

# Material Safety Data Sheet

## N,N'-Dicyclohexylcarbodiimide, 99%

ACC# 96567

### Section 1 - Chemical Product and Company Identification

**MSDS Name:** N,N'-Dicyclohexylcarbodiimide, 99%

**Catalog Numbers:** AC113900010, AC113901000, AC113902500, NC9034574, NC9207748, XXAC11390-5KG

**Synonyms:** DCC; N,N'-Methanetetraylbiscyclohexanamine.

**Company Identification:**

Fisher Scientific  
1 Reagent Lane  
Fair Lawn, NJ 07410

**For information, call:** 201-796-7100

**Emergency Number:** 201-796-7100

**For CHEMTREC assistance, call:** 800-424-9300

**For International CHEMTREC assistance, call:** 703-527-3887

### Section 2 - Composition, Information on Ingredients

CAS#	Chemical Name	Percent	EINECS/ELINCS
538-75-0	N,N'-Dicyclohexylcarbodiimide	99	208-704-1

### Section 3 - Hazards Identification

#### EMERGENCY OVERVIEW

Appearance: colorless solid.

**Danger!** May cause allergic skin reaction. May cause severe eye and skin irritation with possible burns. May cause severe respiratory and digestive tract irritation with possible burns. Moisture sensitive. The toxicological properties of this material have not been fully investigated.

**Target Organs:** Respiratory system, eyes, skin.

#### Potential Health Effects

**Eye:** Contact with eyes may cause severe irritation, and possible eye burns.

**Skin:** May cause skin sensitization, an allergic reaction, which becomes evident upon re-exposure to this material. May cause severe irritation and possible burns.

**Ingestion:** Harmful if swallowed. May cause severe gastrointestinal tract irritation with nausea, vomiting and possible burns. The toxicological properties of this substance have not been fully investigated.

**Inhalation:** The toxicological properties of this substance have not been fully investigated. May cause severe irritation of the respiratory tract with possible burns.

**Chronic:** No information found.

### Section 4 - First Aid Measures

**Eyes:** Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid immediately. Do NOT allow victim to rub eyes or keep eyes closed.

**Skin:** Get medical aid immediately. Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.

**Ingestion:** Do not induce vomiting. If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Get medical aid immediately.

**Inhalation:** Get medical aid immediately. Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.

**Notes to Physician:** Treat symptomatically and supportively.

### Section 5 - Fire Fighting Measures

**General Information:** As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion.

**Extinguishing Media:** Use foam, dry chemical, or carbon dioxide.

**Flash Point:** > 110 deg C (> 230.00 deg F)

**Autoignition Temperature:** Not available.

**Explosion Limits, Lower:** Not available.

**Upper:** Not available.

**NFPA Rating:** (estimated) Health: 2; Flammability: 1; Instability: 0

### Section 6 - Accidental Release Measures

**General Information:** Use proper personal protective equipment as indicated in Section 8.

**Spills/Leaks:** Clean up spills immediately, observing precautions in the Protective Equipment section. Sweep up or absorb material, then place into a suitable clean, dry, closed container for disposal. Avoid generating dusty conditions. Provide ventilation.

## Section 7 - Handling and Storage

**Handling:** Wash thoroughly after handling. Use only in a well-ventilated area. Minimize dust generation and accumulation. Do not get in eyes, on skin, or on clothing. Do not ingest or inhale. Wash clothing before reuse. Discard contaminated shoes.

**Storage:** Store in a cool, dry place. Store in a tightly closed container.

## Section 8 - Exposure Controls, Personal Protection

**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.

### Exposure Limits

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
N,N'-Dicyclohexylcarbodiimide	none listed	none listed	none listed

**OSHA Vacated PELs:** N,N'-Dicyclohexylcarbodiimide: No OSHA Vacated PELs are listed for this chemical.

### Personal Protective Equipment

**Eyes:** Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

**Skin:** Wear appropriate protective gloves to prevent skin exposure.

**Clothing:** Wear appropriate protective clothing to prevent skin exposure.

**Respirators:** Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

## Section 9 - Physical and Chemical Properties

**Physical State:** Solid

**Appearance:** colorless

**Odor:** sweetish odor

**pH:** Not available.

**Vapor Pressure:** Not available.

**Vapor Density:** Not available.

**Evaporation Rate:**Not available.

**Viscosity:** 5.81 cP 55 deg C

**Boiling Point:** 122 - 124 deg C @ 6.00mm Hg

**Freezing/Melting Point:**34 - 35 deg C

**Decomposition Temperature:**Not available.

**Solubility:** reacts

**Specific Gravity/Density:**Not available.

**Molecular Formula:**C13H22N2

**Molecular Weight:**206.33

## Section 10 - Stability and Reactivity

**Chemical Stability:** Stable under normal temperatures and pressures.

**Conditions to Avoid:** Exposure to moist air or water.

**Incompatibilities with Other Materials:** Acids and oxidizing agents. Reacts with moisture.

**Hazardous Decomposition Products:** Nitrogen oxides, carbon monoxide, carbon dioxide, nitrogen.

**Hazardous Polymerization:** Has not been reported.

## Section 11 - Toxicological Information

### RTECS#:

**CAS#** 538-75-0: FF2160000

### LD50/LC50:

CAS# 538-75-0:

