1. IDENTIFICATION OF THE SUBSTANCE AND OF THE COMPANY

1.1 Product identifiers

Product name:	4-Methylumbelliferyl beta-D-glucuronide
Product code:	44064
CAS Number:	6160-80-1
REACH Number:	A registration number is not available for this substance as the annual tonnage does not require registration.

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

Identified uses:	For detection of enzyme activity in laboratories.
Uses advised against:	None identified.

1.3 Details of the supplier of the safety data sheet

Company:	Glycosynth Ltd 14 Craven Court, Winwick Quay, Warrington, Cheshire WA2 8QU, UK
Telephone:	01925 575075
Email:	info@glycosynth.co.uk

1.4 Emergency telephone number

Emergency Phone Number:	+44 1925 575 075
Hours of operation:	8.30 – 17.00 (Local business hours weekdays)

2. HAZARD IDENTIFICATION

2.1 Classification of the substance or mixture

Not a hazardous substance according to Regulation (EC) No. 1272/2008.

2.2 Label elements

Not a hazardous substance according to Regulation (EC) No. 1272/2008.

2.3 Other Hazards

None identified. This substance contains no components considered (identified) to be: persistent, bioaccumulative and toxic (PBT); very persistent and very bioaccumulative (vPvB); or having endocrine disrupting properties at levels of 0.1% or higher.

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Ingredient name:	4-Methylumbelliferyl beta-D-glucuronide
Formula:	$C_{16}H_{16}O_9$
Molecular Weight:	352.3
Synonyms:	MUG, 4-Methylumbelliferyl beta-D-glucopyranosiduronic acid

4. FIRST AID MEASURES

4.1 Description of first aid measures

Eyes: Flush eyes with water as a precaution.
Skin: Wash with water, then soap and water.
Ingestion: Rinse mouth with water.
Inhalation: Remove to fresh air.
If problems occur, seek medical attention.

4.2 Most important symptoms and effects, both acute and delayed

No data available.

4.3 Indication of any immediate medical attention and special treatment needed

No data available.

5. FIREFIGHTING MEASURES

5.1 Extinguishing media

Use dry powder, carbon dioxide, foam, or water extinguishers.

5.2 Special hazards arising from the substance or mixture

Carbon oxides.

5.3 Advice for firefighters

No special measures required.

5.4 Further information

No data available.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment, and emergency procedures

Avoid breathing dust. Avoid contact with eyes and skin. Wear suitable personal protective equipment if necessary.

6.2 Environmental precautions

No special precautions. Avoid discharge into drains and waterways whenever possible.

6.3 Methods and materials for containment and clean up

Transfer to a suitable container for disposal.

6.4 Reference to other sections

See section 8 of this SDS for personal protective equipment and section 13 of this SDS for disposal.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Ensure there is sufficient exhaust ventilation at places where dust is formed. Avoid contact with eyes and skin.

7.2 Conditions for safe storage, including any incompatibilities

To prevent deterioration, the product should be stored in tightly closed containers in a freezer or cold room at -20 degrees centigrade. The product may deteriorate slightly if exposed to light and humidity for prolonged periods.

7.3 Specific end uses

For detection of enzyme activity in laboratories

8. EXPOSURE CONTROL/PERSONAL PROTECTION

8.1 Control parameters

Contains no substances with occupational exposure limit values.

8.2 Exposure control

General industrial hygiene practice. Engineering measure: Ensure there is sufficient ventilation of the area.
Personal protective equipment:
Eye/face protection: Safety glasses.
Hand protection: To prevent skin exposure use gloves to a minimum standard of ISO 374-1/Type C.
Body protection: Appropriate protective clothing to prevent skin contact.
Respiratory protection: Not required. For nuisance levels of dust, use type FFP2 or N95 Standard dust masks.
Other personal protection advice: none available.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

(a) Physical state:	Crystalline powder.
(b) Colour:	White.
(c) Odour:	No data available.
(d) Melting point:	No data available.
(e) Initial boiling point and boiling range:	No data available.
(f) Flammability:	Ignitable. Normal combustion.
(k) pH:	No data available.
(m) Solubility:	Solubility in water at a concentration of 0.1%.

