

According to Regulation (EC) No 1907/2006

According to Regulation (EC) No 2020/878

# N,N'-Diisopropylcarbodiimide (DIC)



Version number: 2.0  
Issued: 2024-01-23  
Replaces SDS: 2019-04-26

## SECTION 1: Identification of the substance/mixture and of the company/undertaking

### 1.1. Product identifier

**Trade name**

N,N'-Diisopropylcarbodiimide (DIC)

**CAS number**

693-13-0

**EC number**

211-743-7

### 1.2. Relevant identified uses of the substance or mixture and uses advised against

**Relevant identified uses**

Research and development.

**Not suitable for use in**

Not suitable for human consumption or veterinary purposes.

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

**Supplier**

Molekula Group

Address

Molekula Ltd, Lingfield Way, Darlington,  
DL1 4XX Darlington  
United Kingdom

Telephone

+44 (0) 3302 000 333

Email

info@molekula.com

Web site

www.molekula.com

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## 1.4. Emergency telephone number

### Poison center/Additional emergency number

0344 892 0111 - National Poisons Information Service (Newcastle Centre)

## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

#### Classification

Flammable liquids, hazard category 3  
Skin irritation, hazard category 2  
Skin sensitisation, hazard category 1  
Serious eye damage, hazard category 1  
Acute toxicity, inhalation, hazard category 1  
Respiratory sensitisation, hazard category 1  
Hazardous to the aquatic environment — Acute hazard category 1  
Hazardous to the aquatic environment — Chronic hazard category 1

#### Hazard statements

H226, H315, H317, H318, H330, H334, H400, H410

### 2.2. Label elements

Labelling according to Regulation (EC) No 1272/2008

#### Hazard pictograms



#### Signal word

Danger

#### Hazard statements

H226 Flammable liquid and vapour.  
H315 Causes skin irritation.  
H317 May cause an allergic skin reaction.  
H318 Causes serious eye damage.  
H330 Fatal if inhaled.  
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
H410 Very toxic to aquatic life with long lasting effects.

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## **Precautionary statements**

P202 Do not handle until all safety precautions have been read and understood.  
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
P260 Do not breathe vapour.  
P273 Avoid release to the environment.  
P280 Wear protective gloves/protective clothing/eye protection/face protection.  
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.  
P332 + P313 If skin irritation occurs: Get medical advice/attention.  
P337 + P313 If eye irritation persists: Get medical advice/attention.

## **2.3. Other hazards**

No data available

## **SECTION 3: Composition/information on ingredients**

### **3.1. Substances**

Chemical name	CAS No. EC No. REACH No. Index No.	Concentration	Classification	H-phrase M factor acute M factor chronic	Note
N,N'-Diisopropylcarbodiimide	693-13-0 211-743-7 - -	100%	Flam. Liq. 3, Skin Irrit. 2, Skin Sens. 1, Eye Dam. 1, Acute Tox. 1 - inhalation, Resp. Sens. 1, Aquatic Acute 1, Aquatic Chronic 1	H226, H315, H317, H318, H330, H334, H400, H410 M-acut=1 M-chro=1	-

## **Molecular weight**

126.20

## **Substance additional information**

For the complete text of H- / EUH-statements mentioned in this section, see section 16.

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## SECTION 4: First aid measures

### 4.1. Description of first aid measures

IF exposed or concerned: Get medical advice/attention. First aiders/ medical personnel need to protect themselves. Show this Safety Data Sheet (SDS) to medical personnel.

#### Inhalation

Toxic if inhaled. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/doctor. If breathing stops, provide artificial respiration. For breathing difficulties oxygen may be necessary.

#### Skin contact

In case of skin contact: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower]. Immediately call a POISON CENTER/doctor. The casualty should be transferred to hospital for further treatment.

#### Eye contact

Remove contact lenses if present. Rinse eyes with water. Continue to rinse for at least 15 minutes and seek medical attention.

#### Ingestion

IF SWALLOWED: give water to drink (two glasses at most). Seek medical advice immediately. In exceptional cases only, if medical care is not available within one hour, induce vomiting (only if the persons are fully conscious and awake).

#### Information for doctors

No data available.

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

The severity of the symptoms described will vary dependant of the concentration and the length of exposure. See section 11 for more detailed information on health effects and symptoms.

#### Inhalation

Single exposure may cause the following adverse effects: Unconsciousness, possibly death.

