

# SAFETY DATA SHEET

## X-GAL Solution in Dimethyl Formamide, 20mg/ml

### SECTION 1: CHEMICAL AND COMPANY IDENTIFICATION

**BioShop Canada Inc.**  
5480 Mainway  
Burlington, Ontario L7L 6A4  
1-800-234-1179

Emergency Telephone No.: CANUTEC 1-613-996-6666  
Chemical Name: 5-BROMO-4-CHLORO- 3-INDOLYL-BETA-D GALACTOPYRANOSIDE, in Dimethylformamide  
Catalog Number: XGA002

### SECTION 2 HAZARDS IDENTIFICATION

#### GHS Classification:

Flammable liquid (Category 2)  
Acute toxicity, Oral (Category 5)  
Acute toxicity, Inhalation-(Category 4)  
Acute toxicity, Dermal (Category 4)  
Skin irritation (Category 2A)  
Eye irritation (Category 2A)  
Reproductive toxicity (category 1B)

#### Pictogram:



Signal word

**DANGER**

#### Hazard statements:

H225- Highly flammable liquid and vapor  
H303- May be harmful if swallowed  
H312+H332 – harmful in contact with skin or if inhaled.  
H316- causes mild skin irritation.  
H319- Causes serious eye irritation.  
H360- May damage fertility or the unborn child

#### Precautionary statements:

P210- Keep away from heat/sparks/open flames/hot surfaces- No smoking.  
P233-Keep container tightly closed.  
P280-wear protective gloves/ eye protection/ face protection.  
P305+P351+P330 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P308+P311- If exposed or concerned. Call POISON CENTRE/doctor.

**Eyes:** Causes eye irritation .  
**Skin:** Causes skin irritation.  
**Ingestion:** May be harmful if ingested.  
**Inhalation:** May be harmful if inhaled.  
**CHRONIC:** Prolonged exposure may cause damage to kidneys

### SECTION 3 COMPOSITION/INGREDIENTS

	CAS #	%
X-Gal	7240-90-6	20mg/ml
Molecular Formula: C <sub>14</sub> H <sub>15</sub> BrClNO <sub>6</sub>		
Molecular Weight: 408		
N,N-Dimethylformamide		
	68-12-2	99%
Molecular Formula: C <sub>3</sub> H <sub>7</sub> NO		
Molecular Weight: 73.9		

### SECTION 4 FIRST AID MEASURES

**Eyes:** Flush eyes with water , GET MEDICAL ATTENTION. Do not rub eyes.  
**Skin:** In case of contact, flush area immediately with water.  
**Inhalation:** Remove victim to fresh air. If not breathing give artificial respiration. If breathing is difficult give oxygen and GET MEDICAL ATTENTION.  
**Ingestion:** Wash mouth with water. DO NOT INDUCE vomiting. GET MEDICAL ATTENTION IMMEDIATELY.

### SECTION 5 FIRE FIGHTING MEASURES

**General Information:** Always wear full protective gear in the event of a fire. Vapors may form explosive mixture with air . Vapors can spread along the ground and create new sources of ignition and flash back.  
**Use water spray to cool fire-exposed containers.**  
**Flash Point:** 57C  
**Autoignition Temperature:** 445C  
**Explosion limits:** Lower: 2.2vol % , Upper 15.2 (ethanol)vol %  
**Extinguishing Media: Small fires:** Use water spray, foam, dry chemical or carbon dioxide. Large fires: water spray .Alcohol resistant foam.

### SECTION 6 ACCIDENTAL RELEASE MEASURES

Ventilate the area. Wear appropriate protective equipment. Absorb spill with inert material ,like vermiculite. Sweep and place in a closed container. In the event of a fire always wear self-contained breathing apparatus, NIOSH/MSHA approved or equivalent.  
**Leak and Spill Procedures:** Ventilate the area. Wear appropriate protective equipment. Remove all sources of ignition. Reduce vapor and avoid ignition sources. Use non-combustible material to absorb liquid such as sawdust or vermiculite

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### SECTION 7 HANDLING AND STORAGE

**Handling:** Avoid contact. Do not get in eyes, on skin, or clothing. Wash thoroughly after handling. Wash contaminated clothing before reuse. Do not cut, weld or expose empty containers to any ignition source. Use adequate ventilation. Ground and bond containers when transferring material.

