

# BROMOCRESOL PURPLE

GHS Safety Data Sheet

Version No:2.0

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## Section 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

### PRODUCT NAME

BROMOCRESOL PURPLE

### OTHER NAMES

C<sub>6</sub>H<sub>4</sub>-SO<sub>2</sub>-OC(C<sub>6</sub>H<sub>2</sub>-3-CH<sub>3</sub>-5-Br-4-OH)<sub>2</sub>, C<sub>6</sub>H<sub>4</sub>-SO<sub>2</sub>-OC(C<sub>6</sub>H<sub>2</sub>-3-CH<sub>3</sub>-5-Br-4-OH)<sub>2</sub>, C<sub>21</sub>-H<sub>16</sub>-O<sub>5</sub>-SBr<sub>2</sub>, "dibromo-o-cresol sulfonphthalein", "dibromo-o-cresol sulfonphthalein", indicator, "bromocresol purple", "5, 5'-dibromo-orthocresolsulfonphthalein", "5, 5'-dibromo-orthocresolsulfonphthalein", "5, 5'-dibromo-orthocresolsulphonphthalein", "5, 5'-dibromo-orthocresolsulphonphthalein"

### PRODUCT USE

Used in small quantities as an acid-base (pH) indicator in the range of 5.2 (yellow) to 6.8 (purple) as the water soluble sodium salt, in dilute sodium hydroxide, or in ethyl alcohol.

### SUPPLIER

Company: S D FINE- CHEM LIMITED

Address:

315- 317, T.V. INDUSTRIAL ESTATE,

248, WORLI,

MUMBAI- 400030.INDIA.

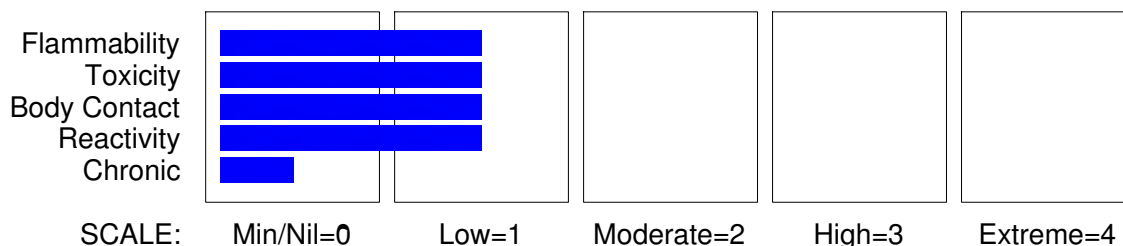
technical@sdfine.com

Telephone: 91- 22- 24959898

Telephone: 91- 22- 24959899

Fax: 91- 22- 24937232

### HAZARD RATINGS



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## Section 2 - HAZARDS IDENTIFICATION

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### EMERGENCY OVERVIEW

#### HAZARD

- Not hazardous
- No hazards determined by using GHS criteria

#### PRECAUTIONARY STATEMENTS

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## Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

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| NAME               | CAS RN   | %   |
|--------------------|----------|-----|
| bromocresol purple | 115-40-2 | >98 |

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## Section 4 - FIRST AID MEASURES

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### SWALLOWED

- Immediately give a glass of water.
- First aid is not generally required. If in doubt, contact a Poisons Information Centre or a doctor.

### EYE

- If this product comes in contact with the eyes:
- Wash out immediately with fresh running water.
  - Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids.
  - If pain persists or recurs seek medical attention.
  - Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.

### SKIN

- If skin contact occurs:
- Immediately remove all contaminated clothing, including footwear.
  - Flush skin and hair with running water (and soap if available).
  - Seek medical attention in event of irritation.

### INHALED

- If dust is inhaled, remove from contaminated area.
- Encourage patient to blow nose to ensure clear passage of breathing.
- If irritation or discomfort persists seek medical attention.

### NOTES TO PHYSICIAN

Treat symptomatically.

