Section 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product name: BROMOPHENOL BLUE INDICATOR
Product code: R-5002-7

1.2. Relevant identified uses of the substance or mixture and uses advised against

1.3. Details of the supplier of the safety data sheet

Company name: Orbeco-Hellige, Inc.
6456 Parkland Drive
Sarasota
Florida
34243
United States
Tel: (941) 756-6410
Email: service@orbeco.com

1.4. Emergency telephone number

Emergency tel: (703) 527-3887

Section 2: Hazards identification

2.1. Classification of the substance or mixture

Classification under CHIP: F: R11; T: R23/24/25; T: R39/23/24/25
Classification under CLP: Acute Tox. 3: H311; Acute Tox. 3: H331; Flam. Liq. 2: H225; STOT SE 1: H370
Most important adverse effects: Highly flammable. Toxic by inhalation, in contact with skin and if swallowed. Toxic:
danger of very serious irreversible effects through inhalation, in contact with skin and if swallowed.

2.2. Label elements

Label elements under CLP:
Hazard statements: H225: Highly flammable liquid and vapour.
H311: Toxic in contact with skin.
H331: Toxic if inhaled.
H370: Causes damage to organs .
Signal words: Danger
Hazard pictograms: GHS02: Flame
GHS06: Skull and crossbones
GHS08: Health hazard

[cont...]
Precautionary statements:
P260: Do not breathe dust/fume/gas/mist/vapours/spray.
P280: Wear protective gloves/protective clothing/eye protection/face protection.
P303+361+353: IF ON SKIN (or hair): Remove immediately all contaminated clothing. Rinse skin with.
P307+311: IF exposed: Call a POISON CENTER or doctor.
P311: Call a POISON CENTER or doctor.
P321: Specific treatment (see on this label).
P361: Remove immediately all contaminated clothing.

Label elements under CHIP:

Hazard symbols: Highly flammable.
Toxic.

Risk phrases: R11: Highly flammable.
R23/24/25: Toxic by inhalation, in contact with skin and if swallowed.
R39/23/24/25: Toxic: danger of very serious irreversible effects through inhalation, in contact with skin and if swallowed.

Safety phrases: S36/37/39: Wear suitable protective clothing, gloves and eye / face protection.
S38: In case of insufficient ventilation, wear suitable respiratory equipment.
S45: In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
S63: In case of accident by inhalation, remove casualty to fresh air and keep at rest.

2.3. Other hazards

Other hazards: In use, may form flammable / explosive vapour-air mixture.
PBT: This substance is not identified as a PBT substance.

Section 3: Composition/information on ingredients

3.2. Mixtures

Hazardous ingredients:

METHANOL

<table>
<thead>
<tr>
<th>EINECS</th>
<th>CAS</th>
<th>CHIP Classification</th>
<th>CLP Classification</th>
<th>Percent</th>
</tr>
</thead>
</table>

[cont...]
SAFETY DATA SHEET
BROMOPHENOL BLUE INDICATOR

Section 4: First aid measures

4.1. Description of first aid measures

Skin contact: Remove all contaminated clothes and footwear immediately unless stuck to skin. Drench the affected skin with running water for 10 minutes or longer if substance is still on skin. Transfer to hospital if there are burns or symptoms of poisoning.

Eye contact: Bathe the eye with running water for 15 minutes. Transfer to hospital for specialist examination.

Ingestion: Wash out mouth with water. Do not induce vomiting. If conscious, give half a litre of water to drink immediately. If unconscious, check for breathing and apply artificial respiration if necessary. If unconscious and breathing is OK, place in the recovery position. Transfer to hospital as soon as possible.

Inhalation: Remove casualty from exposure ensuring one's own safety whilst doing so. If conscious, ensure the casualty sits or lies down. If unconscious and breathing is OK, place in the recovery position. If unconscious, check for breathing and apply artificial respiration if necessary. If breathing becomes bubbly, have the casualty sit and provide oxygen if available. Transfer to hospital as soon as possible.

4.2. Most important symptoms and effects, both acute and delayed

Skin contact: There may be redness or whiteness of the skin in the area of exposure. Irritation or pain may occur at the site of contact. Absorption through the skin may be fatal.

Eye contact: There may be severe pain. The eyes may water profusely.

Ingestion: There may be soreness and redness of the mouth and throat. There may be vomiting. Convulsions may occur. There may be loss of consciousness.

