



# Safety Data Sheet

## According to Regulation (EC) No 1907/2006

2,2'-dimethyl-4,4'-methylenebis(cyclohexylamine)

Version 3.0

Issue date: 22-04-2019

Revision date: 10-01-2024

SDS Record Number: CSSS-TCO-010-123271

### Section 1 Identification of the substance/mixture and of the company/undertaking

#### 1.1 Product identifier:

Identification on the label/Trade name: 2,2'-dimethyl-4,4'-methylenebis(cyclohexylamine)  
Additional identification: Not available  
Identification of the product: CAS#6864-37-5 EC#229-962-1  
Index Number: 612-110-00-1  
REACH registration No.: Not available

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

##### 1.2.1 Identified uses:

Not available.

##### 1.2.2 Uses advised against:

Not available.

#### 1.3 Details of the supplier of the safety data sheet:

Supplier(Only representative): THE HANSON GROUP, LLC  
Supplier(Manufacturer): SHENZHEN YEXU INDUSTRY CO., LTD.  
Address: F10. Keye Building, Buji Town, Shenzhen City, China. 518129  
Contact person(E-mail): szyexu@163.com  
Telephone: +86-755-28792436  
Fax: +86-755-28792435

#### 1.4 Emergency telephone Number:

+86-755-28792436

Available outside office hours? YES  NO

### Section 2 Hazards Identification

#### 2.1 Classification of the substance/mixture:

##### 2.1.1 Classification:

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

REGULATION (EC) No 1272/2008	
Hazard classes/Hazard categories	Hazard statement
Acute Tox. 4	H302
Acute Tox. 3	H311
Skin Corr. 1A	H314
Acute Tox. 2	H330
Aquatic Chronic 2	H411

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

#### 2.2 label elements:

**Hazard Pictograms:****Signal Word(S):**

Danger

**Hazard Statement:**

H302: Harmful if swallowed.

H311: Toxic in contact with skin

H314: Causes severe skin burns and eye damage

H330: Fatal if inhaled

H411: Toxic to aquatic life with long lasting effects

**Precautionary statement:**

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

P264: Wash hands thoroughly after handling.

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

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

P273: Avoid release to the environment.

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

P284: [In case of inadequate ventilation] wear respiratory protection.

P301 + P312: IF SWALLOWED: Call a POISON CENTER/doctor/if you feel unwell.

P301 + P330 + P331: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P302 + P352: IF ON SKIN: Wash with plenty of water.

P303 + P361 + P353: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower.

P304 + P340: IF INHALED: Remove person to fresh air and keep 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/doctor.

P311: Call a POISON CENTER/ doctor.

P330: Rinse mouth.

P361 + P364: Take off immediately all contaminated clothing and wash it before reuse.

P363: Wash contaminated clothing before reuse.

P391: Collect spillage.

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

P405: Store locked up.

P501: Dispose of contents/container in according with local regulation.

**2.3 Other hazards:**

Not applicable.

**Section 3 Composition/information on ingredients****Substance/Mixture:**

Substance

**Ingredient(s):**

Chemical Name	Registration No.	CAS No.	EC No.	Concentration
2,2'-dimethyl-4,4'-methylenebis(cyclohexylamine)	N/A	6864-37-5	229-962-1	≥ 99%

## 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:

Keep patient calm, remove to fresh air, seek medical attention. Immediately administer a corticosteroid from a controlled/metered dose inhaler.

#### 4.1.2 In case of skin contact:

Immediately wash thoroughly with plenty of water, apply sterile dressings, consult a skin specialist.

#### 4.1.3 In case of eyes contact:

Immediately wash affected eyes for at least 15 minutes under running water with eyelids held open, consult an eye specialist.

#### 4.1.4 In case of ingestion:

Rinse mouth thoroughly with water, seek medical attention.

### 4.2 Most important symptoms and effects, both acute and delayed:

Harmful if swallowed. Toxic in contact with skin. Causes severe skin burns and eye damage. Toxic if inhaled.

### 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, dry powder, foam, carbon dioxide.

**Unsuitable extinguishing media:** Not available.

### 5.2 Special hazards arising from the substance or mixture

Carbon monoxide, Carbon dioxide, nitrous gases .The substances/groups of substances mentioned can be released in case of fire.

### 5.3 Advice for firefighters:

Wear self-contained breathing apparatus and chemical-protective clothing.

