

## SAFETY DATA SHEET

Version: 2.0  
Date written: 21 August 2012  
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### SECTION 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY / UNDERTAKING

Product Name **Chitotriose**  
Product Catalogue Name **BQ-CHITOTRIOSE-01**  
CAS-No. **38864-21-0**  
Company: Ludger Ltd  
Culham Science Centre  
Abingdon  
Oxfordshire  
OX14 3EB  
Telephone: 01865 408554  
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### SECTION 2. HAZARDS IDENTIFICATION

#### 2.1 Classification of the substance or mixture

Not a hazardous substance or mixture according to Regulation (EC) No. 1272/2008 [EU-GHS/CLP]

#### 2.2 Label elements

Not a hazardous substance or mixture according to Regulation (EC) No. 1272/2008 [EU-GHS/CLP]

#### 2.3 Other hazard information:

Not a hazardous substance or mixture according to Regulation (EC) No. 1272/2008 [EU-GHS/CLP]

### SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

#### 3.1 Substances

Synonyms: N,N',N''-Triacetyl Chitotriose  
Formula:  $C_{24}H_{41}N_3O_{16}$   
Molecular Weight: 627.59

Component	Concentration
Name Chitotriose	100%
CAS-No. 38864-21-0	

### SECTION 4. FIRST AID MEASURES

#### 4.1 Description of first aid measures

**If ingested**

Rinse mouth well with water.

**If skin is exposed**

Wash the exposed area(s) well with plenty of soap and water.

**If eyes are exposed**

Flush the eye(s) with plenty of water or eye wash solution. If possible and present, remove contact lenses and continue rinsing.

**If inhaled**

Remove effected person(s) to a source of fresh air. If person is not breathing give artificial respiration.

**4.2 Most important symptoms and effects, both acute and delayed**

To the best of our knowledge, the chemical, physical and toxicological properties have not been thoroughly investigated.

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**SECTION 5. FIRE-FIGHTING MEASURES****5.1 Extinguishing media**

Water spray, dry chemical, carbon dioxide or foam, are appropriate media for extinguishing fire. Choose the most appropriate for the surrounding fire and materials.

**5.2 Special hazards arising from the substance or mixture**

Emits toxic fumes of Nitrogen oxides (NO<sub>x</sub>), Carbon oxides under fire conditions.

**5.3 Advice for firefighters**

Fire fighters to wear self-contained breathing apparatus, if deemed necessary.

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**SECTION 6. ACCIDENTAL RELEASE MEASURES****6.1 Personal precautions, protective equipment and emergency procedures**

Avoid breathing in any material, dust mask if appropriate. Wear laboratory gloves and protective clothing, such as a laboratory coat.

**6.2 Environmental Precautions**

Do not let the product enter the drainage system.

**6.3 Methods and material for containment and cleaning up**

Collect without creating dust. Collect and store the spillage/waste material in an appropriately labelled container, arrange collection for disposal. Wash spillage area with water.

**6.4 Reference to other sections**

More information on disposal of the product is in Section 13.

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**SECTION 7. HANDLING AND STORAGE****7.1 Precautions for safe handling**

Avoid contact with skin and eyes, inhalation of dust, mists and/or vapours associated with the material. Wear laboratory gloves, coat and glasses, in accordance with good laboratory practice and wash hands before and after handling the material.

**7.2 Conditions for safe storage, including any incompatibilities**

Store below - 18°C. The material is to be stored in original packaging or similar tightly closing packaging.

## SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1 Control parameters

#### Components with work place control parameters

This product contains no substances with occupational exposure limit values.

### 8.2 Exposure controls

#### Appropriate engineering controls

User to wear personal protective equipment e.g. Laboratory gloves, glasses and coats. Wash hands and avoid contact with skin.

#### Personal Protective Equipment

##### Eye / face protection

Use Safety glasses or goggles, which have been tested and approved under appropriate government standards, such as NIOSH (US) or EN 166 (EU).

