

1. IDENTIFICATION OF THE SUBSTANCE / PREPARATION AND OF THE COMPANY / UNDERTAKING

Product Identifier:

Product Name: Thiourea Dioxide
REACH Registration No.: 01-2119980711-35-XXXX
CAS No.: 1758-73-2

Relevant identified uses of the substance or mixture and uses advised against:

Use pattern: Textile auxiliary.

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2. HAZARDS IDENTIFICATION

Classification of the substance or mixture:

According to regulation (EC) 1272/2008 on classification, labelling and packaging of substances and mixtures:

Self-heating; may catch fire.
Harmful if swallowed.
Causes skin irritation.
Causes serious eye damage.
Harmful if inhaled.
May cause respiratory irritation.
May cause damage to organs through prolonged or repeated exposure.

Classification of the Substance or Mixture:

Acute Toxicity: Cat. 4 (inhalation)
Specific target organ toxicity — Single exposure, Category 3
Specific target organ toxicity — Repeated exposure, Category 2
Acute Toxicity: Cat. 4 (oral)
Skin corrosion/irritation: Irritant, Cat. 2
Serious eye damage/eye irritation: Irreversible effects on the eye, Cat. 1
Self-Heating Substances and Mixtures, Cat. 2

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Label elements:

Hazard pictogram(s):



Signal Word:

Danger.

Contains:

Thiourea Dioxide.

Hazard statement(s):

H252: Self-heating in large quantities; may catch fire.

H302: Harmful if swallowed.

H315: Causes skin irritation.

H318: Causes serious eye damage.

H332: Harmful if inhaled.

H335: May cause respiratory irritation.

H373: May cause damage to organs through prolonged or repeated exposure.

Precautionary statements (prevention):

P235+P410: Keep cool. Protect from sunlight.

P260: Do not breathe dust/fume/gas/mist/vapours/spray.

P270: Do not eat, drink or smoke when using this product.

P271: Use only outdoors or in a well-ventilated area.

P280: Wear protective gloves/protective clothing/eye protection/face protection.

Precautionary statements (response):

P304+P340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

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 or doctor/physician.

Precautionary statements (storage):

P403+P233: Store in a well-ventilated place. Keep container tightly closed.

P405: Store locked up.

P407: Maintain air gap between stacks/pallets.

P420: Store away from other materials.

Precautionary statements (disposal):

P501: Dispose of contents/container to waste treatment in accordance with national regulations.

Other hazards:

If applicable in this section are given hazards which are not part of the overall classification but can contribute to the hazards which may be associated with the substance or mixture.

Not applicable.

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3. COMPOSITION / INFORMATION ON INGREDIENTS

Substances: Not applicable.

Mixtures:

Chemical characterisation: Thiourea Dioxide

Hazardous ingredients (GHS) according to Regulation (EC) 1272/2008:

Products: Thiourea Dioxide

Content: >=90%

EC Number: 217-157-8

CAS Number: 1758-73-2

REACH Registration Number: 01-2119987951-20-XXXX

Self-heat. 2: H252

Acute Tox. 4 (oral): H302

Skin Irrit. 2: H315

Eye Dam.1: H318

Acute Tox. 4 (inhalation): H332

STOT SE 3: H335

STOT RE 2: H373

4. FIRST AID MEASURES (SYMPTOMS)

Description of first aid measures:

General information: Take off immediately all contaminated clothing.

After inhalation: Upon inhalation of aerosol/vapour/dust: Take the patient into the fresh air; if there is difficulty in breathing, medical advice is required.

After contact with skin: Remove all contaminated clothing immediately.
Cleansing with plenty of water, soap or other non-irritating cleansing agents.

After contact with eyes: Contamination of the eyes must be treated by thorough irrigation with water, with the eyelids held open. A doctor (or eye specialist) should be consulted immediately.

After ingestion: Rinse mouth out immediately.
In case of swallowing drink plenty of water. Do not induce vomiting. Consult a doctor.

Most important symptoms and effects, both acute and delayed:

Please see hazard statements in section 2.2 if given and information in this section if stated.