**Storage Conditions:** Keep away from heat and potential ignition sources. Keep in well ventilated area. Keep containers tight.

### SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

#### Exposure Limits:

Dimethylformamide

NIOSH: 10 ppm TWA; 30

Mg/m<sup>3</sup> TWA ,500 ppm IDLH

Eyes: wear chemical splash goggles.

Skin: wear rubber gloves, and apron

Clothing: wear appropriate clothing to prevent exposure.

Respirators: OSHA approved : 29CFR 1910.134 or

European EN 149.

### SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

**Physical State:** Liquid

**Appearance and Odor:** clear, colorless

**Melting Point:** not available

**Boiling Point:** not available

**Specific Gravity/Density:** not available

**Vapor pressure:** not available

**Vapor Density:** not available)

**Water Solubility:** not available

**pH:** not available

### SECTION 10 STABILITY AND REACTIVITY:

**Stability:** Stable under normal temperatures and pressure

**Conditions to avoid:** ignition sources, high temperatures, confined spaces.

**Incompatibility:** Oxidizing and reducing agents, acids and alkali metals.

Potassium, sodium.

**Hazardous Decomposition Products:** carbon monoxide, carbon dioxide, oxides of nitrogen.

**Hazardous Polymerization:** has not been reported.

### SECTION 11 TOXICOLOGICAL PROPERTIES

#### Toxicological Information:

Dimethylformamide

Inhalation, mouse: LC50 =9400 mg/m<sup>3</sup>/2H

Oral, mouse: LD50= 3700 mg/kg

Oral, rat: LD50= 2800mg/kg

Skin, rabbit: LD50 =4720 mg/kg

**Carcinogenicity:** Not listed by ACGIH, IARC, IOSH, NTP or OSHA

**Epidemiology:** Experimental reproductive effects have been reported.  
**Teratogenicity:** No data available  
**Reproductive Effects:** Similar compounds have shown reproductive effects.  
**Neurotoxicity:** No data available  
**Mutagenicity:** Reported non-mutagenic in a large number of assays using whole animals, cultured mammalian cells, yeast and bacteria; including dominant lethal tests in rats, micronucleus test and sperm abnormality tests.

### SECTION 12 ECOLOGICAL INFORMATION

No information found

### SECTION 13 DISPOSAL CONSIDERATION

**Waste Disposal:** Ignitable waste. Observe all, provincial and local regulations.

### SECTION 14 TRANSPORT INFORMATION

#### Shipping Information:

**US Dot:** N, N DIMETHYFORMAMIDE, Flammable  
HAZARD CLASS 3 , UN2265 , Packing Group III

**IATA: Shipping Information:** N, N DIMETHYFORMAMIDE, Flammable,  
HAZARD CLASS 3 , UN2265 , Packing Group III

**TDG Canada Shipping Information:** N, N DIMETHYFORMAMIDE,  
Flammable, HAZARD CLASS 3 , UN2265 , Packing Group III

### SECTION 15 REGULATORY INFORMATION

**US :** TSCA: listed

### SECTION 16 ADDITIONAL INFORMATION

Prepared By: M.Kierdelewicz (President)

Date Prepared: Dec 29/2021

Phone: (800) 234-1179

The information provided on this Material Safety Data Sheet is furnished in good faith and without warranty of any kind. The above information is believed to be correct and should be used only as a guide. BioShop Canada Inc. shall not be held liable for any damage resulting from the handling or from the contact with the above product.

Observe all federal, provincial and state laws concerning health, safety and pollution.

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