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## Section 5 - FIRE FIGHTING MEASURES

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### EXTINGUISHING MEDIA

- Foam.
- Dry chemical powder.
- BCF (where regulations permit).
- Carbon dioxide.
- Water spray or fog - Large fires only.

### FIRE FIGHTING

Alert Fire Brigade and tell them location and nature of hazard.

- Wear breathing apparatus plus protective gloves.
- Prevent, by any means available, spillage from entering drains or water courses.

DO NOT approach containers suspected to be hot.

If safe to do so, remove containers from path of fire.

Use fire fighting procedures suitable for surrounding area.

Cool fire exposed containers with water spray from a protected location.

### FIRE/EXPLOSION HAZARD

- Solid which exhibits difficult combustion or is difficult to ignite.
- Avoid generating dust, particularly clouds of dust in a confined or unventilated space as dusts may form an explosive mixture with air, and any source of ignition, i.e. flame or spark, will cause fire or explosion. Dust clouds generated by the fine grinding of the solid are a particular hazard; accumulations of fine dust may burn rapidly and fiercely if ignited.
- Dry dust can also be charged electrostatically by turbulence, pneumatic transport, pouring, in exhaust ducts and during transport.
- Build-up of electrostatic charge may be prevented by bonding and grounding.
- Powder handling equipment such as dust collectors, dryers and mills may require additional protection measures such as explosion venting.
- All movable parts coming in contact with this material should have a speed of less than 1-metre/sec.

Combustion products include: sulfur oxides (SO<sub>x</sub>) and hydrogen bromide.

### FIRE INCOMPATIBILITY

Avoid contamination with oxidising agents i.e. nitrates, oxidising acids, chlorine bleaches, pool chlorine etc. as ignition may result.

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## Section 6 - ACCIDENTAL RELEASE MEASURES

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### EMERGENCY PROCEDURES

#### MINOR SPILLS

- Clean up all spills immediately.
- Avoid contact with skin and eyes.
- Wear impervious gloves and safety glasses.
- Use dry clean up procedures and avoid generating dust.
- Sweep up or
- Vacuum up (consider explosion-proof machines designed to be grounded during storage and use).
- Place spilled material in clean, dry, sealable, labelled container.

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## Section 6 - ACCIDENTAL RELEASE MEASURES

### MAJOR SPILLS

- Clear area of personnel and move upwind.
- Alert Fire Brigade and tell them location and nature of hazard.
- Control personal contact by using protective equipment and dust respirator.
- Prevent spillage from entering drains, sewers or water courses.
- Avoid generating dust.
- Sweep, shovel up. Recover product wherever possible.
- Put residues in labelled plastic bags or other containers for disposal.
- If contamination of drains or waterways occurs, advise emergency services.

### EMERGENCY RESPONSE PLANNING GUIDELINES (ERPG)

The maximum airborne concentration below which it is believed that nearly all individuals could be exposed for up to one hour WITHOUT experiencing or developing

life-threatening health effects is:

bromocresol purple 250 mg/m<sup>3</sup>

irreversible or other serious effects or symptoms which could impair an individual's ability to take protective action is:

bromocresol purple 50 mg/m<sup>3</sup>

other than mild, transient adverse effects without perceiving a clearly defined odour is:

bromocresol purple 30 mg/m<sup>3</sup>

The threshold concentration below which most people will experience no appreciable risk of health effects:

bromocresol purple 10 mg/m<sup>3</sup>

American Industrial Hygiene Association (AIHA)

Ingredients considered according to the following cutoffs

|                 |          |               |         |
|-----------------|----------|---------------|---------|
| Very Toxic (T+) | >= 0.1%  | Toxic (T)     | >= 3.0% |
| R50             | >= 0.25% | Corrosive (C) | >= 5.0% |
| R51             | >= 2.5%  |               |         |
| else            | >= 10%   |               |         |

where percentage is percentage of ingredient found in the mixture

### SAFE STORAGE WITH OTHER CLASSIFIED CHEMICALS



+: May be stored together

O: May be stored together with specific preventions

X: Must not be stored together

Personal Protective Equipment advice is contained in Section 8 of the MSDS.

