

MATERIAL SAFETY DATA SHEET

PRODUCT NAME: N,N'-DICYCLOHEXYLCARBODIIMIDE

CAS Number: 538-75-0

1. IDENTIFICATION:

Product Code : 90975, 98522

Company Name : ADVENT CHEMBIO PRIVATE LIMITED

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2. HAZARDS IDENTIFICATION:**Hazard classification****Health hazards**

Acute toxicity, Oral : Category 4

Acute toxicity, Dermal : Category 3

Serious eye damage : Category 1

Skin sensitization : Category 1

Labels elements :

Hazard symbol : 

Signal word : Danger

Hazard statement : Harmful if swallowed.
: Toxic in contact with skin.
: May cause an allergic skin reaction.
: Causes serious eye damage.

Precautionary statement

Prevention : Obtain special instructions before use.
Do not breathe dust/ fume/ gas/ mist/ vapors/ spray. Do not handle until all safety precautions have been read and understood.
Wear protective gloves/ protective clothing/ eye protection/ face protection.
Keep away from heat/ sparks/ open flames/ hot surfaces. No smoking.
Keep container tightly closed. Ground/ bond container and receiving equipment.
Use explosion-proof electrical/ ventilating/ lighting/ equipment.
Use only non-sparking tools. Take precautionary measures against static discharge.

Response : IF exposed or concerned: Get medical advice/ attention.
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower. .Call a POISON CENTER/ doctor if you feel unwell.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if

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- present and easy to do. Continue rinsing.
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
- Storage** : Store in a dry & well-ventilated place. Keep container tightly closed. Containers which are opened must be carefully resealed and kept upright to prevent leakage.
- Disposal** : Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.
- Other hazards which do not result in GHS classification** : This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

3. COMPOSITION/ INFORMATION ON INGREDIENTS:

Ingredient	CAS Number	Percent	Hazardous
N,N'-Dicyclohexylcarbodiimide (DCC)	538-75-0	NLT 99.0%	Yes

4. FIRST AID MEASURES:

- General information** : Get medical advice/attention if you feel unwell. Show this safety data sheet to the doctor in attendance.
- Ingestion** : Call a physician or poison control center immediately. Rinse mouth. Do NOT induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.
- Inhalation** : Move to fresh air. Call a physician or poison control center immediately. If breathing stops, provide artificial respiration. If breathing is difficult, give oxygen.
- Skin contact** : Get medical attention if symptoms persist. Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Get medical attention. Call a physician immediately.
- Eye contact** : Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Get medical attention. Immediately call in ophthalmologist.
- Most important symptoms/effects, acute and delayed** : The most important known symptoms and effects are described in the labelling
- Indication of immediate medical attention and special treatment needed** : No data available

5. FIRE FIGHTING MEASURES:**General information****Suitable (and unsuitable) extinguishing media**

- Suitable extinguishing media** : Carbon dioxide (CO₂), Foam, Dry powder.

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Unsuitable extinguishing media : For this substance/mixture no limitations of extinguishing agents are given.

Specific hazards arising from the chemical : Carbon oxides
Nitrogen oxides (NOx)
Combustible.
: Fire may cause evolution of: nitrogen oxides
Vapors are heavier than air and may spread along floors.
Forms explosive mixtures with air on intense heating.
Development of hazardous combustion gases or vapours possible in the event of fire.

Special protective equipment and precautions for firefighters

Special firefighting procedures : Fight fire from a protected location. Move containers from fire area if you can do so without risk.

Special protective equipment for fire-fighters : Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.

6. ACCIDENTAL RELEASE MEASURES:

Personal precautions, protective equipment and emergency procedures : ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area).
: Avoid breathing mists or vapors. Keep upwind. Ventilate closed spaces before entering them. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Keep unauthorized personnel away.

Methods and material for containment and cleaning up : Eliminate all ignition sources if safe to do so. Use only non-sparking tools. Take precautionary measures against static discharges. Stop leak if possible without any risk.
: Absorb spill with vermiculite or other inert material, then place in a container for chemical waste. Clean surface thoroughly to remove residual contamination. Dike far ahead of larger spill for later recovery and disposal.

Notification Procedures : Prevent entry into waterways, sewer, basements or confined areas. Inform authorities if large amounts are involved.

Environmental precautions : Do not contaminate water sources or sewer. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.

7. HANDLING AND STORAGE:

Precautions for safe handling : Do not handle until all safety precautions have been read and understood. Do not handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. Take precautionary measures against static discharges. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting/equipment. Use only non-sparking tools. Wear protective gloves/protective clothing/eye, protection/ face protection. Avoid contact with eyes, skin, and clothing. Do not breathe mist or vapor. Use only with adequate ventilation. Wash hands thoroughly after handling.

Conditions for safe storage, including any incompatibilities : Keep away from food, drink and animal feeding stuffs. Keep container tightly closed in a dry, well-ventilated place..

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8. EXPOSURE CONTROLS PERSONAL PROTECTION:**Control parameters****Appropriate engineering**

controls : No data available

Individual protection measures, such as personal protective equipment

General information	: Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. An eye wash and safety shower must be available in the immediate work area. Use explosion-proof ventilation equipment.
Eye/face protection	: Wear safety glasses with side shields (or goggles).
Hand protection	: Chemical resistant gloves.
Other	: Wear suitable protective clothing.
Respiratory protection	: In case of inadequate ventilation use suitable respirator. Chemical respirator with organic vapor cartridge.
Hygiene measures	: Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Provide eyewash station and safety shower. Avoid contact with eyes, skin, and clothing.

