

January 16, 2017

Material Safety Data Sheet

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY/UNDERTAKING

Product name GlycoYELLOWTM-βGal

GC601 Product code

Company name Goryo Chemical, Inc.

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2. HAZARDS IDENTIFICATION

Not classified GHS classification

Hazardous/Non-hazardous Components

Nocuous No data available Effect on environment No data available Physically and chemical hazards Non-inflammable powder

3. COMPOSITION/INFORMATION ON INGREDIENTS

Single or mixture Single Product Compound name GlycoYELLOW- β Gal Component Single component

4. FIRST AID MEASURES

Skin contact

- · Wash off immediately with plenty of water. If symptoms persist, call a physician.
- · If skin stimulates or rash appears, call a physician.

Eye contact

- · Rinse thoroughly with plenty of water, also under the eyelids. If symptoms persist, consult a physician.
- · Take off your contact lens when wash with water.

Inhalation

- · Remove to fresh air immediately, give a rest and keep warm covering the body with blanket, and obtain medical attention.
- · If feeling bad, call a physician.

Ingestion

- · Rinse out mouth thoroughly with water.
- · If feeling bad, call a physician.

Protection of first-aiders

· A rescuer should wear personal protective equipment, such as rubber gloves and airtight goggles.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media Water spray, Alcohol resistance, Powder, Carbon dioxide

Specifically dangerous hazards Thermal decomposition can lead to release of irritating and toxic gases

and vapors.

Extinguishing method Fire-extinguishing work is done from the windward and the suitable

> fire-extinguishing method according to the surrounding situation is used. Uninvolved persons should evacuate to a safe place. In case of fire in the surroundings: Remove movable containers if safe to do so.

Protection of fire-fighters Use personal protective equipment as required

6. ACCIDENTAL RELEASE MEASURES

Personal precautions

· Go to the windward, and wearing protective clothing during procedures is imperative.

- · Keep away the people under lee and seal off by roping spill site.
- · Keep away near inflammables swiftly and prepare fire-fighting equipment.

Environmental precautions

· Prevent product from entering drains.

Methods and materials for containment and cleaning up

• Do not touch spilled material without suitable protection. After material is completely picked up, wash the spill site with soap and water and ventilate the area. Put all wastes in a plastic bag for disposal and seal it tightly. Remove, clean, or dispose of contaminated clothing.

7. HANDLING AND STORAGE

Handling

Technical measures

- · Handling is performed in a well-ventilated place.
- · Avoid contact with skin, eyes and clothing.
- · Wear suitable protective equipment.
- · Wash hands and face thoroughly after handling.
- · Use a local exhaust if dust or aerosol will be generated.

Advice on safe handling

- · Handle in accordance with good industrial hygiene and safety practice.
- · Vessel shouldn't be treated violently, such as rolling, shocking or dragging.

Storage

Storage conditions

- · Keep container tightly closed. Store in a dark place under -20 degrees Celsius.
- · Avoid long storage.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering controls Install a closed system or local exhaust.

Install safety shower and eye bath.

Control parameters Not set up

Personal protective equipment

Respiratory protection Dust respirator
Hand protection Protective gloves
Eye protection Safety glasses

Skin and body protection Protective clothing. Protective boots, if the situation requires.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state (color/form) Pink / Hygroscopic solid

Odor Odorless

No data available Нα Melting point/freezing point No data available Boiling Point/Range No data available Flash Point No data available Explosive limits No data available Vapor pressure No data available Vapor density No data available Density No data available

 $\begin{tabular}{lll} Solubile to CH_2Cl_2, DMSO \\ Firing point & No data available \\ Decomposition temperature & No data available \\ \end{tabular}$

10. STABILITY AND REACTIVITY

Stability Stable under proper conditions.

Reactivity None under normal processing.

Incompatible materials Strong oxidizing agents, reducing agents

Hazardous Decomposition Products None under normal use.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity No data available No data available Skin corrosion/irritation Serious eye damage/irritation No data available No data available Respiratory sensitization Skin sensitization No data available No data available Reproductive cell mutagenicity Carcinogenicity No data available Reproductive toxicity No data available STOT-single exposure No data available STOT-repeated exposure No data available Aspiration hazard No data available

12. ECOLOGICAL INFORMATION

Ecotoxicity effects

Mobility

No information available

No information available

Biodegradation

No information available

Bioaccumulation

No information available

13. DISPOSAL CONSIDERATIONS

Chemical materials

• Dispose of in accordance with local regulations.

Polluted vessels and package

· Dispose of in accordance with local regulations.

14. TRANSPORT INFORMATION

Hazards Class Does not correspond to the classification standard of the United Nations

IATA

Proper shipping name Not classified as dangerous in the meaning of transport regulations.

Hazard Class No information available
Subsidiary Class No information available
Packing group No information available
UN-No No information available

15. JAPANESE REGULATORY INFORMATION

Not applicable

16. OTHER INFORMATION

- · International Chemical Safety Card (ICSC) database in Japanese (National Institute of Health Sciences)
- This MSDS was prepared sincerely on the basis of the information we could obtained, however, any warranty shall not be given regarding the data contained and the assessment of hazards and toxicity.
- Prior to use, please investigate not only the hazards and toxicity information but also the laws and regulations of the organization, area and country where the products are to be used.
- · Some new information or amendments may be added afterwards.
- If the products are to be used far behind the expected time of use or if you have any questions, please feel free to contact us.