## Section 6 Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures:

**6.1.1 For non-emergency personnel:** Breathing protection required. Avoid contact with the skin, eyes and clothing. For personal protection see Section 8.

**6.1.2 For emergency responders:** Wear an appropriate NIOSH/MSHA approved respirator if vapor is generated.

### 6.2 Environmental Precautions:

Avoid disposing into drainage/sewer system or directly into the aquatic environment.

### 6.3 Methods for Containment and Cleaning up:

For small amounts: Pick up with suitable appliance and dispose of. Pick up with absorbent material (e.g. sand, sawdust, general-purpose binder).

For large amounts: Pump off product.

### 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.

## Section 7 Handling and storage

### 7.1 Precautions for safe handling:

**7.1.1 Protective measures:** Ensure thorough ventilation of stores and work areas. Avoid aerosol formation. Prevent electrostatic charge - sources of ignition should be kept well clear - fire

<b>7.1.2 Advice on general occupational hygiene:</b>	extinguishers should be kept handy.
<b>7.2 Conditions for safe storage, including any incompatibilities:</b>	Do not eat, drink and smoke in work areas. Wash hands after use. Remove contaminated clothing and protective equipment before entering eating areas.
<b>7.3 Specific end use(s):</b>	Segregate from acids and acid forming substances. Containers should be stored tightly sealed in a dry place. Not applicable.

## Section 8 Exposure Controls/Personal Protection

### 8.1 Control parameters:

<b>8.1.1 Occupational exposure limits:</b>	Not available.
<b>8.1.2 Additional exposure limits under the conditions of use:</b>	Not available.
<b>8.1.3 DNEL/DMEL and PNEC-Values:</b>	<p>Workers - Hazard via inhalation route-Systemic effects-Long term exposure-DNEL (Derived No Effect Level): 0.6 mg/m<sup>3</sup></p> <p>Workers - Hazard via inhalation route- Local effects- Long term exposure- DNEL (Derived No Effect Level): 0.96 mg/m<sup>3</sup></p> <p>Workers - Hazard via dermal route- Systemic effects-Long term exposure-DNEL (Derived No Effect Level): 0.06 mg/kg bw/day</p> <p>PNEC aqua (freshwater): 0.4 mg/L</p> <p>PNEC aqua (marine water): 0.04 mg/L</p> <p>PNEC STP: 1.6 mg/L</p> <p>PNEC sediment (freshwater): 17.4 mg/kg sediment dw</p> <p>PNEC sediment (marine water): 1.74 mg/kg sediment dw</p> <p>PNEC soil: 4.56 mg/kg soil dw</p> <p>PNEC oral: 0.556 mg/kg food</p>

### 8.2 Exposure controls:

<b>8.2.1 Appropriate engineering controls:</b>	Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.
<b>8.2.2 Individual protection measures, such as personal protective equipment:</b>	
<b>Eye/face protection:</b>	Tightly fitting safety goggles (cage goggles) (e.g. EN 166) and face shield.
<b>Hand protection:</b>	Suitable materials also with prolonged, direct contact (Recommended: Protective index 6, corresponding > 480 minutes of permeation time according to EN 374): nitrile rubber (NBR) - 0.4 mm coating thickness butyl rubber (butyl) - 0.7 mm coating thickness polyvinylchloride (PVC) - 0.7 mm coating thickness chloroprene rubber (CR) - 0.5 mm coating thickness fluoroelastomer (FKM) - 0.7 mm coating thickness
<b>Body protection:</b>	Body protection must be chosen depending on activity and possible exposure, e.g. apron, protecting boots, chemical-protection suit (according to EN 14605 in case of splashes or EN ISO 13982 in case of dust).
<b>Respiratory protection:</b>	Respiratory protection in case of vapour/aerosol release. Combination filter for gases/vapours of organic compounds and solid and liquid particles (f.e. EN 14387 Type A-P2).
<b>Thermal hazards:</b>	Wear suitable protective clothing to prevent heat.
<b>8.2.3 Environmental exposure controls:</b>	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:	liquid
Colour:	Colorless to yellow
Odour:	Not available
Odour threshold:	Not available
pH:	Not available
Melting point/range (°C):	-7.1 °C
Boiling point/range (°C):	347 °C
Flash point (°C):	173 °C
Evaporation rate:	Not available
Flammability limit - lower (%):	Not available
Flammability (solid, gas):	Not available
Ignition temperature (°C):	Not available
Upper/lower flammability/explosive limits:	Not available
Vapour pressure (20°C):	0.001 hPa
Vapour density:	Not available
Relative Density:	945.6 kg/m <sup>3</sup> (20 °C)
Bulk density (kg/m <sup>3</sup> ):	Not available
Water solubility (g/l):	2.01 g/L (20 °C)
n-Octanol/Water (log Po/w):	log Pow: 2.3(23 °C)
Auto-ignition temperature:	275 °C
Decomposition temperature:	Not available
Viscosity, dynamic (mPa.s):	35.4 mm <sup>2</sup> /s (40°C)
Explosive properties:	Not available
Oxidising properties:	Not available
Molecular Formula:	C <sub>15</sub> H <sub>30</sub> N <sub>2</sub>
Molecular Weight:	238.41

