1. IDENTIFICATION

Product Name	4-Methylumbelliferyl α-L-idopyranosiduronic acid, sodium salt
Catalogue Number	MI820
Recommended Use	Laboratory research and development.
Supplier	Synthose Inc., 50 Viceroy Road, Unit 7, Concord, Ontario, L4K 3A7, Canada
Emergency Phone No.	+1-905-669-0017
Email	admin@synthose.com

2. HAZARD IDENTIFICATION

Classification

Acute Toxicity, Oral (Category 4)

Acute Toxicity, Dermal (Category 4)

Acute Toxicity, Inhalation (Category 4)

Label Elements

Pictogram

Signal Word Warning

Hazard Statements

H302:	Harmful if swallowed
H312:	Harmful in contact with skin
H332:	Harmful if inhaled

Precautionary Statements

P264:	Wash skin thoroughly after handling.
P280:	Wear protective gloves/protective clothing.
P301 + P312 + P330:	IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. Rinse mouth.
P302 + P352:	IF ON SKIN: Wash with plenty of soap and water.
P304 + P340:	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P312:	Call a POISON CENTER or doctor/physician if you feel unwell.
P363:	Wash contaminated clothing before reuse.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name	4-Methylumbelliferyl α-L-idopyranosiduronic acid, sodium salt
Synonym	4-Methyl-2-oxo-2H-1-benzopyran-7-yl α-L-idopyranosiduronic acid monosodium salt
CAS Number	89157-94-8
Molecular Formula	$C_{16}H_{15}O_9.Na$
Molecular Weight	374.28

Component	CAS Number	Concentration
4-Methylumbelliferyl α-L-idopyranosiduronic acid, sodium salt	89157-94-8	100%

4. FIRST-AID MEASURES

Inhalation	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.
Skin Contact	IF ON SKIN: Wash with plenty of soap and water. Call a POISON CENTER or doctor/physician if you feel unwell. Wash contaminated clothing before reuse.
Eye Contact	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing for at least 15 minutes.
Ingestion	IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. Rinse mouth.

Most Important Symptoms and Effects, Acute and Delayed

Not determined

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media	Water spray, alcohol-resistant foam, dry chemical, or carbon dioxide.
Unsuitable Extinguishing Media	Not determined
Special Protective Equipment and Precautions for Firefighters	Not determined

Specific Hazards Arising from the Hazardous Product

Hazardous Combustion Products	Carbon oxides, Sodium oxides

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures	Use personal protective equipment. Avoid breathing dust, fumes, gas, mist, vapours, or spray.
Methods and Materials for Containment and Cleaning Up	Pick up and arrange disposal without creating dust. Sweep up and shovel or soak up with inert absorbent material. Keep in suitable, closed containers for disposal.

7. HANDLING AND STORAGE

Precautions for Safe Handling	Wash skin thoroughly after handling. Wear protective gloves/protective clothing.
Conditions for Safe Storage	Store at 0 to 8 °C.
Incompatible Materials	Not determined

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Occupational Exposure Guidelines	Not determined
Appropriate Engineering Controls	Use mechanical exhaust or laboratory fume hood to avoid exposure.

Individual Protection Measures / Personal Protective Equipment

Eye/Face Protection	Wear safety glasses with side-shields, chemical safety goggles, or face shield. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).
Skin Protection	Handle with gloves. Wear long-sleeved lab coat. Do not wear open-toed shoes.
Respiratory Protection	Use particle respirator for nuisance exposures. For greater protection, use half or full face mask respirator with cartridges. Respiratory equipment should be tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	White Crystalline Solid	**Flammable/Explosive Limits**	Not determined
Odour	Not determined	**Vapour Pressure**	Not determined
Odour Threshold	Not determined	**Vapour Density**	Not determined
pH	Not determined	**Relative Density**	Not determined
Melting Point	196-199 °C	**Solubility**	DMSO, H_2O
Boiling Point	Not determined	**Partition Coefficient log K_{OW}**	Not determined
Flash Point	Not determined	**Auto-ignition Temperature**	Not determined
Evaporation Rate	Not determined	**Decomposition Temperature**	Not determined
Flammability (solid, gas)	Not determined	**Viscosity**	Not determined

10. STABILITY AND REACTIVITY

Reactivity	Not reactive
Chemical Stability	Stable under recommended storage conditions
Possibility of Hazardous Reactions	None expected under normal conditions of storage and use

Conditions to Avoid	Open flames, sparks, static discharge, excessive heat
Incompatible Materials	Not determined
Hazardous Decomposition Products	
Formed under Fire Conditions	Carbon oxides, Sodium oxides

11. TOXICOLOGICAL INFORMATION

Likely Routes of Exposure	Ingestion, Skin Contact, Inhalation
Acute Toxicity, Oral	Harmful if swallowed ATE Oral (mg/kg) - 500
Acute Toxicity, Dermal	Harmful in contact with skin ATE Dermal (mg/kg) - 1100
Acute Toxicity, Inhalation	Harmful if inhaled ATE Inhalation (Dust/Mist, mg/L) - 1.5
Eye Contact	May cause eye irritation

12. ECOLOGICAL INFORMATION

Not determined

13. DISPOSAL CONSIDERATIONS

Dispose of in accordance with local, regional, and/or federal regulations.
Offer surplus and non-recyclable solutions to a licensed disposal company. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

14. TRANSPORT INFORMATION

Not dangerous goods for transport according to IATA, IMDG, or ADR.

15. REGULATORY INFORMATION

Canada DSL / NDSL	The components of this product are not on the DSL Inventory but are manufactured at <100kg per year.
USA TSCA	Negative Certification

16. OTHER INFORMATION

Latest Revision 2020-08-05

Abbreviations

ATE	Acute Toxicity Estimate
K_{OW}	Concentration in octanol phase / Concentration in aqueous phase
LC_{50}	Median Lethal Concentration
LD_{50}	Median Lethal Dose
TDLo	Lowest Known Toxic Dose
EC_{50}	Half Maximal Effective Concentration
RTECS	Registry of Toxic Effects of Chemical Substances
DSL	Domestic Substances List
NDSL	Non-Domestic Substances List
TSCA	Toxic Substances Control Act
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
ADR	Agreement concerning the International Carriage of Dangerous Goods by Road