MATERIAL SAFETY DATA SHEET

SECTION 1 - PRODUCT AND COMPANY INFORMATION

- **Product name: X-Gal.**
- **Catalog number: XG31000**
- **Chemical name or synonyms:** 5-bromo-4-chloro-3-indolyl-β-D-galactopyranoside
- **Contact:**

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SECTION 2 – COMPOSITION, INFORMATION ON INGREDIENTS

Ingredient name	CAS number	%	EINECS	Classification
X-Gal	7240-90-6	> 99 %	-	None

Ingredients are not hazardous or their concentrations do not exceed the limit specified according to 29 CFR 1910.1200 Hazard Communication Standard (USA) and Directive 1999/45/EC-2001/59/EC (EU).

SECTION 3 – HAZARDS IDENTIFICATION

- This product contains hazardous ingredients (Yes; No; Not Applicable or no information): **The toxicological properties have not yet been fully determined. Compound should be handled as a potential health hazard.**
- This product contains hazardous carcinogens (Yes; No; N/A): **No**
- This product contains hazardous ingredients to the environment. (Yes; No; N/A): **No**

SECTION 4 – FIRST AID MEASURES

- **Effects and symptoms:**
  - *Inhalation* — May cause irritation to the respiratory tract. Symptoms may include coughing, sore throat, difficult breathing and chest pain.
  - *Ingestion* — May be harmful if swallowed. Symptoms may include nausea, vomiting and diarrhea.
  - *Skin contact* — May cause irritation with redness and pain. May be absorbed through the skin with possible systemic effects.
  - *Eye contact* — May cause irritation, redness and pain.
  - *Aggravating conditions* — Repeated or prolonged exposure is not known to aggravate medical conditions.

- **First-Aid measures:**
  - *Inhalation* — If inhaled, remove to fresh air. If breathing is difficult, give oxygen. Get medical attention immediately.
  - *Ingestion* — Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention if symptoms appear.
  - *Skin contact* — In case of contact, immediately flush skin with plenty of water while removing contaminated clothing and shoes. Wash clothes before reuse. Get medical attention immediately.
  - *Eye contact* — In case of contact, immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.
  - *Notes to physician* — Not available.
  - *Protection of first-aiders* — Not available.

SECTION 5 – FIRE FIGHTING MEASURES

- **Flammability of the product:** May be combustible at high temperature.
- **Flash Point:** Not available.
- **Fire hazards in presence of various substances:** Not considered to be flammable.
- **Fire fighting media and instructions:** Use dry chemical, CO2, water spray or foam.
- **Protective clothing (fire):** Be sure to use an approved/certified respirator or equivalent.
- **Hazardous thermal decomposition products:** Burning produces irritant fumes (nitrogen oxides, carbon oxides, halogens).

SECTION 6 – ACCIDENTAL RELEASE MEASURES

- **Personal precautions:** Safety glasses, lab coat and gloves.
- **Environmental precautions and clean-up methods:** Prevent product from entering drains. Sweep up and shovel into suitable containers for disposal.

SECTION 7 – HANDLING AND STORAGE

- **Handling:** Avoid breathing vapors or spray mists. Use only in area provided with appropriate exhaust ventilation. Wear personal protective equipment.
- **Storage:** Keep container tightly closed. Store at – 20 C. Protect from light.
- **Intended use:** Refer to the instruction booklet for proper and intended use. Otherwise, contact supplier for specific application.
- **Packaging materials**
  Suitable: Use original container.

SECTION 8 – EXPOSURE CONTROLS, PERSONAL PROTECTION

- **Engineering Controls**: Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. Ensure that eyewash stations and safety showers are proximal to the work-station location.
- **Personal protection**
  - **Eyes:** Safety glasses.
  - **Body:** Lab coat and gloves.
  - **Respiratory:** Respirator is not needed under normal and intended conditions of use, if exposures are kept below established limits.

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

- **Appearance**
  - **Physical State:** Solid.
  - **Color:** White.
  - **Odor:** Not available.
  - **Taste:** Not available.

- **Molecular weight:** 408.63 g/mol.
- **Molecular formula:** C14H15BrClNO6
- **pH:** Not available
- **Melting point:** 230 C (446 F).
- **Decomposition temperature:** Not available
- **Flash point:** Not available.
- **Solubility:** Soluble in water.

SECTION 10 – STABILITY AND REACTIVITY

- **Stability and reactivity:** The product is stable under recommended storage conditions.
- **Conditions to avoid**: Exposure to light and moisture over prolonged periods, heat, flames, ignition sources.
- **Materials to avoid:** Strong acids, strong bases, strong oxidizing agents.
- **Hazardous polymerization:** Will not occur.
- **Hazardous decomposition products:** Carbon oxides, Nitrogen oxides (NOx), halogens.

SECTION 11 – TOXICOLOGICAL INFORMATION

- **Toxicity on animals:**
  - **LD50:** Not available.
  - **LC50:** Not available.
- **Chronic effects on humans**: Chronic exposure may cause nausea and vomiting. Higher exposure may causes unconsciousness.
- **Other toxic effects on humans**: Slightly hazardous in case of ingestion, skin or eye contact.

SECTION 12 – ECOLOGICAL INFORMATION

- No data available.

SECTION 13 – DISPOSAL CONSIDERATIONS

- **Waste stream:** Not available.
- **Waste disposal method**: Contact a licensed professional waste disposal service to dispose of this material. Dispose in accordance with governmental environmental regulations. Observe all federal, state, and local environmental regulations.
- **European waste catalogue (EWC):** Not available.
- **Hazardous waste:** Will not occur.

SECTION 14 – TRANSPORT INFORMATION

- This substance is considered to be non-hazardous for transport and air-transport.

SECTION 15 – REGULATORY INFORMATION

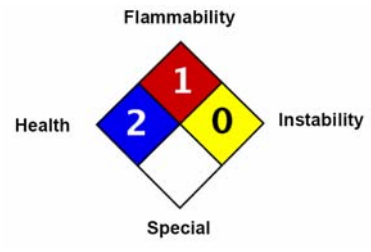
R36/37 Irritating to eyes and respiratory system.
S24/25 Avoid contact with skin and eyes
S22 Do not breathe dust.

SECTION 16 – OTHER INFORMATION

- **Hazardous Material Information System (U.S.A.):**

Health	**2**
Fire hazard	**1**
Reactivity	**0**
Personal protection	**E**

- **National Fire Protection Association (U.S.A.):**



- **Other Comments:**

To the best of our knowledge, the information contain herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein.
Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

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