

This safety data sheet was created pursuant to the requirements of: Regulation (EC) No. 1907/2006 and Regulation (EC) No. 1272/2008

Revision date 11-Oct-2021

Revision Number 1

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

1.1. Product identifier

Product Code(s) TRC-T773830-250MG

Product Name Triclabendazole Sulfoxide

NOTE [8] - No registration number is given for this substance because it is under the threshold in REACH Article 6(1) and not subject to the registration requirements according to REACH Title II

| EC No | 694-764-8 |
|---|--|
| CAS No | 100648-13-3 |
| Chemical name | Triclabendazole Sulfoxide |
| Pure substance/mixture | Substance |
| Formula | C14 H9 Cl3 N2 O2 S |
| Molecular weight | 375.66 |
| 1.2. Relevant identified uses of the s | ubstance or mixture and uses advised against |
| Recommended use | Laboratory use |
| Uses advised against | No information available |
| 1.3. Details of the supplier of the saf | ety data sheet |
| Supplier | |
| LGC Limited Queens Road Teddington Middlesex TW11 0LY UNITED KINGDOM :+44 (0) 20 8943 7000 Fax :+44 (0) 20 8943 2767 eMail : gb@lgcstandards.com | |
| Web : www.lgcstandards.com | |
| For further information, please contact | _ |
| E-mail address | sds-request@lgcgroup.com |



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1.4. Emergency telephone number

Emergency Telephone

For Hazardous Materials or Dangerous Goods Incident Spill, Leak, Fire Exposure, or Accident Call CHEMTREC: USA & Canada 1-800-424-9300 Rest of the world +1 703-741-5970

| Emergency Telephone - §45 - (EC)1 | 272/2008 |
|-----------------------------------|---|
| Europe | 112 |
| Austria | No information available |
| Bulgaria | |
| Croatia | |
| Cyprus | |
| Czech Republic | |
| Denmark | |
| France | |
| Hungary | |
| Ireland | |
| Italy | |
| Lithuania | |
| Luxembourg | (+352) 8002 5500 Free telephone number with a 24/7 access in French, Dutch and English. |
| Netherlands | |
| Norway | |
| Portugal | |
| Romania | |
| Slovakia | |
| Slovenia | |
| Spain | |
| Sweden | |
| Switzerland | |

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Regulation (EC) No 1272/2008

Chronic aquatic toxicity

2.2. Label elements

Hazard statements

H413 - May cause long lasting harmful effects to aquatic life

Precautionary Statements - EU (§28, 1272/2008)

Category 4 - (H413)



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P273 - Avoid release to the environment P501 - Dispose of contents/ container to an approved waste disposal plant

2.3. Other hazards

No information available.

This substance does not meet the PBT/vPvB criteria of REACH, annex XIII.

| Chemical name | EU - REACH (1907/2006) - Article 59(1) | EU - REACH (1907/2006) - Endocrine |
|---------------------------|--|------------------------------------|
| | - Candidate List of Substances of Very | Disruptor Assessment List of |
| | High Concern (SVHC) for Authorisation | Substances |
| Triclabendazole Sulfoxide | - | - |

SECTION 3: Composition/information on ingredients

3.1 Substances

| Chemical name | Weight-% | REACH registration number | EC No | Classification according to Regulation (EC) No. 1272/2008 [CLP] | Specific concentration limit (SCL) | M-Factor | M-Factor (long-term) |
|---|----------|------------------------------|-----------|--|--|----------|-------------------------|
| Triclabendazole Sulfoxide 100648-13-3 | 100 | - | 694-764-8 | Aquatic Chronic 4 (H413) | | | |

Full text of H- and EUH-phrases: see section 16

Acute Toxicity Estimate No information available

This product does not contain candidate substances of very high concern at a concentration >=0.1% (Regulation (EC) No. 1907/2006 (REACH), Article 59)

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation

Remove to fresh air.

Eye contactRinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids.
Consult a doctor.