Inhalation: There may be shortness of breath with a burning sensation in the throat. Absorption through the lungs can occur causing symptoms similar to those of ingestion. Convulsions may occur. There may be loss of consciousness.

Delayed / immediate effects: Immediate effects can be expected after short-term exposure.

4.3. Indication of any immediate medical attention and special treatment needed

Immediate / special treatment: Immediate medical attention is required. Show this safety data sheet to the doctor in attendance.

Section 5: Fire-fighting measures

5.1. Extinguishing media

### 5.2. Special hazards arising from the substance or mixture

**Exposure hazards:** Highly flammable. Toxic. Vapour may travel considerable distance to source of ignition and flash back. In combustion emits toxic fumes of carbon dioxide / carbon monoxide. Mercury oxides.

### 5.3. Advice for fire-fighters

**Advice for fire-fighters:** Wear self-contained breathing apparatus. Wear protective clothing to prevent contact with skin and eyes.

### Section 6: Accidental release measures

#### 6.1. Personal precautions, protective equipment and emergency procedures

**Personal precautions:** Notify the police and fire brigade immediately. Eliminate all sources of ignition. If outside do not approach from downwind. If outside keep bystanders upwind and away from danger point. Mark out the contaminated area with signs and prevent access to unauthorised personnel. Do not attempt to take action without suitable protective clothing - see section 8 of SDS. Turn leaking containers leak-side up to prevent the escape of liquid.

#### 6.2. Environmental precautions

**Environmental precautions:** Do not discharge into drains or rivers. Contain the spillage using bunding.

#### 6.3. Methods and material for containment and cleaning up

**Clean-up procedures:** Clean-up should be dealt with only by qualified personnel familiar with the specific substance. Absorb into dry earth or sand. Transfer to a closable, labelled salvage container for disposal by an appropriate method. Do not use equipment in clean-up procedure which may produce sparks.

#### 6.4. Reference to other sections

**Reference to other sections:** Refer to section 8 of SDS.

### Section 7: Handling and storage

#### 7.1. Precautions for safe handling

**Handling requirements:** Avoid direct contact with the substance. Ensure there is exhaust ventilation of the area. Avoid the formation or spread of mists in the air. Smoking is forbidden. Use non-sparking tools.

#### 7.2. Conditions for safe storage, including any incompatibilities

**Storage conditions:** Store in cool, well ventilated area. Keep container tightly closed. Keep away from sources of ignition. Prevent the build up of electrostatic charge in the immediate area. Ensure lighting and electrical equipment are not a source of ignition.

**Suitable packaging:** Must only be kept in original packaging.

[cont...]
7.3. Specific end use(s)

Specific end use(s): No data available.

Section 8: Exposure controls/personal protection

8.1. Control parameters

Hazardous ingredients:

METHANOL

<table>
<thead>
<tr>
<th>Workplace exposure limits:</th>
<th>Respirable dust</th>
</tr>
</thead>
<tbody>
<tr>
<td>8 hour TWA:</td>
<td>15 min. STEL:</td>
</tr>
<tr>
<td>UK</td>
<td>266 mg/m3</td>
</tr>
</tbody>
</table>

8.2. Exposure controls

Engineering measures: Ensure there is exhaust ventilation of the area. Ensure lighting and electrical equipment are not a source of ignition.

Respiratory protection: Self-contained breathing apparatus must be available in case of emergency.

Hand protection: Protective gloves (EN374).

Eye protection: Safety glasses (EN166). Ensure eye bath is to hand.

Skin protection: Impermeable protective clothing.

Environmental: Refer to specific Member State legislation for requirements under Community environmental legislation.

Section 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

State: Liquid
Colour: Colourless
Odour: Alcoholic

Solubility in water: Miscible

Also soluble in: Most organic solvents.
Viscosity: Non-viscous

Boiling point/range°C: 64.7
Flash point°C: 11

9.2. Other information

Section 10: Stability and reactivity

10.1. Reactivity

Reactivity: Stable under recommended transport or storage conditions.
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10.2. Chemical stability

Chemical stability: Stable under normal conditions. Stable at room temperature.

10.3. Possibility of hazardous reactions

Hazardous reactions: Hazardous reactions will not occur under normal transport or storage conditions. Decomposition may occur on exposure to conditions or materials listed below.

10.4. Conditions to avoid

Conditions to avoid: Heat. Sources of ignition. Flames.