Indication of any immediate medical attention and special treatment needed:

Please see precautionary statements in section 2.2 as well as first aid information in this section if stated.

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5. FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable extinguishing media: Copious quantities of water, carbon dioxide, dry powder.
Adapt fire-fighting measures to surrounding environment.

Extinguishing media that must not be used for safety reasons: Not determined.

Special hazards arising from the substance or mixture: Not determined.

Advice for fire-fighters:

Special protective equipment for firefighting: Firemen have to wear self-contained breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures:

Personal precautions: Not determined.

Environmental precautions:

Environmental precautions: Not determined.

Methods and material for containment and cleaning up:

Methods for clothing up: Not determined.

Reference to other sections:

7. HANDLING AND STORAGE

Precautions for safe handling:

Advice on safe handling: Temperatures over 60 °C may lead to self-decomposition.

Advice on protection against fire and explosion: Not determined.

Conditions for safe storage, including any incompatibilities:

Requirements for storage rooms and vessels:

Store sealed in original container in a cool place.

Do not allow product temperature to exceed 35 °C.

Protect from sunlight.

Further information on storage conditions: Keep away from oxidising agents.

Storage class: 4.2 Self-igniting substances.

Storage stability: Not determined.

Specific end use(s): Not determined.

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8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Control parameters:

Ingredients with occupational exposure limits to be monitored: Not applicable.

Exposure controls:

General protective measures:

Do not breathe vapour/spray.
Avoid contact with eyes and skin.
Take off immediately all contaminated clothing.

Hygiene measures:

Keep away from food and drink stuffs.
Do not eat, drink or smoke at work.
Wash hands before breaks and at end of work and use skin-protecting ointment.

Respiratory protection:

Not necessary.

Hand protection:

Wear suitable impervious gloves e.g. of PVC or nitrile rubber. In the event of contamination, change protective gloves immediately. Avoid skin contact with the wetted surfaces of the protective gloves.

Eye protection:

Tightly fitting safety glasses.

Body protection:

Wear protective clothing.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties:

Form:	Solid.
Colour:	White to yellow.
Odour:	Odourless.
Melting point (decomposition):	129 – 133°C
Boiling point:	Not determined.
Flash Point:	Not applicable.
Ignition Temperature:	Not determined.
Flammability:	Not determined.
Lower explosion limit:	Not determined.
Upper explosion limit:	Not determined.
Vapour Pressure:	Not determined.
Density:	1,749 g/cm ³ (20°C)
Solubility in water:	27 g/l
pH value:	4 (10 g/l)

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Octanol/water partition coefficient (log Pow):

Viscosity (dynamic): Not determined.

Viscosity (kinematic): Not determined.

Viscosity (flow time): Not determined.

Other Information:

Combustion number: Not determined.

Dust explosion class: Not determined.

Bulk density: Not determined.

Further information (phys.-chem.): Not necessary.

10. STABILITY AND REACTIVITY

Reactivity: No hazardous reactions when stored and handled according to prescribed instructions.

Chemical stability:

Thermal decomposition: Not determined.

Possibility of hazardous reactions:

Hazardous reactions: Not determined.

Hazardous decomposition products: Not applicable.

Conditions to avoid:

For avoidable conditions: Not necessary.

Incompatible materials:

For avoidable materials: Not necessary.

Hazardous decomposition products: Not applicable.

11. TOXICOLOGICAL INFORMATION

Information on toxicological effects:

Acute oral toxicity: LD50 1.120 mg/kg (rat).

Acute inhalation toxicity: Not determined.

Acute dermal toxicity: Not determined.

Irritant effect on skin: Causes skin irritation (rabbit).

Irritant effect on eyes: Causes serious eye damage (rabbit eye).

Sensitisation: Non-sensitising.

Repeated dose toxicity: Not determined.

Mutagenicity: Not determined.

Teratogenicity: Not necessary.

Carcinogenicity: Not necessary.

