SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier
- Product name: 1,2-Benzisothiazol-3(2H)-one
- Part number: DRE-C10536600
- CAS Number: 2634-33-5
- EC number: 220-120-9
- Index number: 613-088-00-6

1.2 Relevant identified uses of the substance or mixture and uses advised against
- Application of the substance / the mixture: Reference material for laboratory use only

1.3 Details of the supplier of the safety data sheet
- Manufacturer/Supplier:
  LGC Limited
  Queens Road
  Teddington
  Middlesex TW11 0LY
  UNITED KINGDOM
  Tel: +44 (0) 20 8943 7000
  Fax: +44 (0) 20 8943 2767
  eMail: gb@lgcstandards.com
  Web: www.lgcs tandards.com

1.4 Emergency telephone number: +44 (0) 20 8943 7000 (Monday - Friday: 8am - 5pm)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture
- Classification according to Regulation (EC) No 1272/2008

GHS05 corrosion
Eye Dam. 1 H318 Causes serious eye damage.

GHS09 environment
Aquatic Acute 1 H400 Very toxic to aquatic life.

GHS07
Acute Tox. 4 H302 Harmful if swallowed.
Skin Irrit. 2 H315 Causes skin irritation.
Skin Sens. 1 H317 May cause an allergic skin reaction.

2.2 Label elements
- Labelling according to Regulation (EC) No 1272/2008
  The substance is classified and labelled according to the CLP regulation.

(Contd. on page 2)
Product name: 1,2-Benzisothiazol-3(2H)-one

- Hazard pictograms

  GHS05  GHS07  GHS09

- Signal word  Danger

- Hazard statements
  H302 Harmful if swallowed.
  H315 Causes skin irritation.
  H318 Causes serious eye damage.
  H317 May cause an allergic skin reaction.
  H400 Very toxic to aquatic life.

- Precautionary statements
  P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
  P280 Wear protective gloves / eye protection / face protection.
  P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
  P310 Immediately call a POISON CENTER/doctor.
  P321 Specific treatment (see on this label).
  P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

- 2.3 Other hazards
- Results of PBT and vPvB assessment
  - PBT: Not applicable.
  - vPvB: Not applicable.

SECTION 3: Composition/information on ingredients

- 3.1 Chemical characterisation: Substances
  - CAS No. Description
    2634-33-5 1,2-benzothiazol-3(2H)-one
  - Identification number(s) None
  - EC number: 220-120-9
  - Index number: 613-088-00-6
  - RTECS: DE4620000
  - Additional information: For the wording of the listed hazard phrases refer to section 16.

SECTION 4: First aid measures

- 4.1 Description of first aid measures
  - General information:
    Immediately remove any clothing soiled by the product. 
    Symptoms of poisoning may occur even after several hours; therefore medical observation for at least 48 hours after the accident is recommended.
  - After inhalation:
    Supply fresh air and call a doctor.
    In case of unconsciousness place patient in recovery position for transport.
  - After skin contact:
    Immediately wash with water and soap and rinse thoroughly.
    If skin irritation continues, consult a doctor.
  - After eye contact: Rinse opened eye for several minutes under running water. Then consult a doctor.

(Contd. from page 3)
Product name: 1,2-Benzisothiazol-3(2H)-one

· After swallowing:
  Rinse mouth. Do not induce vomiting.
  Seek medical treatment.

· 4.2 Most important symptoms and effects, both acute and delayed No further relevant information available.

· 4.3 Indication of any immediate medical attention and special treatment needed
  No further relevant information available.

SECTION 5: Firefighting measures

· 5.1 Extinguishing media
  Suitable extinguishing agents: Use fire extinguishing methods suitable for surrounding conditions.

· 5.2 Special hazards arising from the substance or mixture
  Formation of toxic gases is possible during heating or in case of fire.

· 5.3 Advice for firefighters
  Protective equipment: Wear self-contained respiratory protective device.

SECTION 6: Accidental release measures

· 6.1 Personal precautions, protective equipment and emergency procedures
  Wear protective equipment. Keep unprotected persons away.

· 6.2 Environmental precautions:
  Inform respective authorities in case of seepage into water course or sewage system.
  Do not allow to enter sewers/surface or ground water.

· 6.3 Methods and material for containment and cleaning up:
  Use neutralising agent.
  Dispose of contaminated material as waste according to item 13.
  Ensure adequate ventilation.

· 6.4 Reference to other sections
  See Section 7 for information on safe handling.
  See Section 8 for information on personal protection equipment.
  See Section 13 for disposal information.