(n) Partition coefficient: n-octanol/water:	No data available.
(p) Density:	No data available.
(r) Particle characteristics:	No data available (does not contain nanoforms).

9.2 Other safety information

No other identified hazard or safety characteristics.

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10. STABILITY AND REACTIVITY

10.1 Reactivity

No dangerous reactions known under conditions of normal use.

10.2 Chemical stability

Stable under normal conditions.

10.3 Possibility of hazardous reactions

No hazardous reactions known under conditions of normal use.

10.4 Conditions to avoid

No data available.

10.5 Incompatible materials

Very strong oxidising agents. Avoid contact as exothermic decomposition may occur.

10.6 Hazardous decomposition products

None.

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11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity:	Not classified based on available information.
Skin corrosion/irritation:	Not classified based on available information.
Serious eye damage/irritation:	Not classified based on available information.
Respiratory or skin sensitisation:	Not classified based on available information.
Germ cell mutagenicity:	Not classified based on available information.
Carcinogenicity: IARC:	No component of this product present at levels >0.1% is identified as a probable, possible or confirmed human carcinogen by IARC.
Reproductive toxicity:	Not classified based on available information.
Specific target organ – single exposure:	Not classified based on available information.
Specific target organ – repeated exposure:	Not classified based on available information.
Aspiration hazard:	Not classified based on available information.
Signs and symptoms of exposure:	To the best of our knowledge, the chemical, physical and toxicological properties have not been thoroughly investigated.
11.2 Information on other hazards	None identified(or no data available)

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12. ECOLOGICAL INFORMATION

12.1 Toxicity

No data available.

12.2 Persistence and degradability

No data available.

12.3 Bioaccumulative potential

No data available.

12.4 Mobility in soil

No data available.

12.5 Results of PBT and vPvB assessment

This substance contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Endocrine disrupting properties

No data available. The substance is not for plant protection use. The substance is not a known, presumed or suspected endocrine disrupter.

12.7 Other adverse effects

No data available.

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

The substance is not classified as hazardous waste according to Directive 2008/98/EC. Dispose according to local regulations. Contaminated packaging: Dispose of as unused product. Empty containers may be recycled.

14. TRANSPORT INFORMATION

14.1 UN number

Not regulated as a dangerous good.

14.2 UN proper shipping name

Not regulated as a dangerous good.

14.3 Transportation hazard class(es)

Not regulated as a dangerous good.

14.4 Packaging group

Not regulated as a dangerous good.

14.5 Environmental hazard

Not regulated as a dangerous good.

14.6 Special precautions for user

Remarks: Not a dangerous good in the meaning of ADR, RID, ADN, IMDG-Code, ICAO/IATA-DGR.

14.7 Maritime transport in bulk according to IMO instruments

Not applicable: not a bulk good.

15. REGULATORY INFORMATION

This safety data sheet complies with the requirements of Regulation (EU) No. 2020/878.

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

No data available.

15.2 Chemical Safety Assessment

No chemical safety assessment has been carried out.

16. OTHER INFORMATION

Revision number: 8, Revision date: 09/09/2026. Reason: Review.
Revision number: 7, Revision date: 01/06/2021. Reason: Updated according to Regulation (EU) No. 2020/878.

Abbreviations: ADN – European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road; IARC – International Agency for Cancer Research; IATA-DGR – International Air Transport Association Dangerous Goods Regulations; ICAO – International Civil Aviation Organization; IMO International Maritime Organization; IMDG – International Maritime Dangerous Goods.

The above information is believed to be correct to the best of our knowledge. The information given in this SDS should be used as a guide and does not constitute the user's own assessment of workplace risk as required by the Health and Safety legislation currently in force. We cannot accept liability for any loss, injury or damage which may result from handling or use of this product. All chemicals should be handled only by competent personnel within a suitably controlled environment.