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## Section 7 - HANDLING AND STORAGE

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### PROCEDURE FOR HANDLING

- Limit all unnecessary personal contact.
- Wear protective clothing when risk of exposure occurs.
- Use in a well-ventilated area.
- When handling DO NOT eat, drink or smoke.
- Always wash hands with soap and water after handling.
- Avoid physical damage to containers.
- Use good occupational work practice.
- Observe manufacturer's storing and handling recommendations.

### SUITABLE CONTAINER

Packaging as recommended by manufacturer.

- Check that containers are clearly labelled.

Glass container.  
Plastic container.  
Polylined drum.

### STORAGE INCOMPATIBILITY

Segregate from strong acids, strong bases, strong reducing agents and strong oxidising agents.

### STORAGE REQUIREMENTS

Observe manufacturer's storing and handling recommendations.  
Store in original containers.  
Keep containers securely sealed.  
No smoking, naked lights, heat or ignition sources.  
Store in a cool, dry place.  
Store in a well-ventilated area.  
Store away from incompatible materials.  
Store in an upright position.  
Protect containers against physical damage.  
Check regularly for spills and leaks.

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## Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

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### EXPOSURE CONTROLS

The following purple materials had no OELs on our records

- bromocresol purple:

CAS:115- 40- 2 CAS:62625- 30- 3 CAS:644950- 41- 4  
CAS:99792- 85- 5 CAS:518- 50- 3

### MATERIAL DATA

These "dusts" have little adverse effect on the lungs and do not produce toxic effects or organic disease. Although there is no dust which does not evoke some cellular response at sufficiently high concentrations, the cellular response caused by P.N.O.C.s has the following characteristics:

- the architecture of the air spaces remain intact,
- scar tissue (collagen) is not synthesised to any degree,

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## Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

- tissue reaction is potentially reversible.

Extensive concentrations of P.N.O.C.s may:

- seriously reduce visibility,
- cause unpleasant deposits in the eyes, ears and nasal passages,
- contribute to skin or mucous membrane injury by chemical or mechanical action, per se, or by the rigorous skin cleansing procedures necessary for their removal. [ACGIH]

This limit does not apply:

- to brief exposures to higher concentrations
- nor does it apply to those substances that may cause physiological impairment at lower concentrations but for which a TLV has as yet to be determined.

This exposure standard applies to particles which

- are insoluble or poorly soluble\* in water or, preferably, in aqueous lung fluid (if data is available) and
- have a low toxicity (i.e.. are not cytotoxic, genotoxic, or otherwise chemically reactive with lung tissue, and do not emit ionizing radiation, cause immune sensitization, or cause toxic effects other than by inflammation or by a mechanism of lung overload).

### PERSONAL PROTECTION



#### EYE

- Safety glasses.
- Safety glasses with side shields.
- Chemical goggles.
- Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lens or restrictions on use, should be created for each workplace or task. This should include a review of lens absorption and adsorption for the class of chemicals in use and an account of injury experience. Medical and first-aid personnel should be trained in their removal and suitable equipment should be readily available. In the event of chemical exposure, begin eye irrigation immediately and remove contact lens as soon as practicable. Lens should be removed at the first signs of eye redness or irritation - lens should be removed in a clean environment only after workers have washed hands thoroughly. [CDC NIOSH Current Intelligence Bulletin 59].

#### HANDS/FEET

Plastic gloves.  
Rubber gloves.  
Safety footwear.

#### OTHER

- Overalls.
- Barrier cream
- Eyewash unit.

#### RESPIRATOR

Protection Factor  
10 x ES

Half- Face Respirator  
P1 Air- line\*

Full- Face Respirator  
- -

Powered Air Respirator  
PAPR- P1 -

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## Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

|           |             |             |          |
|-----------|-------------|-------------|----------|
| 50 x ES   | Air- line** | P2          | PAPR- P2 |
| 100 x ES  | -           | P3          | -        |
|           |             | Air- line*  | -        |
| 100+ x ES | -           | Air- line** | PAPR- P3 |

\* - Negative pressure demand \*\* - Continuous flow.