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| Skin contact | Wash skin with soap and water. In the case of skin irritation or allergic reactions see a doctor. |
|-------------------------------------|---|
| Ingestion | Rinse mouth. |
| 4.2. Most important symptoms and | effects, both acute and delayed |
| Symptoms | No information available. |
| 4.3. Indication of any immediate me | edical attention and special treatment needed |
| Note to doctors | Treat symptomatically. |
| | |

| SECTION 5: Firefighting measures | | |
|--|--|--|
| 5.1. Extinguishing media | | |
| Suitable Extinguishing Media | Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. | |
| Large Fire | CAUTION: Use of water spray when fighting fire may be inefficient. | |
| Unsuitable extinguishing media | Do not scatter spilled material with high pressure water streams. | |
| 5.2. Special hazards arising from the substance or mixture | | |
| Specific hazards arising from the chemical | No information available. | |
| 5.3. Advice for firefighters | | |
| Special protective equipment and precautions for fire-fighters | Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment. | |
| SECTION 6: Accidental release measures | | |

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions Ensure adequate ventilation.

For emergency responders Use personal protection recommended in Section 8.

6.2. Environmental precautions



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| Environmental precautions | See Section 12 for additional Ecological Information. | |
|-------------------------------------|--|--|
| 6.3. Methods and material for conta | ainment and cleaning up | |
| Methods for containment | Prevent further leakage or spillage if safe to do so. | |
| Methods for cleaning up | Take up mechanically, placing in appropriate containers for disposal. | |
| Prevention of secondary hazards | Clean contaminated objects and areas thoroughly observing environmental regulations. | |
| 6.4. Reference to other sections | | |
| Reference to other sections | See section 8 for more information. See section 13 for more information. | |

SECTION 7: Handling and storage

7.1. Precautions for safe handling

| Advice on safe handling | Ensure adequate ventilation. |
|---------------------------------------|---|
| General hygiene considerations | Avoid contact with skin, eyes or clothing. Do not eat, drink or smoke when using this product. Wash hands before breaks and after work. Wear suitable gloves and eye/face protection. |
| 7.2. Conditions for safe storage, inc | luding any incompatibilities |
| Storage Conditions | Please refer to the manufacturer's certificate for specific storage and transport temperature |

7.3. Specific end use(s)

Identified uses Risk Management Methods (RMM) The information required is contained in this Safety Data Sheet.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure Limits

This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

conditions. Store only in the original receptacle unless other advice is given on the CoA.

Biological occupational exposure limits

This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific



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regulatory bodies

| Derived No Effect Level (DNEL) | No information available. |
|-----------------------------------|---------------------------|
| Predicted No Effect Concentration | No information available. |
| (PNEC) | |

8.2. Exposure controls

Personal protective equipment

Eye/face protectionAvoid contact with eyes. Wear safety glasses with side shields (or goggles).Hand protectionThe protective gloves to be used must comply with the specifications of EC Directive
89/686/EEC and the related standard EN374.

| Gloves | | |
|--|---|--|
| PPE - Glove material | Glove thickness | Break through time |
| Wear protective Viton™ | | |
| gloves | | |
| Wear protective nitrile rubber gloves | 0.11 mm | 480 minutes |
| | PPE - Glove material Wear protective Viton™ gloves Wear protective nitrile | PPE - Glove material Glove thickness Wear protective Viton™ gloves Wear protective nitrile 0.11 mm |

Skin and body protection Wear suitable protective clothing.

| Respiratory protection | No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required. |
|--------------------------------|---|
| General hygiene considerations | Avoid contact with skin, eyes or clothing. Do not eat, drink or smoke when using this product. Wash hands before breaks and after work. Wear suitable gloves and eye/face protection. |

Environmental exposure controls Do not allow into any sewer, on the ground or into any body of water.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

| Physical state | Solid |
|-----------------|---------------------------|
| Appearance | Crystalline |
| Colour | colourless |
| Odour | No information available. |
| Odour threshold | No information available |