10.5. Incompatible materials

Materials to avoid: Strong oxidising agents.

10.6. Hazardous decomposition products


Section 11: Toxicological information

11.1. Information on toxicological effects

Toxicity values:

<table>
<thead>
<tr>
<th>Route</th>
<th>Species</th>
<th>Test</th>
<th>Value</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>ORAL</td>
<td>RAT</td>
<td>LD50</td>
<td>5628</td>
<td>mg/kg</td>
</tr>
<tr>
<td>ORAL</td>
<td>RBT</td>
<td>LD50</td>
<td>15800</td>
<td>mg/kg</td>
</tr>
<tr>
<td>VAPOURS</td>
<td>RAT</td>
<td>4H LC50</td>
<td>64000</td>
<td>mg/kg</td>
</tr>
</tbody>
</table>

Relevant effects for mixture:

<table>
<thead>
<tr>
<th>Effect</th>
<th>Route</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute toxicity (toxic)</td>
<td>INH DRM ING</td>
<td>Hazardous: calculated</td>
</tr>
</tbody>
</table>

Symptoms / routes of exposure

Skin contact: There may be redness or whiteness of the skin in the area of exposure. Irritation or pain may occur at the site of contact. Absorption through the skin may be fatal.

Eye contact: There may be severe pain. The eyes may water profusely.

Ingestion: There may be soreness and redness of the mouth and throat. There may be vomiting. Convulsions may occur. There may be loss of consciousness.

Inhalation: There may be shortness of breath with a burning sensation in the throat. Absorption through the lungs can occur causing symptoms similar to those of ingestion. Convulsions may occur. There may be loss of consciousness.

Delayed / immediate effects: Immediate effects can be expected after short-term exposure.

[cont...]
### Section 12: Ecological information

**12.1. Toxicity**

**12.2. Persistence and degradability**

**Persistence and degradability:** No data available.

**12.3. Bioaccumulative potential**

**Bioaccumulative potential:** No data available.

**12.4. Mobility in soil**

**Mobility:** No data available.

**12.5. Results of PBT and vPvB assessment**

**PBT identification:** This substance is not identified as a PBT substance.

**12.6. Other adverse effects**

**Other adverse effects:** No data available.

### Section 13: Disposal considerations

**13.1. Waste treatment methods**

**Disposal operations:** Transfer to a suitable container and arrange for collection by specialised disposal company.

**Recovery operations:** Solvent reclamation/regeneration.

**Waste code number:** 16 05 06

**Disposal of packaging:** Arrange for collection by specialised disposal company.

**NB:** The user’s attention is drawn to the possible existence of regional or national regulations regarding disposal.

### Section 14: Transport information

**14.1. UN number**

**UN number:** UN1992

**14.2. UN proper shipping name**

**Shipping name:** FLAMMABLE LIQUID, TOXIC, N.O.S. (METHANOL;)

**14.3. Transport hazard class(es)**

**Transport class:** 3 (6.1)
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BROMOPHENOL BLUE INDICATOR

14.4. Packing group

Packing group:  II

14.5. Environmental hazards

Environmentally hazardous:  No  
Marine pollutant:  No

14.6. Special precautions for user

Special precautions:  No special precautions.
Tunnel code:  D/E  
Transport category:  2

Section 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

15.2. Chemical Safety Assessment

Chemical safety assessment:  A chemical safety assessment has not been carried out for the substance or the mixture by the supplier.

Section 16: Other information

Other information

Other information:  This safety data sheet is prepared in accordance with Commission Regulation (EU) No 453/2010.

* indicates text in the SDS which has changed since the last revision.

Phrases used in s.2 and 3:

H225: Highly flammable liquid and vapour.
H301: Toxic if swallowed.
H311: Toxic in contact with skin.
H331: Toxic if inhaled.
H370: Causes damage to organs <or state all organs affected, if known> <state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard>.
R11: Highly flammable.
R23/24/25: Toxic by inhalation, in contact with skin and if swallowed.
R39/23/24/25: Toxic: danger of very serious irreversible effects through inhalation, in contact with skin and if swallowed.

Legal disclaimer:  Alteration to this document is strictly prohibited. The format and formulas contained within this document comply with UK laws and legislation. Every effort has been made to ensure that the information in this MSDS is accurate. However some labels printed before the date on this document may have conflicting hazard information that can be disregarded in favour of the information as detailed above.