

SAFETY DATA SHEET

THIOUREA DIOXIDE

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

1.1 Product identifier:	
CAS Number:	1758-73-2
EC number:	217-157-8
1.2 SYNONYMS:	<ul style="list-style-type: none"> Aminoiminomethanesulphinic acid

SECTION 2: Hazards identification:

2.1 Classification of the substance or mixture:	Classification according to Regulation (EC) No 1272/2008 The substance is classified according to the CLP regulation.
2.2 Label elements:	<p>Labelling according to Regulation (EC) No 1272/2008</p> <p>Self-heating substances and mixtures, (Category 1)</p> <p>Acute toxicity, oral (Category 4)</p> <p>Acute toxicity, inhalation (Category 2)</p> <p>Skin irritation, (Category 2)</p> <p>Serious eye damage, (Category 1)</p> <p>Specific target organ toxicity - single exposure, Respiratory system (Category 3)</p> <p>Specific target organ toxicity - repeated exposure, Lungs (Category 2)</p>
Hazard Pictograms:	
Signal Word:	Danger
Hazard statements:	<p>H251: Self-heating; may catch fire.</p> <p>H302: Harmful if swallowed.</p> <p>H315: Causes skin irritation.</p> <p>H318: Causes serious eye damage.</p> <p>H330: Fatal if inhaled.</p>
	<p>H335: May cause respiratory irritation.</p> <p>H373: May cause damage to organs (Lungs) through prolonged or repeated exposure.</p>

<p>Precautionary Statements:</p>	<p>P235: Keep cool. P280: Wear protective gloves/ protective clothing/ eye protection/ face protection. P301 + P312: IF SWALLOWED: Call a POISON CENTER/ doctor if you feel unwell. P304 + P340 + P310: IF INHALED: Remove person to fresh air and keep comfortable for breathing. 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. P314 Get medical advice/ attention if you feel unwell P405: Store locked up. P501: Dispose of contents/ container to an approved waste disposal plant.</p>
<p>2.3 Other hazards:</p>	
<p>Inhalation:</p>	<p>can cause respiratory irritation, coughing, and shortness of breath.</p>
<p>Ingestion:</p>	<p>may cause nausea, vomiting, abdominal pain, and possible toxic effects on internal organs.</p>
<p>Skin Contact:</p>	<p>can cause irritation, redness, and possible allergic reactions.</p>
<p>Eye contact:</p>	<p>can cause irritation, redness, pain, and watering.</p>
<p>Chronic Exposure:</p>	<p>may lead to skin sensitization, respiratory issues, and potential effects on the liver and kidneys.</p>
<p>Aggravation of pre-existing conditions:</p>	<p>may aggravate pre-existing respiratory conditions, skin disorders, or liver and kidney problems.</p>

SECTION 3: Composition/information on ingredients

3.1 Chemical characterisation:	Substances
CAS No:	Description: 1758-73-2 THIOUREA DIOXIDE
Identification number(s):	EC number: 217-157-8

SECTION 4: First aid measures

4.1 Description of first aid measures	
General information:	
After inhalation:	If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.
After skin contact:	Remove contaminated clothing immediately. Wash with plenty of water. Consult a physician.
After eye contact:	Immediately flush eyes with plenty of water for at least 15 minutes. consult a physician.
After swallowing:	Rinse mouth with water. Immediately after ingestion. Do not induce vomiting. Consult a physician.
4.2 Most important symptoms and effects, both acute and delayed:	Acute exposure can cause irritation of the eyes, skin, and respiratory tract, nausea, and vomiting, while delayed or repeated exposure may lead to skin sensitization and potential liver, kidney, or respiratory effects.
4.3 Indication of any immediate medical attention and special treatment needed:	Treat symptomatically.

SECTION 5: Firefighting measures

5.1 Extinguishing media:	Water, Carbon dioxide dry powder.
5.2 Special hazards arising from the substance or mixture:	Carbon oxides. Nitrogen oxides.

5.3 Advice for firefighters:	Wear fully protective suit, safety glasses and respiratory device. Cool tanks/drums with water spray/remove them into safety.
5.4 further information:	no data available

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures:	Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Avoid dust accumulation. Seek medical attention.
6.2 Environmental precautions:	Do not enter this chemical into drains.
6.3 Methods and material for containment and cleaning up:	Take up spill into absorbent material, e.g.: sand, earth, vermiculite, powdered limestone. Scoop absorbed substance into closing containers. Spill must not return in its original container. Clean contaminated surfaces with an excess of water. Wash clothing and equipment after handling.