SECTION 7: Handling and storage

· 7.1 Precautions for safe handling
  Ensure good ventilation/extraction at the workplace.
  Remove dust thoroughly.
  Store in cool, dry place in tightly closed receptacles.

· Information about fire - and explosion protection: No special measures required.

· 7.2 Conditions for safe storage, including any incompatibilities
  Storage:
  Requirements to be met by storerooms and receptacles:
  Please refer to the manufacturer’s certificate for specific storage and transport temperature conditions.
  Store only in the original receptacle.
  Keep container in a well-ventilated place. Keep away from sources of ignition and heat.
  Information about storage in one common storage facility: Store away from foodstuffs.

· 7.3 Specific end use(s)
  No further relevant information available.
### SECTION 8: Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.
- **8.1 Control parameters**
  - **Ingredients with limit values that require monitoring at the workplace:** Not required.
  - **Additional information:** Lists used were valid at the time of SDS preparation.
- **8.2 Exposure controls**
  - **Personal protective equipment:**
    - **General protective and hygienic measures:**
      - Keep away from foodstuffs, beverages and feed.
      - Immediately remove all soiled and contaminated clothing.
      - Wash hands before breaks and at the end of work.
      - Avoid contact with the skin.
      - Avoid contact with the eyes and skin.
    - **Respiratory protection:**
      - In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.
    - **Protection of hands:**
      - The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
      - Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.
      - The protective gloves to be used must comply with the specifications of EC Directive 89/686/EEC and the related standard EN374.
  - **Material of gloves**
    - Butyl rubber, BR
    - Nitrile rubber, NBR
  - **Penetration time of glove material**
    - The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
  - **Eye protection:**
    - Tightly sealed goggles

### SECTION 9: Physical and chemical properties

- **9.1 Information on basic physical and chemical properties**
  - **General Information**
    - **Appearance:** Solid
    - **Colour:** Light yellow
    - **Odour:** Odourless
    - **Odour threshold:** Not determined.
  - **pH-value:** Not applicable.
  - **Change in condition**
    - **Melting point/freezing point:** 154-158 °C
**Product name:** 1,2-Benzisothiazol-3(2H)-one

**SECTION 10: Stability and reactivity**

- **10.1 Reactivity** Stable under normal conditions.
- **10.2 Chemical stability** Stable under normal conditions.
- **Thermal decomposition / conditions to be avoided:**
  Formation of toxic gases is possible during heating or in case of fire.
- **10.3 Possibility of hazardous reactions** No dangerous reactions known.
- **10.4 Conditions to avoid** Heat.
- **10.5 Incompatible materials:** Strong oxidizing agents.
- **10.6 Hazardous decomposition products:**
  Formation of toxic gases is possible during heating or in case of fire.

**SECTION 11: Toxicological information**

- **11.1 Information on toxicological effects**
- **Acute toxicity**
  Harmful if swallowed.

<table>
<thead>
<tr>
<th>LD/LC50 values relevant for classification:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral [LD50] 1,020 mg/kg (rat)</td>
</tr>
</tbody>
</table>

- **Primary irritant effect:**
- **Skin corrosion/irritation**
  Causes skin irritation.
Product name: 1,2-Benzisothiazol-3(2H)-one

(Contd. from page 5)

- **Serious eye damage/irritation**
  Causes serious eye damage.
- **Respiratory or skin sensitisation**
  May cause an allergic skin reaction.
- **CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)**
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity** Based on available data, the classification criteria are not met.
- **Reproductive toxicity** Based on available data, the classification criteria are not met.
- **STOT-single exposure** Based on available data, the classification criteria are not met.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard** Based on available data, the classification criteria are not met.

**SECTION 12: Ecological information**

- **12.1 Toxicity**
  - **Aquatic toxicity:**
    - EC50/48 h: 4.4 mg/l (crustacean)
    - LC50/96 h: 10 mg/l (fish)
- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.
- **Ecotoxicological effects:**
- **Remark:** Very toxic for fish
- **Additional ecological information:**
- **General notes:**
  Water hazard class 2 (German Regulation) (Assessment by list): hazardous for water
  Do not allow product to reach ground water, water course or sewage system.
  Must not reach sewage water or drainage ditch undiluted or unneutralised.
  Danger to drinking water if even small quantities leak into the ground.
  Very toxic for aquatic organisms
- **12.5 Results of PBT and vPvB assessment**
  - PBT: Not applicable.
  - vPvB: Not applicable.
- **12.6 Other adverse effects** No further relevant information available.

