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A Geno Technology, Inc. (USA) brand name

Safety Data Sheet

Cat. # RC-113

X-Gal; 5-Bromo-4-chloro-3-indoxyl-beta-D-galactopyranoside

Size: 100mg



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5-Bromo-4-chloro-3-indoxyl-beta-D-galactopyranoside

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Date of issue: 05/03/2016

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Version: 7.1

SECTION 1: Identification

1.1. Identification

Product form : Substance
Substance name : 5-Bromo-4-chloro-3-indoxyl-beta-D-galactopyranoside
Chemical name : X-Gal
CAS-No. : 7240-90-6
Product code : 101X_X001_864A
Formula : C₁₄H₁₅BrClNO₆
Synonyms : 5-bromo-4-chloro-3-indolyl-beta-D-galactoside / 5-bromo-4-chloroindol-3-yl-beta-D-galactopyranoside / beta-D-Galactopyranoside, 5-bromo-4-chloro-1H-indol-3-yl / x-gal
BIG No : 26774

1.2. Recommended use and restrictions on use

Use of the substance/mixture : Laboratory chemical

1.3. Supplier

Geno Technology, Inc./ G-Biosciences
9800 Page Avenue
Saint Louis, 63132-1429 - United States
T 800-628-7730 - F 314-991-1504
technical@GBiosciences.com - www.GBiosciences.com

1.4. Emergency telephone number

Emergency number : Chemtrec **1-800-424-9300** (USA/Canada), **+1-703-527-3887** (Intl)

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS US classification

Not classified

2.2. GHS Label elements, including precautionary statements

GHS US labeling

No labeling applicable

2.3. Other hazards which do not result in classification

No additional information available

2.4. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/Information on ingredients

3.1. Substances

Substance type : Mono-constituent

Name	Common Name (Synonyms)	Product identifier	%	GHS US classification
5-Bromo-4-chloro-3-indoxyl-beta-D-galactopyranoside (Main constituent)	5-bromo-4-chloro-3-indolyl-beta-D-galactoside / 5-bromo-4-chloroindol-3-yl-beta-D-galactopyranoside / beta-D-Galactopyranoside, 5-bromo-4-chloro-1H-indol-3-yl / x-gal	(CAS-No.) 7240-90-6	100	Not classified

Full text of hazard classes and H-statements : see section 16

3.2. Mixtures

Not applicable

SECTION 4: First-aid measures

4.1. Description of first aid measures

First-aid measures general : If you feel unwell, seek medical advice.
First-aid measures after inhalation : Remove the victim into fresh air. Respiratory problems: consult a doctor/medical service.

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First-aid measures after skin contact	: Rinse with water. Soap may be used. Take victim to a doctor if irritation persists.
First-aid measures after eye contact	: Rinse with water. Remove contact lenses, if present and easy to do. Continue rinsing. Take victim to an ophthalmologist if irritation persists.
First-aid measures after ingestion	: Rinse mouth with water. Call Poison Information Centre (www.big.be/antigif.htm). Consult a doctor/medical service if you feel unwell. Ingestion of large quantities: immediately to hospital.

4.2. Most important symptoms and effects (acute and delayed)

Potential Adverse human health effects and symptoms	: Practically non-toxic.
Symptoms/effects after inhalation	: No effects known.
Symptoms/effects after skin contact	: No effects known.
Symptoms/effects after eye contact	: No effects known.
Symptoms/effects after ingestion	: No effects known.
Chronic symptoms	: No effects known.

4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media	: Quick-acting ABC powder extinguisher. Class A foam extinguisher. Water (quick-acting extinguisher, reel). Water. Class A foam.
Unsuitable extinguishing media	: Quick-acting BC powder extinguisher. Quick-acting CO2 extinguisher.

5.2. Specific hazards arising from the chemical

Fire hazard	: DIRECT FIRE HAZARD: Non-flammable. Most organic solids may burn if strongly heated.
Explosion hazard	: DIRECT EXPLOSION HAZARD: Most organic solids are liable to dust explosion hazard.

5.3. Special protective equipment and precautions for fire-fighters

Precautionary measures fire	: Exposure to fire/heat: keep upwind. Exposure to fire/heat: consider evacuation. Exposure to fire/heat: have neighbourhood close doors and windows.
Firefighting instructions	: Dilute toxic gases with water spray. Take account of toxic/corrosive precipitation water.
Protection during firefighting	: Heat/fire exposure: compressed air/oxygen apparatus.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Protective equipment	: Gloves. Protective clothing. Dust cloud production: compressed air/oxygen apparatus.
Emergency procedures	: Mark the danger area. Prevent dust cloud formation, e.g. by wetting. No naked flames. Wash contaminated clothes.
Measures in case of dust release	: In case of dust production: keep upwind. Dust production: have neighbourhood close doors and windows.

6.1.2. For emergency responders

Protective equipment	: Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".
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6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

For containment	: Contain released product, pump into suitable containers. Plug the leak, cut off the supply. Knock down/dilute dust cloud with water spray.
Methods for cleaning up	: Stop dust cloud by covering with sand/earth. Scoop solid spill into closing containers. Clean contaminated surfaces with an excess of water. Wash clothing and equipment after handling.
Other information	: Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13.