9. PHYSICAL AND CHEMICAL PROPERTIES:

Appearance	: Colourless or white solidified mass or chunks
Odor	: No data available
Solubility	: 1 g in 10 mL of dichloromethane is clear and colourless
Formula	: C ₁₃ H ₂₂ N ₂
Molecular Weight	: 206.33 g/mol
Density	: 1.01 g/cm ³ at 25°C
pH	: No data available
% Volatiles by volume @ 21C (70F)	: No data available
Boiling Point	: 122- 124°C
Melting Point	: 35.0 - 37°C
Flash Point	: 113 °C
Vapor Density (Air=1)	: No data available
Vapor Pressure (mm Hg)	: 0.0192 @ 25°C



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Evaporation Rate (BuAc=1) : No data available

10. STABILITY AND REACTIVITY:

Forms explosive mixtures with air on intense heating. A range from approx. 15 Kelvin below the flash point is to be rated as critical.

Reactivity : The following applies in general to flammable organic substances and mixtures: in correspondingly fine distribution, when whirled up a dust explosion potential may generally be assumed.

Chemical stability : Material is stable under ambient conditions..

Possibility of hazardous reactions : No data available

Conditions to avoid : Strong heating.

Incompatible materials : Strong oxidizing agents

Hazardous decomposition products : In the event of fire: see section 5

11. TOXICOLOGICAL INFORMATION:

Information on toxicological effects

Acute toxicity (list all possible routes of exposure)

Oral Product : LD 50 (Rat): 1.110 mg/kg

Dermal Product : 300.1 mg/kg

Inhalation Product : No data available.

Repeated dose toxicity Product : No data available.

Skin corrosion/irritation Product : No irritation

Serious eye damage/eye irritation Product : Causes serious eye damage.

Respiratory or skin sensitization Product : Not a skin sensitizer.

Carcinogenicity Product : No data available.

IARC Monographs on the Evaluation of Carcinogenic Risks to Humans : No data available.

US. National Toxicology Program (NTP) Report on Carcinogens : No data available.

US. OSHA Specifically Regulated Substances (29 : No data available.

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CFR 1910.1001-1050

Germ cell mutagenicity	Test Type: Ames test Test system: Escherichia coli/Salmonella typhimurium Metabolic activation: with and without metabolic activation Result: negative
	: Test Type: Mutagenicity (mammal cell test): chromosome aberration. Test system: Chinese hamster cells Metabolic activation: with and without metabolic activation Result: negative
Reproductive toxicity	: No data available
Product	
Specific target organ	
toxicity - single exposure	: No data available
Product	
Specific target organ	
toxicity - repeated	: No data available
exposure Product	
Aspiration hazard Product	: No data available
Additional Information	Depending on the intensity and duration of exposure, effects may vary from mild irritation to severe destruction of tissue. May cause blindness. Symptoms may be delayed. To the best of our knowledge, the chemical, physical, and toxicological properties have not : been thoroughly investigated. Other dangerous properties cannot be excluded. This substance should be handled with particular care. Liver - Irregularities - Based on Human Evidence

12. ECOLOGICAL INFORMATION:**Ecotoxicity****Acute hazards to the aquatic environment****Fish Product** : No data available.**Aquatic invertebrates** : No data available.
Product**Chronic hazards to the aquatic environment****Fish Product** : No data available.**Aquatic invertebrates** : No data available.
Product**Toxicity to Aquatic Plants** : No data available.
Product:**Persistence and degradability****Biodegradation Product** : No data available.



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BOD/COD ratio Product : No data available.

Bioaccumulative potential

Bioconcentration factor (BCF) Product : No data available on bioaccumulation.

Partition coefficient n-octanol / water (log Kow) Product : No data available.

Mobility in soil : No data available.

Other adverse effects : Discharge into the environment must be avoided.

13. DISPOSAL CONSIDERATION:

Disposal instructions : Discharge, treatment, or disposal may be subject to national, state, or local laws. Disposal recommendations are based on uncontaminated material.

Contaminated packaging : Since emptied containers retain product residue, follow label warnings even after container is emptied.

14. TRANSPORT INFORMATION:

	UN No.	UN proper shipping name	Hazard Class(es)	Packaging group	Marine Pollutant
ADR/RID	UN 2811	N,N'-Dicyclohexylcarbodiimide (DCC)	6.1	III	No
IMDG	UN 2811	N,N'-Dicyclohexylcarbodiimide (DCC)	6.1	III	No
IATA	UN 2811	N,N'-Dicyclohexylcarbodiimide (DCC)	6.1	III	No

15. REGULATORY INFORMATION:

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.
Safety, health and environmental regulations/legislation specific for the substance or mixture
No Data Available.

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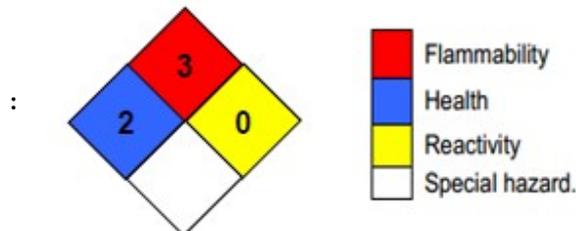
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16. OTHER INFORMATION:

NFPA Hazard ID



Hazard rating: 0 - Minimal; 1 - Slight; 2 - Moderate; 3 - Serious; 4 - Severe

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