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**1 IDENTIFICATION**

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Product Identifier	<b>2-Chloroethyl 2,3,4-tri-O-acetyl-<math>\beta</math>-D-glucopyranosiduronic acid methyl ester</b>
Synonym(s)	Methyl 2,3,4-tri-O-acetyl-1-O-(2-chloroethyl)- $\beta$ -D-glucopyranuronate
Catalogue Number	CG316
Recommended Use	Laboratory R&D
Manufacturer / Supplier	Synthose Inc. 50 Viceroy Road, Unit 7 Concord, Ontario, L4K 3A7, Canada
Phone	+1-905-669-0017
Email	admin@synthose.com
Emergency Phone	+1-905-669-0017

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**2 HAZARD IDENTIFICATION**

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**GHS Classification**

Not a dangerous substance or mixture according to the Globally Harmonised System (GHS).

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**3 COMPOSITION / INFORMATION ON INGREDIENTS**

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Substance Name	2-Chloroethyl 2,3,4-tri-O-acetyl- $\beta$ -D-glucopyranosiduronic acid methyl ester
Synonym(s)	Methyl 2,3,4-tri-O-acetyl-1-O-(2-chloroethyl)- $\beta$ -D-glucopyranuronate
CAS RN	6386-29-4
Chemical Formula	C <sub>15</sub> H <sub>21</sub> ClO <sub>10</sub>
Molecular Weight	396.77

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**4 FIRST AID MEASURES**

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**Symptoms and Effects of Exposure**

Not determined.

**General Advice**

Move out of dangerous area. Consult a physician. Show this safety data sheet to the doctor in attendance.

**If Inhaled**

Move to fresh air. If required, give artificial respiration. Consult a physician.

**In Case of Skin Contact**

Remove contaminated clothing and shoes. Wash off with soap and plenty of water. Consult a physician.

**In Case of Eye Contact**

Rinse thoroughly with plenty of water for at least 15 minutes. Consult a physician.

**If Swallowed**

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

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**5 FIRE FIGHTING MEASURES**

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**Conditions of Flammability**

Not flammable or combustible.

**Suitable Extinguishing Media**

Dry chemical

**Unsuitable Extinguishing Media**

Not determined

**Hazardous Combustion Products**

Carbon oxides, Hydrogen chloride gas

**Special Protective Equipment for Firefighters**

Wear self-contained breathing apparatus and full protective gear.

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**6 ACCIDENTAL RELEASE MEASURES**

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**Personal Precautions**

Wear respiratory protection. Ensure adequate ventilation. Avoid breathing vapors, mist or gas.

**Environmental Precautions**

Do not allow product to be released to the environment. Do not let product enter drains.

#### Methods and Materials for Containment and Cleaning Up

Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

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### 7 HANDLING AND STORAGE

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#### Precautions for Safe Handling

Avoid contact with skin and eyes. Avoid inhalation and ingestion. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed.

#### Conditions for Safe Storage

Keep container tightly closed in a dry and well-ventilated place. Ships ambient. Long-term storage recommended at -20°C.

#### Incompatible Materials

Not determined

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### 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

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#### Occupational Exposure Limits

Not determined

#### Appropriate Engineering Controls

Use mechanical exhaust or laboratory fume hood to avoid exposure.

#### Individual Protective Measures

##### Respiratory Protection

For nuisance exposures use type P95 (US) or type P1 (EU EN 143) particle respirator. For higher level protection use type OV/AG/P99 (US) or type ABEK-P2 (EU EN 143) respirator cartridges. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

##### Hand Protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

##### Eye Protection

Wear safety glasses with side-shields conforming to EN166, 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).

##### Body Protection

Wear protective clothing. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

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### 9 PHYSICAL AND CHEMICAL PROPERTIES

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Appearance	White Crystalline Solid
Odour	Not determined
Odour Threshold	Not determined
pH	Not determined
Melting Point Range	141-142 °C
Boiling Point Range	Not determined
Flash Point	Not determined
Evaporation Rate	Not determined
Flammability	Not determined
Lower flammable/explosive limit	Not determined
Upper flammable/explosive limit	Not determined
Vapour Pressure	Not determined
Vapour Density	Not determined
Relative Density	Not determined
Solubility	MeOH, EtOH, EtOAc, DMSO, CH <sub>2</sub> Cl <sub>2</sub> , DMF
Partition Coefficient n-octanol / water	Not determined
Auto-Ignition Temperature	Not determined
Decomposition Temperature	Not determined
Viscosity	Not determined

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### 10 STABILITY AND REACTIVITY

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#### Chemical Stability

Stable under recommended storage conditions.

#### Possibility of Hazardous Reactions

Not determined

#### Conditions to Avoid

Not determined

**Incompatible Materials**

Not determined

**Hazardous Decomposition Products**

Formed under fire conditions: Carbon oxides, Hydrogen chloride gas

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**11 TOXICOLOGICAL INFORMATION**

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**Signs and Symptoms of Exposure****Inhalation**

May be harmful if inhaled. May cause respiratory tract irritation.

**Skin Contact**

May be harmful if absorbed through skin. May cause skin irritation.

**Eye Contact**

May cause eye irritation

**Ingestion**

May be harmful if swallowed

**Chronic Effects of Exposure**

Not determined

**Acute Toxicity**

Not determined

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**12 ECOLOGICAL INFORMATION**

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Not determined

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**13 DISPOSAL CONSIDERATIONS**

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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.

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**14 TRANSPORT INFORMATION**

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UN	Not hazardous for transport
NA / DOT	Not hazardous for transport

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**15 REGULATORY INFORMATION**

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DSL / NDSL Status	The components of this product are not on the DSL Inventory but are manufactured at <100kg per year.
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**16 OTHER INFORMATION**

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**Date of the Latest Revision of the SDS**

2018-10-09

**HMIS Classification**

Health Hazard	0
Flammability	0
Physical Hazard	0