SECTION 7: Handling and storage

7.1 Precautions for safe handling:	For use in are with adequate ventilation. Empty containers pose a fire risk, evaporate the residue under a fume hood. Ground all equipment containing material Do not use in confined spaces. Electrostatic discharge protection. Minimize dust generation and accumulation. Avoid ingestion and inhalation.
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7.2 Conditions for safe storage, including any incompatibilities:	Store in original containers. Keep containers securely sealed. Store in a cool, dry, well-ventilated area. Store away from incompatible materials and foodstuff containers. Protect containers against physical damage and check regularly for leaks. Store in a dry and dark area. Tightly closed.
Requirements to be met by storerooms and receptacles:	Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.
7.3 Specific end uses:	no data available

SECTION 8: Exposure controls/personal protection

8.1 Control parameters	
Additional information about design of technical facilities:	A system of local and general exhaust is recommended.
8.2 Exposure controls	
Appropriate engineering controls	Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.
Personal protective equipment:	Dust respirator, protective masks, wearing anti chemical gloves, rubber gloves, etc.
General protective and hygienic measures:	Eyes, body and hand protection, maintain indoor air unobstructed. Wear protective equipment.
	Respiratory protection: Required.
Protection of hands:	Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in

	accordance with applicable laws. Wash and dry hands.
	Eye protection: Required
Protection of Body:	Complete suit protecting against chemicals, Flame retardant antistatic protective clothing.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties General Information	
Appearance: Form:	Crystalline solid
Colour:	White
Odour:	Slight sulfur like
pH-value:	6
Melting point/Melting range:	120°C
Boiling point/Boiling range:	Not determined
Flammability (solid, gaseous):	Non- flammable
Ignition temperature:	Not determined
Decomposition temperature:	120°C
Self-igniting:	None
Flash point:	No data available
Danger of explosion:	None
Explosion limits: Lower:	Not determined
Explosion limits: Upper:	Not determined
Vapour pressure:	Not determined
Density at 20 °C:	1.3 g/cm ³
Relative density:	1.3
Vapour density:	Not determined
Evaporation rate:	Not determined
Solubility in / Miscibility with- water at 20 °C:	Highly Soluble
Partition coefficient:(n- octanol/water)	-2.6
Viscosity:	Not applicable

SECTION 10: Stability and reactivity

10.1 Reactivity	Self heating material- may catch fire.
10.2 Chemical stability	This chemical is stable under storage conditions.

10.3 Possibility of hazardous reactions	Can react with strong oxidizing agents, releasing sulfur dioxide.
10.4 Conditions to avoid	Excessive heat, direct sunlight, flames, moisture.
10.5 Incompatible materials	strong oxidizing agents, strong acids and bases, reducing agents.
10.6 Hazardous decomposition products	sulfur oxides, ammonia.

SECTION 11: Toxicological information

11.1 Information on toxicological effects	
Acute Toxicity:	LD50 (Oral, Rat): no data available LD50 (Dermal, Rabbit): no data available LC50 (Inhalation Rat): no data available
Skin corrosion/Irritation:	Causes skin irritation
Serious eye damage/irritation:	Causes serious eye damage
Respiratory damage/irritation:	No data available
Ingestion:	No data available
Germ cell mutagenicity:	No data available
Carcinogenicity:	No data available
Reproductive toxicity:	No data available
Specific target organ toxicity - single exposure:	May cause respiratory irritation
Specific target organ toxicity - repeated exposure:	May cause damage to lungs.
Aspiration hazard:	No data available
Signs and Symptoms of Exposure:	Refer section 2.3
11.2 Additional toxicological information	
Biodegradability:	Readily biodegradable

SECTION 12: Ecological information

12.1 Toxicity Aquatic toxicity:	LC50(fish): no data available EC50(daphnia): no data available ErC50(algae): no data available
12.2 Persistence and degradability:	Readily biodegradable

12.3 Bioaccumulative potential:	low bioaccumulative
12.4 Mobility in soil:	High mobility
12.5 Other adverse effects:	No data available

SECTION 13: Disposal considerations

13.1 Waste treatment methods	
Uncleaned packaging Recommendation:	dispose of in accordance with local hazardous waste regulations
Recommended cleansing agents:	Water, mild detergents, Sand.

SECTION 14: Transport information

14.1 UN-Number · ADR, ADN, IMDG, IATA:	3341
14.2 UN proper shipping name · ADR, ADN, IMDG, IATA:	THIOUREA DIOXIDE
14.3 Transport hazard class(es) · ADR, ADN, IMDG, IATA :	4.2
14.4 Packing group · ADR, IMDG, IATA:	2
14.5 Environmental hazards:	None
14.6 Special precautions for user:	Handle responsibly.

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture Directive 2012/18/EU	Directive 2012/18/EU, under that this substance is classified in listed substances as acute toxic substances.
Named dangerous substances:	This substance is not listed in the annex 1 to the directive.
15.2 Chemical safety assessment:	Chemical assessment has not been carried out.

SECTION 16: Other information

The data included was derived from international authoritative database and provided by the enterprise. Other information was based on the present state of our knowledge. We try to ensure the correctness of all information. However, due to the diversity of information sources and limitations of our knowledge, this document is only for reference. Users should make their independent judgment

Multichem Exports LLP.
1315, Dalamal Tower,
Nariman Point, Mumbai 400021, India
T: +91 6301006301
E: sales@multichemexports.com
www.multichemexports.com



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