##### Skin protection

Handle with gloves. Wearer should check for holes/tears before use. Proper glove removal technique should be used, to avoid potential contact with skin. Gloves must satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it. Wash and dry hands after handling the material.

##### Body Protection

Wear laboratory coat or similar coverings.

##### Respiratory protection

Respiratory protection is not required.

##### Thermal hazards

No data available

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## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 Information on basic physical and chemical properties

Appearance	Opaque crystalline powder
Odour	None
Odour threshold	No data available
pH	No data available
Freezing/Melting Point	Melting point/range:- 245-247°C lit.
Initial boiling point and boiling range	No data available
Flash Point	No data available
Evaporation rate	No data available
Flammability	No data available
Upper/lower flammability or explosive limits	No data available
Vapour Pressure	No data available
Relative Density	No data available
Solubility in water and solvents	ca. 50g/l
Partition coefficient	No data available
Autoignition temperature	No data available
Decomposition temperature	No data available
Viscosity	No data available
Explosive properties	No data available
Oxidising properties	No data available

**9.2 Other information**

No data available

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**SECTION 10. STABILITY AND REACTIVITY****10.1 Reactivity**

No data available

**10.2 Chemical stability**

Stable when stored at recommended temperature. Store at -18°C.

**10.3 Possibility of hazardous reactions**

No data available

**10.4 Conditions to Avoid**

Avoid exposure to sources of heat and humidity.

**10.5 Incompatible materials**

Strong oxidizing agents.

**10.6 Hazardous decomposition products**

Other decomposition products – No further data available.

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**SECTION 11. TOXICOLOGICAL INFORMATION****11.1 Information on toxicological effects****Acute toxicity**

No data available

**Skin corrosion/irritation**

No data available

**Serious eye damage/irritation**

No data available

**Respiratory or skin sensitisation**

No data available

**Germ cell mutagenicity**

No data available

**Carcinogenicity**

IARC: No components of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen.

**Reproductive toxicity**

No data available

**STOT-single exposure**

No data available

**STOT-repeated exposure**

No data available

**Aspiration hazard.**

No data available

**Potential Health Hazards****Route of Exposure;**

**Inhalation** May be harmful if inhaled. Causes respiratory tract irritation.  
**Ingestion** May be harmful if swallowed.  
**Skin** May be harmful if absorbed through the skin. Causes skin irritation.  
**Eyes** Causes serious eye irritation.

**Signs and symptoms of exposure**

To the best of our knowledge, the chemical, physical and toxicological properties have not been thoroughly investigated.

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**SECTION 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**

No data available

**12.6. Other adverse effects**

No data available

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**SECTION 13. DISPOSAL CONSIDERATIONS****13.1 Waste treatment methods**

Any waste substances should be disposed of by a licensed professional disposal company.

**Contaminated packaging**

Dispose of as a used product/material.

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**SECTION 14. TRANSPORT INFORMATION****14.1 UN Number**

ADR/RID: -

IMDG: -

IATA: -

**14.2 UN Proper Shipping Name**

ADR/RID: Not Dangerous Goods

IMDG: Not Dangerous Goods

IATA: Not Dangerous Goods

**14.3 Transport hazard class(es)**

ADR/RID: -

IMDG: -

IATA: -

**14.4 Packing group**

ADR/RID: -

IMDG: -

IATA: -

**14.5 Environmental hazards**

ADR/RID: No

IMDG Marine pollutant: No

IATA: No

**14.6 Special precautions for user**

No data available

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**SECTION 15. REGULATORY INFORMATION**

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**

No data available

**15.2 Chemical Safety Assessment**

No data available

Please note that the label elements that used to go in Section 15 are now in Section 2.

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**SECTION 16. OTHER INFORMATION**

The advice offered is derived from the current available information on the hazardous materials in this product and its component(s). Consideration has been made regarding the quantities offered in the pre-dispensed container. The advice offered is, therefore, not all-inclusive nor should it be taken as the descriptive of the compound generally.