The local concentration of material, quantity and conditions of use determine the type of personal protective equipment required.

For further information consult your Occupational Health and Safety Advisor.

### ENGINEERING CONTROLS

General exhaust is adequate under normal operating conditions. If risk of overexposure exists, wear SAA approved respirator. Correct fit is essential to obtain adequate protection. Provide adequate ventilation in warehouse or closed storage areas. Air contaminants generated in the workplace possess varying "escape" velocities which, in turn, determine the "capture velocities" of fresh circulating air required to effectively remove the contaminant.

|                                                                                                                                                                                                                     |                                |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|
| Type of Contaminant:                                                                                                                                                                                                | Air Speed:                     |
| solvent, vapours, degreasing etc., evaporating from tank (in still air)                                                                                                                                             | 0.25- 0.5 m/s (50- 100 f/min)  |
| aerosols, fumes from pouring operations, intermittent container filling, low speed conveyer transfers, welding, spray drift, plating acid fumes, pickling (released at low velocity into zone of active generation) | 0.5- 1 m/s (100- 200 f/min.)   |
| direct spray, spray painting in shallow booths, drum filling, conveyer loading, crusher dusts, gas discharge (active generation into zone of rapid air motion)                                                      | 1- 2.5 m/s (200- 500 f/min)    |
| grinding, abrasive blasting, tumbling, high speed wheel generated dusts (released at high initial velocity into zone of very high rapid air motion).                                                                | 2.5- 10 m/s (500- 2000 f/min.) |

Within each range the appropriate value depends on:

|                                                           |                                    |
|-----------------------------------------------------------|------------------------------------|
| Lower end of the range                                    | Upper end of the range             |
| 1: Room air currents minimal or favourable to capture     | 1: Disturbing room air currents    |
| 2: Contaminants of low toxicity or of nuisance value only | 2: Contaminants of high toxicity   |
| 3: Intermittent, low production.                          | 3: High production, heavy use      |
| 4: Large hood or large air mass in motion                 | 4: Small hood - local control only |

Simple theory shows that air velocity falls rapidly with distance away from the opening of a simple extraction pipe. Velocity generally decreases with the square of distance from the extraction point (in simple cases). Therefore the air speed at the extraction point should be adjusted, accordingly, after reference to distance from the contaminating source. The air velocity at the extraction fan, for example, should be a minimum of 1-2 m/s (200-400 f/min.) for extraction of solvents generated in a tank 2 meters distant from the extraction point. Other mechanical considerations, producing performance deficits

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## Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

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within the extraction apparatus, make it essential that theoretical air velocities are multiplied by factors of 10 or more when extraction systems are installed or used.

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## Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

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### APPEARANCE

Purple or pale yellow powder or crystals; odourless; sparingly soluble in water; soluble in alkaline solutions and alcohol. Usually present as the pure compound (acid) and as the water-soluble monosodium salt.

### PHYSICAL PROPERTIES

Solid.

Does not mix with water.

Molecular Weight: 540.24

Melting Range (°C): 240 (decomposes)

Solubility in water (g/L): Immiscible

pH (1% solution): Slightly acidic.

Volatile Component (%vol): Not applicable.

Relative Vapour Density (air=1): Not applicable.

Lower Explosive Limit (%): Not available.

Autoignition Temp (°C): Not available.

State: Divided solid

Boiling Range (°C): Not available.

Specific Gravity (water=1): Not available.

pH (as supplied): Not applicable

Vapour Pressure (kPa): Not applicable.

Evaporation Rate: Not applicable

Flash Point (°C): Not applicable

Upper Explosive Limit (%): Not available.