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SECTION 7: Handling and storage

7.1. Precautions for safe handling

- Precautions for safe handling : Avoid raising dust. Keep away from naked flames/heat. Carry operations in the open/under local exhaust/ventilation or with respiratory protection. Comply with the legal requirements. Clean contaminated clothing. Thoroughly clean/dry the installation before use. Keep container tightly closed.
- Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

- Storage conditions : Store in a well-ventilated place. Keep cool.
- Storage temperature : -20 °C
- Heat-ignition : KEEP SUBSTANCE AWAY FROM: heat sources.
- Information on mixed storage : KEEP SUBSTANCE AWAY FROM: oxidizing agents. water/moisture.
- Storage area : Provide for a cooling system. Store in a dry area. Keep container in a well-ventilated place. May be stored under argon. Meet the legal requirements.
- Special rules on packaging : SPECIAL REQUIREMENTS: closing. watertight. dry. opaque. correctly labelled. meet the legal requirements. Secure fragile packagings in solid containers.
- Packaging materials : SUITABLE MATERIAL: glass.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

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No additional information available

8.2. Appropriate engineering controls

- Appropriate engineering controls : Ensure good ventilation of the work station.
- Environmental exposure controls : Avoid release to the environment.

8.3. Individual protection measures/Personal protective equipment

Hand protection:

Gloves

Eye protection:

Safety glasses. In case of dust production: protective goggles

Skin and body protection:

Protective clothing

Respiratory protection:

Dust production: dust mask with filter type P1

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

- Physical state : Solid
- Appearance : Solid. Powder.
- Color : White
- Odor : No data available
- Odor threshold : No data available
- pH : No data available
- Melting point : 230 °C
- Freezing point : Not applicable
- Boiling point : No data available
- Flash point : Not applicable
- Relative evaporation rate (butyl acetate=1) : No data available

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Flammability (solid, gas)	: Non flammable.
Vapor pressure	: No data available
Relative vapor density at 20 °C	: Not applicable
Relative density	: Not applicable
Molecular mass	: 408.64 g/mol
Solubility	: No data available
Log Pow	: 1.1 (Estimated value, KOWWIN)
Auto-ignition temperature	: Not applicable
Decomposition temperature	: 230 °C
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosion limits	: Not applicable
Explosive properties	: No data available
Oxidizing properties	: No data available

9.2. Other information

VOC content	: 0 %
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SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Unstable on exposure to light. Unstable on exposure to moisture.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Hazardous decomposition products.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral)	: Not classified
Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: Not classified
Skin corrosion/irritation	: Not classified
Serious eye damage/irritation	: Not classified
Respiratory or skin sensitization	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
Specific target organ toxicity – single exposure	: Not classified
Specific target organ toxicity – repeated exposure	: Not classified
Aspiration hazard	: Not classified
Viscosity, kinematic	: No data available
Potential Adverse human health effects and symptoms	: Practically non-toxic.
Symptoms/effects after inhalation	: No effects known.

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Symptoms/effects after skin contact	: No effects known.
Symptoms/effects after eye contact	: No effects known.
Symptoms/effects after ingestion	: No effects known.
Chronic symptoms	: No effects known.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general	: The product is not considered harmful to aquatic organisms or to cause long-term adverse effects in the environment.
Ecology - air	: Not included in the list of fluorinated greenhouse gases (Regulation (EU) No 517/2014). Photooxidation in the air. Not classified as dangerous for the ozone layer (Regulation (EC) No 1005/2009).

12.2. Persistence and degradability

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Persistence and degradability	Not readily biodegradable in water.
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12.3. Bioaccumulative potential

5-Bromo-4-chloro-3-indoxyl-beta-D-galactopyranoside (7240-90-6)

BCF fish 1	1.37 l/kg (BCFBAF v3.01, Estimated value, Fresh weight)
Log Pow	1.1 (Estimated value, KOWWIN)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).

12.4. Mobility in soil

5-Bromo-4-chloro-3-indoxyl-beta-D-galactopyranoside (7240-90-6)

Ecology - soil	Adsorbs into the soil.
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12.5. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Disposal methods

Waste treatment methods	: Waste treatment methods.
Product/Packaging disposal recommendations	: Do not discharge into the sewer. Remove waste in accordance with local and/or national regulations. Remove to an incinerator for chlorinated waste materials with energy recovery. Dissolve or mix with a combustible solvent.
Additional information	: Can be considered as non hazardous waste according to Directive 2008/98/EC, as amended by Regulation (EU) No 1357/2014 and Regulation (EU) No 2017/997.

SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT

Not regulated

Transportation of Dangerous Goods

Not applicable

Transport by sea

Not regulated

Air transport

Not regulated

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SECTION 15: Regulatory information

15.1. US Federal regulations

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Not listed on the United States TSCA (Toxic Substances Control Act) inventory

15.2. International regulations

CANADA

EU-Regulations

National regulations

No additional information available

15.3. US State regulations

SECTION 16: Other information

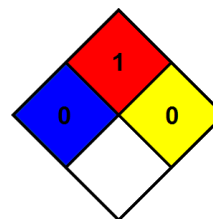
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NFPA health hazard : 0 - Materials that, under emergency conditions, would offer no hazard beyond that of ordinary combustible materials.

NFPA fire hazard : 1 - Materials that must be preheated before ignition can occur.

NFPA reactivity : 0 - Material that in themselves are normally stable, even under fire conditions.



SDS US (GHS HazCom 2012)

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.