

DTDC Powder

SDS Date: Provisional

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

1.1 Product identifier:

Identification on the label/Trade name:	Dithiocaprolactame
Additional identification:	1,1'-dithiobis[hexahydro-2H-azepin-2-one]
Identification of the product:	See section 3
Index Number:	Not available
REACH late pre-registration No.:	17-2119953977-16-0000

1.2 Relevant identified uses of the substance and uses advised against:

1.2.1 Identified uses:

Mainly used as curing agent for natural rubber or synthetic rubber.

1.2.2 Uses advised against:

Not available.

1.3 Details of the supplier of the safety data sheet:

Supplier(Only representative):	Chemical Inspection & Regulation Service Limited
Supplier(Manufacturer):	Shandong Yanggu Huatai Chemical Co., Ltd
Address:	No.217, Qinghexi Road, Yanggu County, Shandong Province, China
Contact person(E-mail):	exp@ygh_atai.com
Telephone:	+86-635-5106616
Fax:	+86-635-5106999

1.4 Emergency telephone Number:

+353 41 980 6916

Available outside office hours? YES NO X

SECTION 2 Hazards Identification

2.1 Classification of the substance

2.1.1 Classification:

The substance is classified as following according to 67/548/EEC and REGULATION (EC) No 1272/2008:

REGULATION (EC) No 1272/2008

Hazard classes/Hazard categories	Hazard statement
Skin Sens. 1	H317
Eye Irrit. 2	H319
Aquatic Chronic 2	H411

For full text of H- phrases: see section 2.2.

67/548/EEC

Hazards characteristics	R-Phrases
Xi	R36
-	R43
N	R51-53

For full text of R- phrases: see section 16.

2.1.2 The most important adverse effects

2.1.2.1 The most important adverse physicochemical effects:

Not applicable.

2.1.2.2 The most important adverse human health effects:

May cause an allergic skin reaction. Causes serious eye irritation.

2.1.2.3 The most important adverse environmental effects:

Toxic to aquatic life with long lasting effects.

2.2 label elements

Hazard Pictograms:



Signal Word(S):

Warning

Hazard Statement:

H317: May cause an allergic skin reaction. H319: Causes serious eye irritation.

Precautionary Statement:

H411: Toxic to aquatic life with long lasting effects.

P261: Avoid breathing dust/fume/gas/mist/vapours/spray. P264: Wash hands thoroughly after handling.

P272: Contaminated work clothing should not be allowed out of the workplace. P273: Avoid release to the environment.

P280: Wear protective gloves/protective clothing/eye protection/face protection. P302 + P352 IF ON SKIN: Wash with plenty of soap and water.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P333 + P313 If skin irritation or rash occurs: Get medical advice/attention.

P337 + P313: If eye irritation persists: Get medical advice/attention.

P363: Wash contaminated clothing before reuse.

P391: Collect spillage.

P501: Dispose of contents/container to local/regional/national/ international regulation.

2.3 Other hazards

Not available (PBT, vPvB, Substance is an endocrine disruptor etc.)

SECTION 3 Composition/information on ingredients

Substance/Mixture: Substance

Ingredient(s):

Chemical Name	Index No. Concentration	Late pre-registration No.	CAS No.	EC No.
Dithiocaprolactame	N/A ≥97%	17-2119953977-16-0000	23847-08-7	245-910-0

SECTION 4 First aid measures

4.1 Description of first aid measures:

In all cases of doubt, or when symptoms persist, seek medical attention.

4.1.1 In case of inhalation:

Supply fresh air; consult doctor in case of complaints.

4.1.2 In case of skin contact:

Immediately wash with water and soap and rinse thoroughly.

4.1.3 In case of eyes contact:

Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

4.1.4 In case of ingestion:

Rinse out mouth and then drink plenty of water. Do NOT induce vomiting. Seek medical treatment.

4.2 Most important symptoms and effects, both acute and delayed

May cause an allergic skin reaction. Causes serious eye irritation.