Decomposition Temp (°C): 240

## Section 10 - CHEMICAL STABILITY AND REACTIVITY INFORMATION

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### CONDITIONS CONTRIBUTING TO INSTABILITY

- Presence of incompatible materials.
  - Product is considered stable.
  - Hazardous polymerisation will not occur.
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## Section 11 - TOXICOLOGICAL INFORMATION

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### POTENTIAL HEALTH EFFECTS

#### ACUTE HEALTH EFFECTS

#### SWALLOWED

Although ingestion is not thought to produce harmful effects (as classified under EC Directives), the material may still be damaging to the health of the individual, following ingestion, especially where pre-existing organ (e.g liver, kidney) damage is evident. Present definitions of harmful or toxic substances are generally based on doses producing mortality rather than those producing morbidity (disease, ill-health). Gastrointestinal tract discomfort may produce nausea and vomiting. In an occupational setting however, ingestion of insignificant quantities is not thought to be cause for concern.

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## Section 11 - TOXICOLOGICAL INFORMATION

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### EYE

Although the material is not thought to be an irritant (as classified by EC Directives), direct contact with the eye may produce transient discomfort characterised by tearing or conjunctival redness (as with windburn).

The dust may produce eye discomfort causing transient smarting, blinking.

### SKIN

The material is not thought to produce adverse health effects or skin irritation following contact (as classified by EC Directives using animal models). Nevertheless, good hygiene practice requires that exposure be kept to a minimum and that suitable gloves be used in an occupational setting.

### INHALED

The material is not thought to produce adverse health effects or irritation of the respiratory tract (as classified by EC Directives using animal models). Nevertheless, good hygiene practice requires that exposure be kept to a minimum and that suitable control measures be used in an occupational setting.

Persons with impaired respiratory function, airway diseases and conditions such as emphysema or chronic bronchitis, may incur further disability if excessive concentrations of particulate are inhaled.

### CHRONIC HEALTH EFFECTS

Principal routes of exposure are by accidental skin and eye contact and inhalation of generated dusts.

Very rare allergic reactions may occur with a related chemical, phenolphthalein.

No human exposure data available. For this reason health effects described are based on experience with chemically related materials.

As with any chemical product, contact with unprotected bare skin; inhalation of vapour, mist or dust in work place atmosphere; or ingestion in any form, should be avoided by observing good occupational work practice.

## TOXICITY AND IRRITATION

No significant acute toxicological data identified in literature search.

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## Section 12 - ECOLOGICAL INFORMATION

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No data for bromocresol purple.

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## Section 13 - DISPOSAL CONSIDERATIONS

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- Recycle wherever possible or consult manufacturer for recycling options.
- Consult State Land Waste Authority for disposal.
- Bury or incinerate residue at an approved site.
- Recycle containers if possible, or dispose of in an authorised landfill.

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## Section 14 - TRANSPORTATION INFORMATION

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HAZCHEM: None

NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS:UN, IATA,

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## Section 14 - TRANSPORTATION INFORMATION

IMDG

## Section 15 - REGULATORY INFORMATION

### REGULATIONS

No regulations applicable

No data available for bromocresol purple as CAS: 115-40-2, CAS: 62625-30-3, CAS: 644950-41-4, CAS: 99792-85-5, CAS: 518-50-3.

## Section 16 - OTHER INFORMATION

### Denmark Advisory list for selfclassification of dangerous substances

| Substance          | CAS        | Suggested codes |
|--------------------|------------|-----------------|
| bromocresol purple | 115- 40- 2 | N; R51/53       |

### INGREDIENTS WITH MULTIPLE CAS NUMBERS

| Ingredient Name    | CAS                                                               |
|--------------------|-------------------------------------------------------------------|
| bromocresol purple | 115- 40- 2, 62625- 30- 3, 644950- 41- 4, 99792- 85- 5, 518- 50- 3 |

The above information is believed to be accurate and represent the best information currently available to us, but does not represent any warranty expressed or implied of the properties of the product. User should make their own investigation to determine the suitability of the information for their particular purpose.

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