#### Skin contact

Single exposure may cause the following adverse effects: Skin sensitisation: Skin irritation.

#### Eye contact

Single exposure may cause the following adverse effects: Risk of serious eye damage.

#### Ingestion

Single exposure may cause the following adverse effects: Severe abdominal pain. May cause severe internal injury. Unconsciousness, possibly death.

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## 4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically. No special treatment requirement.

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

#### Suitable extinguishing media

Use alcohol resistant foam, carbon dioxide or dry powder to extinguish.

#### Unsuitable extinguishing media

No specific fire fighting procedure given.

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

Specific hazards: Toxic. Flammable liquid and vapour.

Containers can burst violently when heated, due to excess pressure build-up.

Vapours may form explosive mixture with air at room temperature. Development of hazardous combustion gases or vapours possible in the event of fire.

Carbon monoxide (CO). Carbon dioxide (CO<sub>2</sub>). Nitrous gases (NO<sub>x</sub>).

Combustible.

Vapours are heavier than air and may travel along the floor and in the bottom of containers.

### 5.3. Advice for firefighters

#### Special protective equipment for fire-fighters

Evacuate area. Avoid breathing gas, fume, vapours or spray. Prevent skin contact by maintaining a safe distance and by wearing suitable protective equipment/ clothing. Cool containers exposed to heat with water spray and remove container, if no risk is involved.

## SECTION 6: Accidental release measures

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

Avoid inhalation of vapours and spray mist and contact with skin and eyes. For personal protection, see section 8. Provide adequate ventilation. Remove sources of ignition. Beware of the explosion danger. Take action to prevent static discharges.

### 6.2. Environmental precautions

Avoid discharge into drains, water courses or onto the ground. Risk of explosion.

### 6.3. Methods and material for containment and cleaning up

Collect with absorbent, non-combustible material into suitable containers. Remove sources of ignition. Beware of the explosion danger. Use spark-proof tools and explosion-proof equipment.

### 6.4. Reference to other sections

For personal protection, see section 8. For waste disposal, see section 13.

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## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

#### Preventive handling precautions

For precautions see section 2.2. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Take action to prevent static discharges. Use spark-proof tools and explosion-proof equipment. Wear protective clothing, gloves, eye and face protection. Avoid contact with skin and eyes. Avoid ingestion and inhalation.

#### General hygiene

Observe good chemical hygiene practices. Keep away from food, drink and animal feeding stuffs. Do not eat, drink or smoke when using this product. Remove contaminated clothing and launder thoroughly before re-use. Wash skin thoroughly after handling.

### 7.2. Conditions for safe storage, including any incompatibilities

Store at room temperature. Store in a dry place. Store in a closed container.

Moisture Sensitive. Handle and store contents under inert gas.

### 7.3. Specific end use(s)

No specific usage precautions noted.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

#### Exposure limits

No occupational exposure limit assigned.

### 8.2. Exposure controls

#### Personal Protective Equipment Symbols



#### Eye / face protection

Wear eye protection. Eye glasses with side protection

#### Hand protection

Wear protective gloves.

No specific hygiene procedures noted, but good personal hygiene practices are always advisable, especially when working with chemicals.

Wash contaminated skin thoroughly after handling.

#### Other skin protection

Wash skin thoroughly after handling.

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## **Respiratory protection**

Provide adequate ventilation. If ventilation is insufficient, suitable respiratory protection must be provided.

## **Environmental exposure controls**

Avoid discharge into drains. Risk of explosion.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

#### **Physical state**

Liquid

#### **Colour**

Colourless.

#### **Odour**

No data available

#### **Melting point / freezing point**

No data available

#### **Boiling point or initial boiling point and boiling range**

145 - 148 °C

#### **Flammability**

No data available

#### **Lower and upper explosion limit**

No data available

#### **Flash point**

33 °C

#### **Auto-ignition temperature**

No data available

#### **Decomposition temperature**

No data available

#### **pH**

No data available

#### **Kinematic viscosity**

No data available

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## Solubility

No data available

## Partition coefficient n-octanol/water

No data available

## Vapour pressure

No data available

## Density and/or relative density

0.815 g/cm<sup>3</sup>

### Method

(20°C)

## Relative vapour density

No data available

## Explosive properties

Not explosive

## Particle characteristics

No data available

## 9.2. Other information

No data available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Vapor/air-mixtures are explosive at intense warming.

