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

- **1.1 Product identifier**
  - **Product name:** (RS)-2-[2-[4-[(2-Chlorophenyl)phenylmethyl]piperazin-1-yl]ethoxy]acetic acid dihydrochloride
  
- **Part number:** MM0380.03

- **1.2 Relevant identified uses of the substance or mixture and uses advised against**
  - No further relevant information available.

- **Application of the substance / the mixture**
  - Reference material for laboratory use only

- **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.lgcstandards.com

- **Further information obtainable from:**
  - Product safety department
  - eMail: sds-request@lgcgroup.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

  ![GHS07]

  Acute Tox. 4  H302  Harmful if swallowed.
  Skin Irrit. 2  H315  Causes skin irritation.
  Eye Irrit. 2  H319  Causes serious eye irritation.
  STOT SE 3  H335  May cause respiratory irritation.

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

- **Hazard pictograms**

  ![GHS07]

- **Signal word** Warning

- **Hazard statements**
  - H302 Harmful if swallowed.
  - H315 Causes skin irritation.
  - H319 Causes serious eye irritation.
  - H335 May cause respiratory irritation.

- **Precautionary statements**
  - P280 Wear protective gloves/protective clothing/eye protection/face protection.
  - P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
  - P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
  - P321 Specific treatment (see on this label).
  - P405 Store locked up.

(Contd. on page 2)
SECTION 3: Composition/information on ingredients

- 3.1 Chemical characterisation: Substances
- CAS No. Description
  (RS)-2-[2-[4-[(2-Chlorophenyl)phenylmethyl]piperazin-1-yl]ethoxy]acetic Acid Dihydrochloride
- Identification number(s) None
- 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:
  Symptoms of poisoning may occur even after several hours; therefore medical observation for at least 48 hours after the accident is recommended.
- After inhalation: 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. If symptoms persist, consult a doctor.
- After swallowing:
  Rinse mouth. Do not induce vomiting.
  Call for a doctor immediately.
- 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:
  CO2, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- 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
  Avoid formation of dust.
- 6.2 Environmental precautions
  Do not allow to enter sewers/surface or ground water.
- 6.3 Methods and material for containment and cleaning up:
  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
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:
Store in a cool location.
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.
Further information about storage conditions: Keep container tightly sealed.

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 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

Protective gloves

Material of gloves
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.
Nitrile rubber, NBR
Product name: (RS)-2-[2-[4-[(2-Chlorophenyl)phenylmethyl]piperazin-1-yl]ethoxy]acetic Acid Dihydrochloride

- **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**
  - **Appearance:**
    - **Form:** Solid
    - **Colour:** Off white
    - **Odour:** Odourless
    - **Odour threshold:** Not determined.
  - **pH-value:** Not applicable.
  - **Change in condition**
    - **Melting point/Melting range:** 216-229 °C
    - **Boiling point/Boiling range:** Not determined.
  - **Flash point:** Not applicable.
  - **Flammability (solid, gaseous):** Not determined.
  - **Ignition temperature:**
    - **Decomposition temperature:** Not determined.
    - **Self-igniting:** Not determined.
  - **Danger of explosion:** Not determined.
  - **Explosion limits:**
    - **Lower:** Not determined.
    - **Upper:** Not determined.
  - **Vapour pressure:** Not applicable.
  - **Density:** Not determined.
    - **Relative density** Not determined.
  - **Vapour density** Not applicable.
  - **Evaporation rate** Not applicable.
  - **Solubility in / Miscibility with water:** Not determined.
  - **Partition coefficient (n-octanol/water):** Not determined.
  - **Viscosity:**
    - **Dynamic:** Not applicable.
    - **Kinematic:** Not applicable.
  - **9.2 Other information**
    - No further relevant information available.
Product name: (RS)-2-[2-[(2-Chlorophenyl)phenylmethyl]piperazin-1-yl]ethoxy]acetic Acid Dihydrochloride

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.
  - Primary irritant effect:
    - Skin corrosion/irritation
      Causes skin irritation.
    - Serious eye damage/irritation
      Causes serious eye irritation.
  - Respiratory or skin sensitisation
    Based on available data, the classification criteria are not met.
  - 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
    May cause respiratory irritation.
  - 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: No further relevant information available.
  - 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.
  - Additional ecological information:
    - General notes:
      Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water
      Do not allow undiluted product to reach ground water, water course or sewage system.
    - 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, ADN, IMDG, IATA: Not applicable

- 14.3 Transport hazard class(es)
  - ADR, ADN, IMDG, IATA: Not applicable

- 14.4 Packing group
  - ADR, IMDG, IATA: Not applicable

- 14.5 Environmental hazards:
  - Marine pollutant: No

- 14.6 Special precautions for user
  - Not applicable.

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

- UN "Model Regulation": Not applicable

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 not listed.
  - Australian Inventory of Chemical Substances: Substance is not listed.
  - Standard for the Uniform Scheduling of Medicines and Poisons: Substance is not listed.

- 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.
Product name: (RS)-2-[2-[(2-Chlorophenyl)phenylmethyl]piperazin-1-yl]ethoxy]acetic Acid Dihydrochloride

- **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
  - GHS: Globally Harmonised System of Classification and Labelling of Chemicals
  - CAS: Chemical Abstracts Service (division of the American Chemical Society)
  - LD50: Lethal dose, 50 percent
  - PBT: Persistent, Bioaccumulative and Toxic
  - vPvB: very Persistent and very Bioaccumulative
  - LC50: Lethal concentration, 50 percent
  - SVHC: Substances of Very High Concern
  - Acute Tox. 4: Acute toxicity – Category 4
  - Skin Irrit. 2: Skin corrosion/irritation – Category 2
  - Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
  - STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

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