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12. ECOLOGICAL INFORMATION

Toxicity:

Fish toxicity: LC50 416 mg/l (96h)
Method: OECD 203

Daphnia toxicity: 390 mg/l (24h, Daphnia magna)
Method: OECD 202

Algae toxicity: IC50 32 mg/l (72h)
Method: OECD 201

Bacteria toxicity: EC10 538mg/l (18h, Pseudomonas putida)
Remarks: Not determined.

Persistence and degradability:

Physico-chemical eliminability: Not determined.

Biodegradability: The product is readily biodegradable according to OECD criteria.

Behaviour in environmental compartments: Not determined.

Dissolved Organic carbon (DOC): Not determined.

Chemical oxygen demand (COD): 420 mg/g

Biochemical oxygen demand (BOD5): 210 mg/g

Bioaccumulative potential: Not determined.

Mobility in soil: Not determined.

Results of PBT and vPvB assessment: Not determined.

Other adverse effects: Not determined.

13. DISPOSAL CONSIDERATIONS

Waste treatment methods:

Product: May be disposed of according to the local regulations (systematic dump or burning).

Uncleaned packaging: Not determined.

14. TRANSPORT INFORMATION

ADR: UN 3341, THIOUREA DIOXIDE, Class: 4.2, PG: III

ADNR: UN 3341, THIOUREA DIOXIDE, Class: 4.2, PG: III

RID: UN 3341, THIOUREA DIOXIDE, Class: 4.2, PG: III

IMDG: UN 3341, THIOUREA DIOXIDE, Class: 4.2, PG: III, EmS: F-A, S-J

IATA_C: UN 3341, THIOUREA DIOXIDE, Class: 4.2, PG: III

IATA_P: UN 3341, THIOUREA DIOXIDE, Class: 4.2, PG: III

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UN Number: See above entry at the respective regulation.

UN proper shipping name: See above entry at the respective regulation.

Transport hazard class(es): See above entry at the respective regulation.

Packing group: See above entry at the respective regulation.

Tunnel code: See above entry at the respective regulation.

Environmental hazards: See above entry at the respective regulation.

Special precautions for user: Corrosive, toxic.
Corrosive when wet.
Self-igniting.
Keep separated from foodstuffs.

Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code:

No transport in bulk according to Annex II of MARPOL 73/78 and the IBC code foreseen for this substance or mixture.

15. REGULATORY INFORMATION

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

TA-Luft (Ger.): Not applicable.

Water Hazard Class (Ger.): WGK 1- slightly hazardous to water.
WGK- Classification in accordance with the German Water Resources Act.

Chemical Safety Assessment: Not determined.

Note: The regulatory information given above only indicates the principal regulations specifically applicable to the product described in the safety data sheet. The user's attention is drawn to the possible existence of additional provisions which complete these regulations. Refer to all applicable national, international and local regulations or provisions.

16. OTHER INFORMATION

Text of all shortcuts referred to in Sections 2 and 3:

H252: Self-heating in large quantities; may catch fire.

H302: Harmful if swallowed.

H315: Causes skin irritation.

H318: Causes serious eye damage.

H332: Harmful if inhaled.

H335: May cause respiratory irritation.

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Acute Tox. 4 (inhalation): Cat. 4 (inhalation)

Acute Tox. 4 (oral): Cat. 4 (oral)

Eye Dam.1: Serious eye damage/eye irritation: Irreversible effects on the eye, Cat. 1

Self-heat.2: Self-Heating Substances and Mixtures, Cat. 2

Skin Irrit.2: Skin corrosion/irritation: Irritant, Cat. 2

STOT RE 2: Specific target organ toxicity — Repeated exposure, Category 2

STOT SE 3: Specific target organ toxicity — Single exposure, Category 3

Legal disclaimer:

The information contained in this SDS does not constitute a risk assessment, and should not replace the user's own assessment of risks as required by other health and safety legislation. This advice is given by Nexchem Ltd who accept no legal liability for it except otherwise provided by law. The information contained herein is based on the present state of our knowledge and is intended to describe our products from the point of view of safety requirements. It should not therefore be construed as guaranteeing specific properties.