### 9.2. Other information:

Fat solubility(solvent– oil to be specified) etc:	Not available
Surface tension:	Not available
Dissociation constant in water( pKa):	10.3(25 °C)
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:	Strong exothermic reaction with acids.
10.4 Conditions to avoid:	Incompatible materials. Avoid all sources of ignition: heat, sparks, open flame.

**10.5 Incompatible materials:**

Copper, strong acids, oxidizing agents, brass.

**10.6 Hazardous decomposition products:**

Carbon monoxide, Carbon dioxide, nitrogen oxides.

## Section 11 Toxicological information

### 11.1 Information on toxicological effects:

**Acute toxicity:**

**LD50(Oral, Rat):** 320 - 460 mg/kg bw

**LD50(Dermal, Rabbit):** 200 - 400 mg/kg bw

**LC50(Inhalation, Rat):** 0.42 mg/L air (analytical),4h

**Skin corrosion/Irritation:** Causes severe skin burns and eye damage.

**Serious eye damage/irritation:** Not classified

**Respiratory or skin sensitization:** Not classified

**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	22.4 mg/L	96h	Fish	OECD 203	N/A	N/A
EC50	4.57 mg/L	48h	Daphnia	OECD 202	N/A	N/A
EC50	7.9 mg/L	72h	Algae	OECD 201	N/A	N/A

**12.2 Persistence and degradability:** Under test conditions no biodegradation observed.

**12.3 Bioaccumulative potential:** BCF < 6

**12.4 Mobility in soil:** log Koc: 2.6 (23°C)

**12.5 Results of PBT&vPvB assessment:** The substance is not PBT / vpvb.

**12.6 Other adverse effects:** Toxic to aquatic life with long lasting effects.

## Section 13 Disposal considerations

**13.1 Waste treatment methods:** Due to the high risk of contamination recycling/recovery is not recommended.  
Waste disposal in accordance with regulations (most probably controlled incineration).

## Section 14 Transport information

	Land transport(ADR/RID)	Sea transport (IMDG)	Air transport (ICAO/IATA)
<b>UN-Number</b>	2927	2927	2927
<b>UN Proper shipping name</b>	TOXIC LIQUID, CORROSIVE, ORGANIC, N.O.S.	CORROSIVE LIQUID, TOXIC, N.O.S.(2,2'-dimethyl-4,4'-meth	CORROSIVE LIQUID, TOXIC, N.O.S.(2,2'-dimethyl-4,4'-meth

	(2,2'-dimethyl-4,4'-methylenebis(cyclohexylamine))	ylenebis(cyclohexylamine))	ylenebis(cyclohexylamine))
<b>Transport hazard Class</b>	6.1+8	6.1+8	6.1+8
<b>Packaging group</b>	II	II	II
<b>Environmental hazards</b>	Yes	Yes	Yes
<b>Special precautions for user</b>	See section 2.2	See section 2.2	See section 2.2
<b>Transport in bulk according to Annex II of Marpol and the IBC Code</b>	-	-	-

## Section 15 Regulation information

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

**Relevant information regarding authorization:** Not applicable.

**Relevant information regarding restriction:** Not applicable.

**Other EU regulations:** Employment restrictions concerning young person must be observed. For use only by technically qualified individuals.

**Other National regulations:** Not applicable

**15.2 Chemical Safety Assessment has been carried out?** YES  NO

## Section 16 Other information

### 16.1 Indication of changes:

Version 1.0 Amended by (EU) 2015/830

### 16.2 Training instructions:

Not applicable.

### 16.3 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.

### 16.4 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.

**Author:** Hangzhou REACH Technology Group Co., Limited **Website:** [www.cirs-group.com](http://www.cirs-group.com) **Tel:** 0571-87206555 **Email:** info@cirs-group.com