**SECTION 13: Disposal considerations**

- **13.1 Waste treatment methods**
- **Recommendation**
  Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- **European waste catalogue**
  Waste disposal key numbers from EWC have to be assigned depending on origin and processing.
- **Uncleaned packaging:**
  - **Recommendation:** Dispose of in accordance with national regulations.

**SECTION 14: Transport information**

- **14.1 UN-Number**
- **ADR, IMDG, IATA**
  - UN3077
Product name: 1,2-Benzisothiazol-3(2H)-one

(Contd. from page 6)

- **ADR**
  
  3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (1,2-benzisothiazol-3(2H)-one)

- **IMDG**
  
  ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (1,2-benzisothiazol-3(2H)-one), MARINE POLLUTANT

- **IATA**
  
  ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (1,2-benzisothiazol-3(2H)-one)

- **14.3 Transport hazard class(es)**
  
  ADR, IMDG, IATA

- **Class**
  
  9 Miscellaneous dangerous substances and articles.

- **Label**
  
  9

- **14.4 Packing group**
  
  ADR, IMDG, IATA

- **Packing group**
  
  III

- **14.5 Environmental hazards:**
  
  Marine pollutant: Yes (P)

  Special marking (ADR): Symbol (fish and tree)

  Special marking (IATA): Symbol (fish and tree)

- **14.6 Special precautions for user**
  
  Warning: Miscellaneous dangerous substances and articles.

  Danger code (Kemler): 60

  EMS Number: F-A,S-F

  Stowage Category: A

  Stowage Code: SW23 When transported in BK3 bulk container, see 7.6.2.12 and 7.7.3.9.

- **14.7 Transport in bulk according to Annex II of Marpol and the IBC Code**
  
  Not applicable.

- **Transport/Additional information:**

  ADR

  - Limited quantities (LQ) 5 kg

  - Excepted quantities (EQ) Code: E1

  Maximum net quantity per inner packaging: 30 g

  Maximum net quantity per outer packaging: 1000 g

  - Transport category 2

  - Tunnel restriction code E

  - UN "Model Regulation":

    UN 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (1,2-BENZISOTHIAZOL-3(2H)-ONE), 9, III

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**SECTION 15: Regulatory information**

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

  - Philippines Inventory of Chemicals and Chemical Substances Substance is listed.

  - Australian Inventory of Chemical Substances Substance is listed.

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Product name: 1,2-Benzisothiazol-3(2H)-one

- **Standard for the Uniform Scheduling of Medicines and Poisons** Substance is not listed.
- **Directive 2012/18/EU**
- **Named dangerous substances - ANNEX I** Substance is not listed.
- **Seveso category E1** Hazardous to the Aquatic Environment
- **Qualifying quantity (tonnes) for the application of lower-tier requirements** 100 t
- **Qualifying quantity (tonnes) for the application of upper-tier requirements** 200 t
- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

**SECTION 16: Other information**

The information in this safety data sheet (SDS) has been prepared with due care and is true and accurate to the best of our knowledge. The user must determine the suitability of the information for its particular purpose, ensure compliance with existing laws and regulations, and be aware that other or additional safety or performance considerations may arise when using, handling and/or storing the material. The information in this SDS does not purport to be all inclusive or a guarantee as to the properties of the material supplied, and should be used only as a guide. LGC makes no warranties or representations as to the accuracy and completeness of the information contained herein, shall not be held responsible for the suitability of this information for the user’s intended purposes or the consequences of such use, and shall not be liable for any damage or loss, howsoever arising, direct or otherwise.

- **Abbreviations and acronyms:**
  - ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
  - IMDG: International Maritime Code for Dangerous Goods
  - IATA: International Air Transport Association
  - P: Marine Pollutant
  - GHS: Globally Harmonised System of Classification and Labelling of Chemicals
  - EINECS: European Inventory of Existing Commercial Chemical Substances
  - CAS: Chemical Abstracts Service (division of the American Chemical Society)
  - LC50: Lethal concentration, 50 percent
  - LD50: Lethal dose, 50 percent
  - PBT: Persistent, Bioaccumulative and Toxic
  - vPvB: very Persistent and very Bioaccumulative
  - Acute Tox. 4: Acute toxicity – Category 4
  - Skin Irrit. 2: Skin corrosion/irritation – Category 2
  - Eye Dam. 1: Serious eye damage/eye irritation – Category 1
  - Skin Sens. 1: Skin sensitisation – Category 1
  - Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1

- **Sources**
  - **Data compared to the previous version altered:** All sections have been updated.