4.3 Indication of any immediate medical attention and special treatment needed

If skin irritation or rash occurs, get medical advice/attention.

SECTION 5 Fire-Fighting measures

5.1 Extinguishing media:

Suitable extinguishing media: Water spray, foam, powder, carbon dioxide.

Unsuitable extinguishing media: Not available.

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 fire-fighters:

Wear a self-contained breathing apparatus in pressure-demand MSHA/ NIOSH (approved or equivalent), and full protective gear.

SECTION 6 Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures:

6.1.1 For non-emergency personnel:

Use personal protective equipment. Avoid dust formation. Avoid breathing dust. Ensure adequate ventilation. Avoid contact with skin and eyes.

6.1.2 For emergency responders:

Wear an appropriate NIOSH/MSHA approved respirator if mist, vapor or dust is generated.

6.2 Environmental Precautions:

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

6.3 Methods for Containment and Cleaning up:

Sweep up spilled material or soak in suitable container for disposal. Avoid dust formation.

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 information on disposal.

6.5 Additional information:

Not applicable.

SECTION 7 Handling and storage**7.1 Precautions for safe handling:****7.1.1 Protective measures:**

Prevent formation of aerosols and dust. Any unavoidable deposit of dust must be regularly removed. Ensure good ventilation/exhaustion at workplace. Keep ignition sources away. Protect against electrostatic charges.

7.1.2 Advice on general occupational hygiene:

Do not eat, drink and smoke in work areas. Wash hands after use. Remove contaminated clothing and protective equipment before entering eating areas.

7.2 Conditions for safe storage, including any incompatibilities:

Keep container tightly closed in a dry, well ventilated place. Keep away from foodstuffs, beverages, feed and tobacco products.

7.3 Specific end use(s):

Not applicable.

SECTION 8 Exposure control/personal protection**8.1 Control parameters:**

8.1.1 Occupational exposure limits: Not available.

8.1.2 Additional exposure limits under the conditions of use: Not available.

8.1.3 DNEL/DMEL and PNEC-Values: Not available.

8.2 Exposure controls**8.2.1 Appropriate engineering controls:**

Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate ventilation to keep airborne concentrations low.

8.2.2 Individual protection measures, such as personal protective equipment:

Eye/face protection	Tightly sealed goggles.
Hand protection	Use protective gloves (e.g. rubber gloves). Avoid direct contact with the chemical by organizational measures.
Body protection	Use protective suit.
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.
Thermal hazards	Wear suitable protective clothing to prevent heat.

8.2.3 Environmental exposure controls:

Avoid discharge into the environment.

According to local regulations, Federal and official regulations.

SECTION 9 Physical and chemical properties**9.1 Information on basic physical and chemical properties**

Appearance:	Powder
Colour:	White or light yellow
Odour:	odourless
Odour threshold:	Not available
pH:	Not available

Melting point/range (°C):	136.06 °C
Boiling point/range (°C) :	248.6 °C
Flash point (°C) :	Not available
Evaporation rate:	Not available
Flammability (solid, gas);	Not available
Ignition temperature (°C) :	Not available
Upper/lower flammability/explosive limits:	Not available
Vapour pressure:	0.06 Pa(25°C)
Vapour density: Relative	Not available
Density : Bulk density	1.319 (20 °C)
(kg/m ³) : Water solubility	Not available
(g/l):	Soluble(1.4 g/L)
n-Octanol/Water (log Po/w) :	2.25 (30 °C)
Auto-ignition temperature:	Not available
Decomposition temperature:	Not available
Viscosity, dynamic (mPa s) :	Not available
Explosive properties:	Not available
Oxidising properties:	Not available
Molecular Formula:	C ₆ H ₉ NOS ₂ -2
Molecular Weight:	175.27176

9.2. Other information:

Fat solubility(solvent– oil to be specified) etc:	Not available
Surface tension:	Not available
Dissociation constant in water(pKa):	Not available
Oxidation-reduction Potential:	Not available
Specific gravity:	Not available

SECTION 10 Stability and reactivity

10.1 Reactivity:

The substance is stable under normal storage and handling conditions.

