1. PRODUCT AND COMPANY IDENTIFICATION

Product name: N,N-Dicyclohexylcarbodiimide
Product Number: DB0002
Brand: Aldrich
Supplier: Sigma-Aldrich
3050 Spruce Street
SAINT LOUIS MO 63103
USA
Telephone: +1 800-355-5832
Fax: +1 800-355-5832
Emergency Phone # (For both supplier and manufacturer): (314) 776-5555
Preparation Information: Sigma-Aldrich Corporation
Product Safety - Americas Region
1-800-521-8558

2. HAZARDS IDENTIFICATION

Emergency Overview

OSHA Hazards
Target Organ Effect: Highly toxic by inhalation, Harmful by ingestion., Highly toxic by skin absorption, Skin sensitiser, Corrosive

Target Organs
Eyes

GHS Classification
Acute toxicity, Oral (Category 4)
Acute toxicity, Inhalation (Category 2)
Acute toxicity, Dermal (Category 2)
Skin corrosion (Category 1A)
Serious eye damage (Category 1)
Skin sensitisation (Category 1)

GHS Label elements, including precautionary statements

Pictogram
Signal word Danger
Hazard statement(s) H502 Harmful if swallowed.
H310 + H330 Fatal in contact with skin or inhaled
H314 Causes severe skin burns and eye damage.
H317 May cause an allergic skin reaction.
Precautionary statement(s) P260 Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
P284 Wear respiratory protection.
P302 + P350 IF ON SKIN: Gently wash with plenty of soap and water.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms: DCC
Formula: C13H16N2
Molecular Weight: 206.33 g/mol

Component: Dicyclohexylcarbodiimide
CAS-No.: 538-75-9
EC-No.: 208-704-9
Index-No.: 615-019-00-5

4. FIRST AID MEASURES

General advice Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

If inhaled
If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact
Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.

In case of eye contact
Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician. Continue rinsing eyes during transport to hospital.

If swallowed
Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

5. FIREFIGHTING MEASURES

Conditions of flammability
Not flammable or combustible.

Suitable extinguishing media
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Special protective equipment for firefighters
Wear self-contained breathing apparatus for fire fighting if necessary.

6. SPILL RESPONSE

Spillage reported in area
If spill occurs in confined area, consult a physician. If spill occurs in confined area, consult a physician.

Disposal
Disposal must be in accordance with local, state, and federal regulations.

Disposal methods
Consult a physician. If spill occurs in confined area, consult a physician.

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 or doctor/ physician.

HMIS Classification
Health hazard: 3
Chronic Health Hazard: 1
Fmammability: 1
Physical hazards: 0

NFP A Rating
Health hazard: 3
Fire: 1
Reactivity Hazard: 0

Potential Health Effects
Inhalation May be fatal if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.
Skin May be fatal if absorbed through skin. Causes skin burns.
Eyes Causes eye burns.
Ingestion Harmful if swallowed.
Hazardous combustion products
Hazardous decomposition products formed under fire conditions. - Carbon oxides, nitrogen oxides (NOx)

9. ACCIDENTAL RELEASE MEASURES
Personal precautions
Wear respiratory protection. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.
Environmental precautions
Prevent further leakage or spillage if safe to do so. Do not let product enter drains.
Methods and materials for containment and cleaning up
Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

7. HANDLING AND STORAGE
Precautions for safe handling
Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed.
Conditions for safe storage
Keep container tightly closed in a dry and well-ventilated place.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION
Contains no substances with occupational exposure limit values.
Personal protective equipment
Respiratory protection
Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup in engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).
Hand protection
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 and good laboratory practices. Wash and dry hands.
Eye protection
Face shield and safety goggles Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).
Skin and body protection
Complete suit protecting against chemicals. The type of protective equipment must be selected according to the concentration and amount of the dangerous substances at the specific workplace.
Hygiene measures
Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

