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

· 1.1 Product identifier
· Product name: (RS)-1-[(4-Chlorophenyl)phenylmethyl]piperazine
· Part number: MM0380.01
· CAS Number: 303-26-4
· EC number: 206-137-4

· 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

· 1.3 Details of the supplier of the safety data sheet
· Manufacturer/Supplier:
  LGC Limited
  Queens Road
  Teddington
  Middlesex TW11 0LY
  UNITED KINGDOM

· 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

GH508 health hazard

Repr. 2  H361fd  Suspected of damaging fertility. Suspected of damaging the unborn child.

GH505 corrosion

Eye Dam. 1  H318  Causes serious eye damage.

GH507

Skin Irrit. 2  H315  Causes skin irritation.
Skin Sens. 1  H317  May cause an allergic skin reaction.
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

[Diagram with hazard pictograms]

- Signal word Danger
- Hazard statements
  H315 Causes skin irritation.
  H318 Causes serious eye damage.
  H317 May cause an allergic skin reaction.
  H361f Suspected of damaging fertility. Suspected of damaging the unborn child.
  H335 May cause respiratory irritation.
- Precautionary statements
  P280 Wear protective gloves/protective clothing/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).
  P405 Store locked up.
  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

- Chemical characterisation: Substances
- CAS No. Description
  303-26-4 (RS)-1-[(4-Chlorophenyl)phenylmethyl]piperazine
- Identification number(s) None
- EC number: 206-137-4
- RTECS: TL1772000
- Additional information: For the wording of the listed hazard phrases refer to section 16.

SECTION 4: First aid measures

- Description of first aid measures
- General information: Immediately remove any clothing soiled by the product.

(Contd. on page 3)
 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 respirator protective device.

 SECTION 6: Accidental release measures

- 6.1 Personal precautions, protective equipment and emergency procedures
  - Wear protective equipment. Keep unprotected persons away.
  - 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:
  - 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.
  - Open and handle receptacle with care.
- Information about fire - and explosion protection: Keep respiratory protective device available.

(Contd. from page 2)
Safety data sheet
according to 1907/2006/EC, Article 31

Product name: (RS)-1-[(4-Chlorophenyl)phenylmethyl]piperazine

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 unless other advice is given on the CoA.
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.
Store protective clothing separately.
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

Protective gloves

Material of gloves Fluorocarbon rubber (Viton)
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.
### SECTION 9: Physical and chemical properties

#### 9.1 Information on basic physical and chemical properties
- **Product name:** (RS)-1-[(4-Chlorophenyl)phenylmethyl]piperazine

- **Appearance:**
  - Form: Crystalline powder
  - Colour: Light beige
- **Odour:**
  - Odourless
- **Odour threshold:**
  - Not determined.
- **pH-value:**
  - Not applicable.

- **Change in condition**
  - Melting point/freezing point: >75 °C

- **Flash point:**
  - 113 °C

- **Flammability (solid, gas):**
  - Not determined.

- **Ignition temperature:**
  - Not determined

- **Decomposition temperature:**
  - Not determined.

- **Auto-ignition temperature:**
  - Not determined.

- **Explosion properties:**
  - 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:**
  - Soluble in chloroform, in dichloromethane, and in methanol.
  - Insoluble.

- **Partition coefficient: n-octanol/water:**
  - Not determined.

- **Viscosity:**
  - Dynamic: Not applicable.

(Contd. on page 6)
Product name: (RS)-1-[(4-Chlorophenyl)phenylmethyl]piperazine

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 Based on available data, the classification criteria are not met.
  - Primary irritant effect:
  - Skin corrosion/irritation
    Causes skin irritation.
  - Serious eye damage/irritation
    Causes serious eye damage.
  - Respiratory or skin sensitisation
    May cause an allergic skin reaction.
  - CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)
    Repr. 2
  - 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
    Suspected of damaging fertility. Suspected of damaging the unborn child.
  - 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.
Product name: (RS)-1-[(4-Chlorophenyl)phenylmethyl]piperazine

- 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.
    - Must not reach sewage water or drainage ditch undiluted or unneutralised.
  - 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
  - ADR, ADN, IMDG, IATA: Not applicable

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

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

- 14.5 Environmental hazards:
  - Not applicable.

- 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
- Directive 2012/18/EU
- Named dangerous substances - ANNEX I 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.

- 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
  - EINECS: European Inventory of Existing Commercial Chemical Substances
  - CAS: Chemical Abstracts Service (division of the American Chemical Society)
  - PBT: Persistent, Bioaccumulative and Toxic
  - vPvB: very Persistent and very Bioaccumulative
  - 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
  - Repr. 2: Reproductive toxicity – 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.