

# SAFETY DATA SHEET

## 1. IDENTIFICATION

**Product name:** 2,2'-Dibenzothiazolyl Disulfide  
**Company:** HENAN KAILUN CHEMICAL CO.,LTD.  
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**Responsible Department:** Sales Department  
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## 2. HAZARDS IDENTIFICATION

Classification of the substance or mixture

**PHYSICAL HAZARDS** Not classified

**HEALTH HAZARDS**

Serious eye damage/eye irritation Category 2A

Skin sensitization Category 1

Reproductive toxicity Category 1B

Specific target organ toxicity Kidney

- Repeated exposure [Category 2]

**ENVIRONMENTAL HAZARDS**

Acute aquatic hazard Category 1

Long-term aquatic hazard Category 1

Label elements

Pictograms or hazard symbols



Signal word

Hazard statements

Danger

Causes serious eye irritation

May cause an allergic skin reaction May damage fertility or the unborn child

May cause damage to organs through prolonged or repeated exposure : Kidney

Very toxic to aquatic life

Very toxic to aquatic life with long lasting effects

Precautionary statements

[Prevention]

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.Do not breathe dust, fume, mist, vapors or spray.

Avoid release to the environment.

Contaminated work clothing should not be allowed out of the workplace.Wash hands and face thoroughly after handling.

Wear protective gloves, protective clothing, face protection.

[Response]

IF ON SKIN: Wash with plenty of soap and water. If skin irritation or rash occurs:Take off contaminated clothing. And wash it before reuse.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get

[Storage]  
[Disposal]

medical advice or attention.  
IF exposed or concerned: Get medical advice or attention. Collect spillage.  
Store locked up.  
Dispose of contents and container in accordance with local, regional, national regulations.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

**Substance/mixture:** Substance  
**Components:** N-Cyclohexyl-2-benzothiazolylsulfenamide  
**Percent:** >98.0%(HPLC)(N)  
**CAS RN:** 95-33-0  
**Chemical Formula:** C<sub>13</sub>H<sub>16</sub>N<sub>2</sub>S<sub>2</sub>

### 4. FIRST AID MEASURES

**Inhalation:** Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical advice/attention.  
**Skin contact:** Remove/Take off immediately all contaminated clothing. Gently wash with plenty of soap and water. Get medical advice/attention.  
**Eye contact:** Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Get medical advice/attention.  
**Ingestion:** Get medical advice/attention. Rinse mouth.  
**Protection of first-aiders:** A rescuer should wear personal protective equipment, such as rubber gloves and airtight goggles.

### 5. FIRE-FIGHTING MEASURES

**Suitable extinguishing media:** Dry chemical, foam, water spray, carbon dioxide.  
**Specific hazards arising from the chemical:** Take care as it may decompose upon combustion or in high temperatures to generate poisonous fume.  
**Precautions for firefighters:** Fire-extinguishing work is done from the windward and the suitable fire-extinguishing method according to the surrounding situation is used. Uninvolved persons should evacuate to a safe place. In case of fire in the surroundings: Remove movable containers if safe to do so.  
**Special protective equipment for firefighters:** When extinguishing fire, be sure to wear personal protective equipment

### 6. ACCIDENTAL RELEASE MEASURES

**Personal precautions, protective equipment and emergency procedures:** Use personal protective equipment. Keep people away from and upwind of spill/leak. Entry to non-involved personnel should be controlled around the leakage area by roping off, etc.  
**Environmental precautions:** Be careful not to let it flow into rivers, etc., since adverse effects on the environment are concerned.  
**Methods and materials for containment and cleanup:** Sweep dust to collect it into an airtight container, taking care not to disperse it. Adhered or collected material should be promptly disposed of, in accordance with appropriate laws and regulations.

## 7. HANDLING AND STORAGE

### Precautions for safe handling

<b>Technical measures:</b>	Handling is performed in a well ventilated place. Wear suitable protective equipment. Prevent dispersion of dust. Wash hands and face thoroughly after handling. Use a closed system if possible. Use a local exhaust if dust or aerosol will be generated.
<b>Advice on safe handling:</b>	Avoid all contact!

