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

1.1 Product identifier

Product name: O,O,S-Trimethyldithiophosphate

Part number: DRE-C17881500

CAS Number: 2953-29-9

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 Tel: +44 (0) 20 8943 7000
Queens Road Fax: +44 (0) 20 8943 2767
Teddington eMail: gb@lgcstandards.com
Middlesex TW11 0LY Web: www.lgcstandards.com
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

GHS06 skull and crossbones

Acute Tox. 2 H300 Fatal if swallowed.
Acute Tox. 3 H311 Toxic in contact with skin.
Acute Tox. 3 H331 Toxic if inhaled.

GHS07

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

GHS06

Signal word Danger

Hazard statements

H300 Fatal if swallowed.
H311 + H331 Toxic in contact with skin or if inhaled.
H315 Causes skin irritation.
H319 Causes serious eye irritation.

(Contd. on page 2)
Product name: O,O,S-Trimethyldithiophosphate

(Contd. from page 1)

| H335 | May cause respiratory irritation. |
| P280 | Wear protective gloves/protective clothing/eye protection/face protection. |
| P301+P310 | IF SWALLOWED: Immediately call a POISON CENTER/doctor. |
| 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. |
| 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
2953-29-9 O,O,S-Trimethyldithiophosphate
Identification number(s) None

Additional information: For the wording of the listed risk 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.
Remove breathing equipment only after contaminated clothing has been completely removed.
In case of irregular breathing or respiratory arrest provide artificial respiration.

After inhalation:
Supply fresh air or oxygen; call for doctor.
In case of unconsciousness place patient in recovery position for transport.
Seek immediate medical advice.

After skin contact:
Immediately wash with water and soap and rinse thoroughly.
Seek immediate medical advice.
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.
Product name: O,O,S-Trimethyldithiophosphate

- 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:
    - Mouth respiratory protective device.
    - Wear self-contained respiratory protective device.

SECTION 6: Accidental release measures

- 6.1 Personal precautions, protective equipment and emergency procedures
  Wear protective clothing.
- 6.2 Environmental precautions:
  Do not allow to enter sewers/surface or ground water.
- 6.3 Methods and material for containment and cleaning up:
  - Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
  - 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.
  - Store in cool, dry place in tightly closed receptacles.
  - Open and handle receptacle with care.
  - Prevent formation of aerosols.
- Information about fire - and explosion protection: Keep respiratory protective device available.
- 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.
      - Store protective clothing separately.
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.
  Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

- **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
  - 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.

- **Eye protection:**
  Tightly sealed goggles

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**SECTION 9: Physical and chemical properties**

- **9.1 Information on basic physical and chemical properties**
  - **General Information**
    - **Appearance:**
      - Form: Liquid
      - Colour: Yellowish
      - Odour: Pungent
      - Odour threshold: Not determined.
    - **pH-value:** Not determined.
  - **Change in condition**
    - Melting point/Melting range: Not determined.
    - 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.
Product name: O,O,S-Trimethyldithiophosphate

· Explosion limits:
  Lower: Not determined.
  Upper: Not determined.

· Vapour pressure: Not determined.

· Density:
  Relative density: Not determined.
  Vapour density: Not determined.
  Evaporation rate: Not determined.

· Solubility in / Miscibility with water: Not determined.

· Partition coefficient (n-octanol/water): Not determined.

· Viscosity:
  Dynamic: Not determined.
  Kinematic: Not determined.

9.2 Other information
No further relevant information available.

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
  Fatal if swallowed.
  Toxic in contact with skin or if inhaled.
· LD/LC50 values relevant for classification:
  Oral LD50 15 mg/kg (rat)

· 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 (carcinogenicity, 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.
Product name: O,O,S-Trimethyldithiophosphate

(Contd. from page 5)

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, IMDG, IATA
    UN2810
  - ADR
    2810 TOXIC LIQUID, ORGANIC, N.O.S. (O,O,S-Trimethyldithiophosphate)
  - IMDG
    TOXIC LIQUID, ORGANIC, N.O.S. (O,O,S-Trimethyldithiophosphate)
  - IATA
    Toxic, liquids, organic, n.o.s. (O,O,S-Trimethyldithiophosphate)

- 14.3 Transport hazard class(es)
  - ADR, IMDG, IATA
    Class 6.1 Toxic substances.
    Label 6.1

- 14.4 Packing group
  - ADR, IMDG, IATA
    III

- 14.5 Environmental hazards:
  - Not applicable.
Product name: O,O,S-Trimethyldithiophosphate

14.6 Special precautions for user
- Warning: Toxic substances.
- Danger code (Kemler): 60
- EMS Number: F-A,S-A

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

Transport/Additional information:
- ADR
- Limited quantities (LQ): 5L
- Transport category: 2
- Tunnel restriction code: E
- UN "Model Regulation": UN 2810 TOXIC LIQUID, ORGANIC, N.O.S. (O,O,S-TRIMETHYLDITHIOPHOSPHATE), 6.1, III

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.
- Directive 2012/18/EU
- Named dangerous substances - ANNEX I Substance is not listed.
- Seveso category H2 ACUTE TOXIC
- Qualifying quantity (tonnes) for the application of lower-tier requirements 50 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
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
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. 2: Acute toxicity, Hazard Category 2
Acute Tox. 3: Acute toxicity, Hazard Category 3
Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2
Eye Irrit. 2: Serious eye damage/eye irritation, Hazard Category 2
STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3

(Contd. on page 8)
Product name: O,O,S-Trimethyldithiophosphate

- Sources

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