Dermal, guinea pig: LD50 = 10 mL/kg;

Inhalation, rat: LC50 = 159 mg/m<sup>3</sup>/6H;

Oral, mouse: LD50 = >800 mg/kg;

Oral, rat: LD50 = 400 mg/kg;

Rat - ROUTE: Inhalation; DOSE: 159 mg/m<sup>3</sup>/6H TOXIC EFFECTS: Organs and Special Senses (Nose, Eye, Ear, and Taste) - Lacrimation lar - Regional or general arteriolar or venous dilation and Appendages - Hair - ROUTE: Oral; DOSE: 400 mg/kg EFFECTS: ioral - Muscle weakness ointestinal - Hypermotility, diarrhea and Appendages - Hair

### Carcinogenicity:

CAS# 538-75-0: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

**Epidemiology:** No information found

**Teratogenicity:** No information found  
**Reproductive Effects:** No information found  
**Mutagenicity:** No information found  
**Neurotoxicity:** No information found  
**Other Studies:**

## Section 12 - Ecological Information

No information available.

## Section 13 - Disposal Considerations

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

**RCRA P-Series:** None listed.

**RCRA U-Series:** None listed.

## Section 14 - Transport Information

	US DOT	Canada TDG
<b>Shipping Name:</b>	TOXIC SOLIDS, CORROSIVE, ORGANIC, N.O.S.	TOXIC SOLID ORGANIC NOS (N,N'-DICYCLOHEXYLCARBODIIMIDE)
<b>Hazard Class:</b>	6.1	6.1
<b>UN Number:</b>	UN2928	UN2811
<b>Packing Group:</b>	II	II

## Section 15 - Regulatory Information

### US FEDERAL

#### TSCA

CAS# 538-75-0 is listed on the TSCA inventory.

#### Health & Safety Reporting List

None of the chemicals are on the Health & Safety Reporting List.

#### Chemical Test Rules

None of the chemicals in this product are under a Chemical Test Rule.

#### Section 12b

None of the chemicals are listed under TSCA Section 12b.

#### TSCA Significant New Use Rule

None of the chemicals in this material have a SNUR under TSCA.

#### CERCLA Hazardous Substances and corresponding RQs

None of the chemicals in this material have an RQ.

#### SARA Section 302 Extremely Hazardous Substances

None of the chemicals in this product have a TPQ.

#### SARA Codes

CAS # 538-75-0: immediate, delayed.

#### Section 313

No chemicals are reportable under Section 313.

#### Clean Air Act:

This material does not contain any hazardous air pollutants.

This material does not contain any Class 1 Ozone depleters.

This material does not contain any Class 2 Ozone depleters.

#### Clean Water Act:

None of the chemicals in this product are listed as Hazardous Substances under the CWA.

None of the chemicals in this product are listed as Priority Pollutants under the CWA.

None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

#### OSHA:

None of the chemicals in this product are considered highly hazardous by OSHA.

#### STATE

CAS# 538-75-0 is not present on state lists from CA, PA, MN, MA, FL, or NJ.

### California Prop 65

California No Significant Risk Level: None of the chemicals in this product are listed.

### European/International Regulations

#### European Labeling in Accordance with EC Directives

#### Hazard Symbols:

T

#### Risk Phrases:

R 22 Harmful if swallowed.

R 24 Toxic in contact with skin.

R 41 Risk of serious damage to eyes.

R 43 May cause sensitization by skin contact.

#### Safety Phrases:

S 24 Avoid contact with skin.

S 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S 37/39 Wear suitable gloves and eye/face protection.

S 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

**WGK (Water Danger/Protection)**

CAS# 538-75-0: 2

**Canada - DSL/NDSL**

CAS# 538-75-0 is listed on Canada's DSL List.

**Canada - WHMIS**

This product has a WHMIS classification of D1A, D2B.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations.

**Canadian Ingredient Disclosure List**

Section 16 - Additional Information
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**MSDS Creation Date:** 11/19/1997

**Revision #3 Date:** 10/03/2005

*The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall Fisher be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if Fisher has been advised of the possibility of such damages.*