### Conditions for safe storage, including any incompatibilities

<b>Storage conditions:</b>	Keep container tightly closed. Store in a cool and dark place. Store locked up. Store away from incompatible materials such as oxidizing agents.
<b>Packaging material:</b>	Comply with laws.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

<b>Engineering controls:</b>	Install a closed system or local exhaust. Also install safety shower and eye bath.
<b>Personal protective equipment</b>	
<b>Respiratory protection:</b>	Dust respirator, self-contained breathing apparatus(SCBA), supplied air respirator, etc. Use respirators approved under appropriate government standards and follow local and national regulations.
<b>Hand protection:</b>	Impervious gloves.
<b>Eye protection:</b>	Safety goggles. A face-shield, if the situation requires.
<b>Skin and body protection:</b>	Impervious protective clothing. Protective boots, if the situation requires.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Physical state (20°C):</b>	Solid
<b>Form:</b>	Crystal - Powder
<b>Colour:</b>	Pale gray - Reddish gray
<b>Odour:</b>	No data available
<b>pH:</b>	No data available
<b>Melting point/freezing point:</b>	101°C
<b>Boiling point/range:</b>	No data available
<b>Flash point:</b>	No data available
<b>Flammability or explosive limits:</b>	
<b>Lower:</b>	No data available
<b>Upper:</b>	No data available
<b>Relative density:</b>	No data available
<b>Solubility(ies):</b>	
<b>[Water]</b>	Very slightly soluble
<b>[Other solvents]</b>	
<b>Very soluble:</b>	Benzene, Acetone, Chloroform, Toluene
<b>Slightly soluble:</b>	Methanol, Ethanol, Hexane
<b>Log Pow:</b>	5
<b>Autoignition temperature:</b>	315°C

## 10. STABILITY AND REACTIVITY

<b>Chemical stability:</b>	Stable under proper conditions.
<b>Possibility of hazardous reactions:</b>	No special reactivity has been reported.
<b>Incompatible materials:</b>	Oxidizing agents
<b>Hazardous decomposition products:</b>	Carbon dioxide, Carbon monoxide, Nitrogen oxides (NOx), Sulfur oxides

## 11. TOXICOLOGICAL INFORMATION

<b>Acute Toxicity:</b>	ivn-mus LD50:32 mg/kg orl-rat LD50:5300 mg/kg skn-rbt LD50:>7940 mg/kg
<b>Skin corrosion/irritation:</b>	No data available
<b>Serious eye damage/irritation:</b>	No data available
<b>Germ cell mutagenicity:</b>	No data available
<b>Carcinogenicity:</b>	orl-mus TDLo:76 g/kg/78W-I
<b>IARC =</b>	No data available
<b>NTP =</b>	No data available
<b>Reproductive toxicity:</b>	orl-rat TDLo:6065 mg/kg (1-21D preg) par-rat TDLo:800 mg/kg (2D male/2D pre)orl-rat TDLo:4500 mg/kg (6-15 preg)
<b>RTECS Number:</b>	DL6250000

## 12. ECOLOGICAL INFORMATION

<b>Ecotoxicity:</b>	
<b>Fish:</b>	96h LC50:2.1 mg/L ( <i>Oryzias latipes</i> )
<b>Crustacea:</b>	48h EC50:0.79 mg/L ( <i>Daphnia magna</i> )
<b>Algae:</b>	72h EC50:0.10 mg/L ( <i>Selenastrum capricornutum</i> )
<b>Persistence / degradability:</b>	12% (by BOD)
<b>Bioaccumulative potential(BCF):</b>	No data available
<b>Mobility in soil</b>	
<b>Log Pow:</b>	5
<b>Soil adsorption (Koc):</b>	No data available
<b>Henry's Law (PaM<sup>3</sup>/mol):</b>	6.7 x 10 <sup>-5</sup>

## 13. DISPOSAL CONSIDERATIONS

Recycle to process, if possible. Consult your local regional authorities. You may be able to dissolve or mix material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber system. Observe all federal, state and local regulations when disposing of the substance.

## 14. TRANSPORT INFORMATION

<b>Hazards Class:</b>	9: Miscellaneous dangerous goods.
<b>UN-No:</b>	3077
<b>Proper shipping name:</b>	Environmentally hazardous substance, solid, n.o.s.
<b>Packing group:</b>	III
<b>Marine pollutant</b>	Y

## 15. REGULATORY INFORMATION

**Regulations on the Control over Safety of Dangerous Chemicals (State Council announces on January 26,2002 and revised on February 16,2011):** Safe use and production, the storage of a dangerous chemical, transport, loading and unloading were prescribed.

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