### 10.2. Chemical stability

Stable under normal temperature conditions. Stable under the prescribed storage conditions.

Protect from moisture.

### 10.3. Possibility of hazardous reactions

There are no known conditions that are likely to result in a hazardous situation.

### 10.4. Conditions to avoid

Avoid heat. Moisture.

### 10.5. Incompatible materials

There are no known reactivity hazards associated with this product.



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## 10.6. Hazardous decomposition products

See section 5.

## SECTION 11: Toxicological information

### 11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

#### Acute toxicity

Product / Sub- stance name CAS / EC no.	Dose descriptor	Value / Dose	Duration of expos- ure	Test animals	Remarks
N,N'-Diisopropylcarbodiimide 693-13-0 / 211-743-7	Acute Toxicity (Inhalation LC50):	0.13mg/l ( Air. )	4 hours	Rat	(ECHA)

#### Aspiration hazard

Based on available data, the classification criteria are not met.

### 11.2. Information on other hazards

No data available

## SECTION 12: Ecological information

### 12.1. Toxicity

No data available

### 12.2. Persistence and degradability

No data available

### 12.3. Bioaccumulative potential

No data available

### 12.4. Mobility in soil

No data available

### 12.5. Results of PBT and vPvB assessment

No data available

### 12.6. Endocrine disrupting properties

This product does not contain any known or suspected endocrine disruptors.

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## 12.7. Other adverse effects

No data available

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

#### Disposal considerations

Dispose of contents/container in accordance with local regulations.

## SECTION 14: Transport information

### 14.1. UN number

3384

### 14.2. UN proper shipping name

#### ADR / RID / ADN proper shipping name

TOXIC BY INHALATION LIQUID, FLAMMABLE, N.O.S. with an LC50 lower than or equal to 1000 ml/m<sup>3</sup> and saturated vapour concentration greater than or equal to 10 LC50 (N,N'-Diisopropylcarbodiimide)

#### IMDG proper shipping name

TOXIC BY INHALATION LIQUID, FLAMMABLE, N.O.S. with an LC50 lower than or equal to 1000 mL/m<sup>3</sup> and saturated vapour concentration greater than or equal to 10 LC50 (N,N'-Diisopropylcarbodiimide)

#### IATA proper shipping name

Toxic by inhalation liquid, flammable, n.o.s. with an LC50 ≤ 1000 mL/m<sup>3</sup> and saturated vapour concentration ≥ 10 LC50 (N,N'-Diisopropylcarbodiimide)

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## 14.3. Transport hazard class(es)

### Label

ADR/RID/ADN



6.1



3



Environmental hazard

IMDG



6.1



3



Environmental hazard

### ADR / RID Class

6.1

### ADR / RID Classification code

TF1

### ADR / RID hazard identification number

663

### IMDG Class

6.1 (3)

### IATA Class

6.1 (3)

### ADN Class

6.1

### ADN Class Code

TF1

## 14.4. Packing group

ADR / RID / ADN: I

IMDG: I

## 14.5. Environmental hazards

### IMDG EmS

F-E, S-D

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## 14.6. Special precautions for user

Tunnel restriction code: C/D

Transport category: 1

## 14.7. Maritime transport in bulk according to IMO instruments

Not applicable

## SECTION 15: Regulatory information

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

#### EU regulations

This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006.

This material safety data sheet complies with the requirements of Regulation (EU) 2020/878.

#### National regulations

No data available

### 15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

## SECTION 16: Other information

#### Phrase meaning

Flam. Liq. 3 - Flammable liquids, hazard category 3

Skin Irrit. 2 - Skin irritation, hazard category 2

Skin Sens. 1 - Skin sensitisation, hazard category 1

Eye Dam. 1 - Serious eye damage, hazard category 1

Acute Tox. 1 - inhalation - Acute toxicity, inhalation, hazard category 1

Resp. Sens. 1 - Respiratory sensitisation, hazard category 1

Aquatic Acute 1 - Hazardous to the aquatic environment — Acute hazard category 1

Aquatic Chronic 1 - Hazardous to the aquatic environment — Chronic hazard category 1

H226 Flammable liquid and vapour.

H315 Causes skin irritation.

H317 May cause an allergic skin reaction.

H318 Causes serious eye damage.

H330 Fatal if inhaled.

H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

H400 Very toxic to aquatic life.

H410 Very toxic to aquatic life with long lasting effects.