.G. Class: *Not regulated*

Pkg. Group: *Not regulated*

REACTIVITY DATA

Chemical Stability: *Stable.*

Incompatibility with other substances: *May react rapidly and violently, with risk of fire or explosion, with strong oxidizers. May react vigorously or violently with strong reducing agents.*

Reactivity: *Avoid extreme heat, ignition sources, generation of dust.*

Hazardous Decomposition Products: *None known*

FIRE AND EXPLOSION DATA

Flammability: *May be combustible as dust. Can probably burn if strongly heated. Mixtures of dust and air may ignite or explode under certain conditions.*

Extinguishing Media: *Use an extinguisher appropriate to the surrounding material that is burning. Use water as spray or fog to cool containers, absorb heat, disperse vapours. Thermal combustion products may be hazardous; firefighters must wear protective equipment and clothing sufficient to prevent inhalation of dusts or fumes and contact with skin and eyes (Bunker Gear will not be sufficient, chemical splash suit may be necessary).*

Flash Point (Method Used): *Not applicable (does not form vapour)*

Autoignition Temperature: *Not applicable*

Upper Flammable Limit (% by volume): *Not applicable*

Lower Flammable Limit (% by volume): *Not applicable*

Hazardous Combustion Products: *CO_x, SO_x, bromides, phenols, acrid smoke, fumes.*

Sensitivity to Impact: *None identified*

Sensitivity to Static discharge: *Like other organic dusts, may accumulate static charge, and, under certain conditions, can explode in contact with electrostatic spark or other ignition source.*

TOXICOLOGICAL PROPERTIES AND HEALTH DATA

To the best of our knowledge, the physical, chemical and toxicological properties of this substance have not yet been thoroughly investigated.

Toxicological Data:

LD₅₀: *Not available*

LC₅₀: *Not available*

Effects of Acute Exposure to Product:

Inhaled: *Essentially non-toxic. Very low tendency to form vapour. Inhalation of dust may be irritating, causing coughing, mild temporary irritation.*

In contact with skin: *No human or animal information available. Dust not expected to cause irritation. May cause staining. Probably not absorbed through skin.*

In contact with eyes: *No human or animal information available. Dust may cause mild mechanical irritation.*

Ingested: *No human or animal information available. Large doses may cause nausea, vomiting, and diarrhea.*

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Effects of Chronic Exposure to Product:

Some people may develop allergic reactions to this material. No specific information is available, but rare allergic reactions occur to a related chemical, phenolphthalein.

Carcinogenicity: No human or animal information available

Teratogenicity: No human or animal information available

Reproductive Effects: No human or animal information available

Mutagenicity: No human or animal information available. Not mutagenic in tests in bacteria.

Synergistic Products: None known

Ingestion: If victim is alert and not convulsing, rinse mouth thoroughly with water and give 1 to 2 glasses of water to drink to dilute. If victim feels unwell, or if a very large amount has been ingested, get medical attention.

REFERENCES USED

CCINFO disc

Budavari: The Merck Index, 12th ed., 1997

Sax, Lewis: Hawley's Condensed Chemical Dictionary, 11th ed., 1987

Suppliers' Material Safety Data Sheets

ADDITIONAL INFORMATION

Date Issued: November 27, 1991

Revision: September 2009

MSDS: 2284-5, 2288-5

Proposed WHMIS Designation: Not controlled. Not required to be updated every three years (WHMIS 1992, B-40, Section 29.2)

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PREVENTIVE MEASURES

Engineering Controls: Local exhaust ventilation recommended

Respiratory Protection: None usually required. Dust mask in dusty conditions. In high or unknown concentrations, as in fire or spill conditions, NIOSH approved respirator or self-contained breathing apparatus.

Eye Protection: Chemical safety glasses

Skin Protection: Plastic or rubber gloves. Other protective clothing sufficient to limit contact.

Other Personal Protective Equipment: Safety shower and eye-wash fountain in work area.

Leak and Spill Procedure: Restrict access to area. Cleanup personnel must be trained in the handling of hazardous substances, and must wear protective equipment and clothing sufficient to prevent inhalation of dust or fumes and contact with skin and eyes. Avoid generating dust. Wet, or mix with inert absorbent, transfer carefully into covered containers. Wash site of spillage thoroughly with water and detergent.

Waste Disposal: Follow all federal, provincial and local regulations for disposal.

Handling Procedures and Equipment: Personnel working with this material should be thoroughly trained regarding its hazards and its safe use. Use the smallest amount possible for the purpose, in a designated area with adequate ventilation. Avoid generating dust or mist. If dust is present, treat as fire and explosion hazard; eliminate heat and ignition sources, post "No Smoking" signs. Keep work area clean and free of extraneous materials. Avoid repeated or prolonged exposure. Wash thoroughly after handling.

Storage Requirements: Store in suitable, labelled containers, in a cool, dry, well-ventilated area, out of direct sunlight. Keep containers tightly closed when not in use and when empty. Store away from incompatible materials.

FIRST AID MEASURES**Specific Measures:**

Eyes: Do not allow victim to rub eyes. Let eyes to water naturally for a few minutes. If particles/dusts are not dislodged, flush eyes thoroughly with gently running water, holding eyelids open while flushing, for five (5) minutes or until chemical is removed. Do not attempt to manually remove any remaining particles. Get medical advice if irritation develops.

Skin: Wash skin with plenty of running water for five (5) minutes or until chemical is removed. If irritation persists, get medical attention.

Inhalation: Remove to fresh air. Get medical attention for any breathing difficulty.