9. PHYSICAL AND CHEMICAL PROPERTIES
Appearance
Form: Crystalline powder
Colour: colourless
Safety data
pH: no data available
Melting point/range: 34 - 35 °C (93 - 95 °F) - lit.
Boiling point: 122 - 124 °C (255 - 255 °F) at 1 atm (6 mmHg) - lit.
Flash point: 113 °C (235 °F) - closed cup
Ignition temperature: no data available
Autoignition temperature: no data available
Lower explosion limit: no data available
Upper explosion limit: no data available
Vapour pressure: no data available
Density: no data available
Water solubility: no data available
Partition coefficient (octanol/water): no data available
Relative vapour density: no data available
Odour: no data available
Odour Threshold: no data available
Evaporation rate: no data available

10. STABILITY AND REACTIVITY
Chemical stability
Stable under recommended storage conditions.
Possibility of hazardous reactions
no data available
Conditions to avoid
no data available
Materials to avoid
Strong oxidising agents
Hazardous decomposition products
Hazardous decomposition products formed under fire conditions. - Carbon oxides, nitrogen oxides (NOx)
Other decomposition products - no data available

11. TOXICOLOGICAL INFORMATION
Acute toxicity
Oral LD50
LD50 Oral - rat: 1,429 mg/kg
Inhalation LC50
LC50 Inhalation - rat - 6 h - 159 mg/m3
Remarks: Sense Organs and Special Senses (Nose, Eye,Ear, and Taste): Eye: Laceration. Vascular:Regional or general arterial or venous dilation. Skin and Appendages: Other: Hair.
Dermal LD50
LD50 Dermal - rabbit - 78.1 mg/kg
Other information on acute toxicity
no data available
Skin corrosion/irritation
Skin - rabbit - Extremely corrosive and destructive to tissue. - 4 h
Serious eye damage/eye irritation
no data available
Respiratory or skin sensitization
no data available
May cause allergic skin reaction.

Germ cell mutagenicity
no data available

Carcinogenicity

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity
no data available

Teratogenicity
no data available

Specific target organ toxicity - single exposure (Globally Harmonized System)
no data available

Specific target organ toxicity - repeated exposure (Globally Harmonized System)
no data available

Aspiration hazard
no data available

Potential health effects

Inhalation May be fatal if inhaled. Material is extremely destructive to the mucous membranes and upper respiratory tract.

Ingestion Harmful if swallowed.

Skin May be fatal if absorbed through skin. Causes skin burns.

Eyes Causes eye burns.

Signs and Symptoms of Exposure
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.

Synergistic effects
no data available

Additional Information
RTECS: FF2160000

12. ECOLOGICAL INFORMATION

Toxicity
no data available

Persistence and degradability
no data available

Bioaccumulative potential
no data available

Mobility in soil
no data available

PBT and vPvB assessment
no data available

Other adverse effects
no data available

13. DISPOSAL CONSIDERATIONS

Product
Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with a scrubber and scrubber.

Contaminated packaging
Dispose of as unused product.

14. TRANSPORT INFORMATION

DOT (US)
UN number: 2811 Class: 6.1 Packing group: II
Proper shipping name: Toxics solids, organic, n.o.s.
Marine pollutant: No
Poison Inhalation Hazard: No

IMAG
UN number: 2811 Class: 6.1 Packing group: II
Proper shipping name: TOXIC SOLID, ORGANIC, N.O.S.
Marine pollutant: No

IATA
UN number: 2811 Class: 6.1 Packing group: II
Proper shipping name: Toxic solid, organic, n.o.s.

15. REGULATORY INFORMATION

OSHA Hazards
Target Organ Effect, Highly toxic by inhalation, Harmful by ingestion, Highly toxic by skin absorption, Skin sensitiser, Corrosive

SARA 302 Components
SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components
SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III Section 313.

SARA 311/312 Hazards
Acute Health Hazard, Chronic Health Hazard

Massachusetts Right To Know Components
No components are subject to the Massachusetts Right to Know Act.

Pennsylvania Right To Know Components
Dicyclohexylcarbodiimide CAS-No. 528-75-0 Revision Date

New Jersey Right To Know Components
Dicyclohexylcarbodiimide CAS-No. 538-75-0 Revision Date

California Prep. 65 Components
This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.
16. OTHER INFORMATION

Further Information
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