10.2 Chemical stability:

Stable at room temperature in closed containers under normal storage and handling conditions.

10.3 Possibility of hazardous reactions:

Risk of dust explosion.

10.4 Conditions to avoid:

Incompatible materials. Keep away from heat and direct sunlight.

10.5 Incompatible materials:

Acids and bases.

10.6 Hazardous decomposition products:

Formation of toxic gases is possible during heating or in case of fire.

SECTION 11 Toxicological information

11.1 Toxicokinetics, metabolism and distribution

Non-human toxikological data: Not available

11.2 Information on toxicological effects

Acute toxicity:

LD50(Oral, Rat):	> 2000 mg/kg bw
LD50(Dermal, Rat):	> 2000 mg/kg bw
LC50(Inhalation, Rat):	Not available

Skin corrosion/Irritation:

Not classified

Serious eye damage/irritation:

Causes serious eye irritation.

Respiratory or skin sensitization:

May cause an allergic skin reaction.

Germ cell mutagenicity:

Not classified

Carcinogenicity:

Not classified

Reproductive toxicity:

Not classified

STOT- single exposure:

Not classified

STOT-repeated exposure:

Not classified

Aspiration hazard:

Not classified

SECTION 12 Ecological information

12.1 Toxicity:

Acute toxicity		Time	Species	Method	Evaluation	Remarks
LC50	7.5 mg/L	96h	Fish	OECD 203	N/A	N/A
EC50	> 100 mg/L	48h	Daphnia	OECD 202	N/A	N/A
EC50	> 100 mg/L	72h	Algae	OECD 201	N/A	N/A

12.2 Persistence and degradability:

biodegradable.

The test material cannot be considered as readily

12.3 Bioaccumulative potential:

BCF: 14.2 L/kg

12.4 Mobility in soil:

Not available.

12.5 Results of PBT&vPvB assessment:

Not available.

12.6 Other adverse effects:

Not available.

SECTION 13 Disposal considerations

13.1 Waste treatment methods

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

13.2 Product / Packaging disposal:

If empty container retains product residues, all label precautions must be observed. Return for reuse or dispose according to national or local regulations.

SECTION 14 Transport information

	Land transport (ADR/RID)	Sea transport (IMDG)	Air transport (ICAO/IATA)
UN-Number:	3077	3077	3077
UN Proper shipping name:	Environmentally hazardous substance, solid, n.o.s. (Contains Dithiocaprolactame)	Environmentally hazardous substance, solid, n.o.s. (Contains Dithiocaprolactame)	Environmentally hazardous substance, solid, n.o.s. (Contains Dithiocaprolactame)
Transport hazard Class:	9	9	9
Packaging group:	III	III	III
Environmental hazards:	Yes	Yes	Yes
Special precautions for user:	See section 2.2	See section 2.2	See section 2.2
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	IBC08	IBC08	IBC08

SECTION 15 Regulation information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture Relevant information regarding authorization:

**Relevant information regarding restriction:
Other EU regulations:**

Not applicable.
Not applicable.
Employment restrictions concerning young person must be observed. For use only by technically qualified individuals.

**Other National regulations:
Chemical Safety Assessment has been carried out?**

Not applicable
YES NO X

SECTION 16 Other information

16.1 Indication of changes Version 1.1 Amended by EU No 453/2010

16.2 Relevant R- phrases (number and full text):

R36 Irritating to eyes.
R43 May cause sensitisation by skin contact.
R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

16.3 Training instructions:

Not applicable.

16.4 Further information:

This information is based upon the present state of our knowledge. This SDS has been compiled and is solely intended for this product.

16.5 Notice to reader:

Employers should use this information only as a supplement to other information gathered by them, and should make independent judgment of suitability of this information to ensure proper use and protect the health and safety of employees.

This information is furnished without warranty, and any use of the product not in conformance with this Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user.