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| Property | Values | Remarks • Method |
|---|--|--------------------------|
| Melting point / freezing point | 196 °C | None known |
| Boiling point / boiling range | No data available | None known |
| Flammability (solid, gas) | No data available | None known |
| Flammability Limit in Air | | None known |
| Upper flammability or explosive limits | No data available | |
| Lower flammability or explosive limits | No data available | |
| Flash point | No data available | None known |
| Autoignition temperature | No data available | None known |
| Decomposition temperature | | None known |
| pH | No data available | None known |
| pH (as aqueous solution) | No data available | No information available |
| Kinematic viscosity | No data available | None known |
| Dynamic viscosity | No data available | None known |
| Water solubility | No data available | None known |
| Solubility(ies) | slightly soluble, Methanol, Acetonitrile | |
| Partition coefficient | No data available | None known |
| Vapour pressure | No data available | None known |
| Relative density | No data available | None known |
| Bulk density | No data available | |
| Liquid Density | No data available | |
| Relative vapour density | No data available | None known |
| Particle characteristics | | |
| Particle Size | No information available | |
| Particle Size Distribution | No information available | |
| 9.2. Other information | | |
| Molecular weight | 375.66 | |
| Molecular formula | C14 H9 Cl3 N2 O2 S | |

9.2.1. Information with regards to physical hazard classes Not applicable

9.2.2. Other safety characteristics No information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity

No information available.

10.2. Chemical stability

Stability

Stable under normal conditions.



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Explosion data Sensitivity to mechanical impact None. Sensitivity to static discharge None.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions None under normal processing.

10.4. Conditions to avoid

Conditions to avoid None known based on information supplied.

10.5. Incompatible materials

Incompatible materials None known based on information supplied.

Hazardous decomposition products None known based on information supplied.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Information on likely routes of exposure

Product Information

| Inhalation | Specific test data for the substance or mixture is not available. | |
|--|---|--|
| Eye contact | Specific test data for the substance or mixture is not available. | |
| Skin contact | Specific test data for the substance or mixture is not available. | |
| Ingestion | Specific test data for the substance or mixture is not available. | |
| Symptoms related to the physical, chemical and toxicological characteristics | | |

Symptoms

No information available.

Numerical measures of toxicity No information available

Acute toxicity



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| Delayed and immediate effects as well as chronic effects from short and long-term exposure | | |
|--|---|--|
| Skin corrosion/irritation | No information available. | |
| Serious eye damage/eye irritation | No information available. | |
| Respiratory or skin sensitisation | No information available. | |
| Germ cell mutagenicity | No information available. | |
| Carcinogenicity | No information available. | |
| Reproductive toxicity | No information available. | |
| STOT - single exposure | No information available. | |
| STOT - repeated exposure | No information available. | |
| Aspiration hazard | No information available. | |
| 11.2. Information on other hazards | | |
| 11.2.1. Endocrine disrupting prop | erties | |
| Endocrine disrupting properties | No information available. | |
| 11.2.2. Other information | | |
| Other adverse effects | No information available. | |
| SECTION 12: Ecological information | | |
| 12.1. Toxicity | | |
| Ecotoxicity | May cause long lasting harmful effects to aquatic life. | |



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| 12.2. Persistence and degradability | | |
|---|---------------------------|--|
| Persistence and degradability | No information available. | |
| 12.3. Bioaccumulative potential | | |
| Bioaccumulation | No information available. | |
| 12.4. Mobility in soil | | |
| Mobility in soil | No information available. | |
| 12.5. Results of PBT and vPvB assessment | | |
| PBT and vPvB assessment | No information available. | |
| 12.6. Endocrine disrupting properties | | |
| Endocrine disrupting properties | No information available. | |
| 12.7. Other adverse effects No information available. | | |

SECTION 13: Disposal considerations

13.1. Waste treatment methods

| Waste from residues/unused products | Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation. |
|--|---|
| Contaminated packaging | Do not reuse empty containers. |

SECTION 14: Transport information

<u>IATA</u>

| 14.1 | UN number or ID number | Not regulated |
|------|------------------------------|----------------|
| 14.2 | UN proper shipping name | Not regulated |
| 14.3 | Transport hazard class(es) | Not regulated |
| 14.4 | Packing group | Not regulated |
| | Environmental hazards | Not applicable |
| 14.6 | Special precautions for user | |



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| Special Provisions | None |
|---|---|
| IMDG 14.1 UN number or ID number 14.2 UN proper shipping name 14.3 Transport hazard class(es) 14.4 Packing group 14.5 Marine pollutant 14.6 Special precautions for user Special Provisions 14.7 Maritime transport in bulk according to IMO instruments | Not regulated Not regulated Not regulated Not regulated Not applicable None No information available No information available |
| RID14.1UN number or ID number14.2UN proper shipping name14.3Transport hazard class(es)14.4Packing group14.5Environmental hazards14.6Special precautions for user Special Provisions | Not regulated Not regulated Not regulated Not regulated Not applicable None |
| ADR 14.1 UN number or ID number 14.2 UN proper shipping name 14.3 Transport hazard class(es) 14.4 Packing group 14.5 Environmental hazards 14.6 Special precautions for user Special Provisions | Not regulated Not regulated Not regulated Not regulated Not applicable |

SECTION 15: Regulatory information

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

Water hazard class (WGK) obviously hazardous to water (WGK 2)

European Union

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work.

Authorisations and/or restrictions on use:

This product does not contain substances subject to authorisation (Regulation (EC) No. 1907/2006 (REACH), Annex XIV) This product does not contain substances subject to restriction (Regulation (EC) No. 1907/2006 (REACH), Annex XVII)



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DIRECTIVE (EU) 2021/1187 on the marketing and use of explosives precursors Not applicable

Persistent Organic Pollutants Not applicable

Ozone-depleting substances (ODS) regulation (EC) 1005/2009 Not applicable

| International Inventories | |
|---------------------------|--|
| TSCA | Contact supplier for inventory compliance status |
| DSL/NDSL | Contact supplier for inventory compliance status |
| EINECS/ELINCS | Contact supplier for inventory compliance status |
| ENCS | Contact supplier for inventory compliance status |
| IECSC | Contact supplier for inventory compliance status |
| KECL | Contact supplier for inventory compliance status |
| PICCS | Contact supplier for inventory compliance status |
| AICS | Contact supplier for inventory compliance status |

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
Australian Inventory of Chemical Substances

15.2. Chemical safety assessment

Chemical Safety Report

A Chemical Safety Assessment has been carried out for this substance

SECTION 16: Other information

Key or legend to abbreviations and acronyms used in the safety data sheet



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STEL (Short Term Exposure Limit)

Skin designation

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Full text of H-Statements referred to under section 3 H413 - May cause long lasting harmful effects to aquatic life

Legend

SVHC: Substances of Very High Concern for Authorisation:

Legend Section 8: Exposure controls/personal protection

| TWA | TWA (time-weighted average) | STEL | |
|---------|-----------------------------|------|--|
| Ceiling | Maximum limit value | * | |
| | | | |

Classification procedure Classification according to Regulation (EC) No. 1272/2008 [CLP] Method Used Acute oral toxicity Calculation method Acute dermal toxicity Calculation method Acute inhalation toxicity - gas Calculation method Acute inhalation toxicity - Vapour Calculation method Acute inhalation toxicity - dust/mist Calculation method Skin corrosion/irritation Calculation method Serious eye damage/eye irritation Calculation method Respiratory sensitisation Calculation method Skin sensitisation Calculation method Mutagenicity Calculation method Carcinogenicity Calculation method Calculation method Reproductive toxicity STOT - single exposure Calculation method STOT - repeated exposure Calculation method Acute aquatic toxicity Calculation method Chronic aquatic toxicity Calculation method Aspiration hazard Calculation method Ozone Calculation method

Key literature references and sources for data used to compile the SDS

Agency for Toxic Substances and Disease Registry (ATSDR) U.S. Environmental Protection Agency ChemView Database European Food Safety Authority (EFSA) EPA (Environmental Protection Agency) Acute Exposure Guideline Level(s) (AEGL(s)) U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act U.S. Environmental Protection Agency High Production Volume Chemicals Food Research Journal Hazardous Substance Database International Uniform Chemical Information Database (IUCLID) Japan GHS Classification Australian National Industrial Chemicals Notification and Assessment Scheme (NICNAS) NIOSH (National Institute for Occupational Safety and Health) National Library of Medicine's ChemID Plus (NLM CIP) National Library of Medicine's PubMed database (NLM PUBMED)



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National Toxicology Program (NTP) New Zealand's Chemical Classification and Information Database (CCID) Organisation for Economic Co-operation and Development Environment, Health, and Safety Publications Organisation for Economic Co-operation and Development High Production Volume Chemicals Programme Organisation for Economic Co-operation and Development Screening Information Data Set World Health Organization

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This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006 Disclaimer

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.

End of Safety Data Sheet