

According to Regulation (EC) No 1907/2006

According to Regulation (EC) No 2020/878

# N,N-Diisopropylethylamine (Hunigs base)



Version number: 2.0  
Issued: 2024-04-09  
Replaces SDS: 2022-04-28

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

### 1.1. Product identifier

**Trade name**

N,N-Diisopropylethylamine (Hunigs base)

**CAS number**

7087-68-5

**EC number**

230-392-0

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

**Relevant identified uses**

Research and development. Laboratory Chemicals. Manufacture of substances.

**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

**Contact person**

Kevin Banks

**Email**

+44 (0) 7769276927

### 1.4. Emergency telephone number

**Poison center/Additional emergency number**

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

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## 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 2

Acute toxicity, oral, hazard category 4

Serious eye damage, hazard category 1

Acute toxicity, inhalation, hazard category 3

Specific Target Organ Toxicity — Single exposure, hazard category 3 - respiratory tract irritation

Hazardous to the aquatic environment — Chronic hazard category 2

#### Hazard statements

H225, H302, H318, H331, H335, H411

### 2.2. Label elements

Labelling according to Regulation (EC) No 1272/2008

#### Hazard pictograms



#### Signal word

Danger

#### Hazard statements

H225 Highly flammable liquid and vapour.

H302 Harmful if swallowed.

H318 Causes serious eye damage.

H331 Toxic if inhaled.

H335 May cause respiratory irritation.

H411 Toxic to aquatic life with long lasting effects.

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## Precautionary statements

P201 Obtain special instructions before use.

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.

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

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

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.

P405 Store locked up.

## 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-phrases M factor acute M factor chronic	Note
N-Ethyl-N-isopropyl-2-propanamine	7087-68-5 230-392-0 - -	100%	Flam. Liq. 2, Acute Tox. 4 - oral, Eye Dam. 1, Acute Tox. 3 - inhalation, STOT SE 3 - resp. tract irrit., Aquatic Chronic 2	H225, H302, H318, H331, H335, H411 - -	-

## Molecular weight

129.24

## 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].

#### Eye contact

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

The casualty should be transferred to hospital for further treatment.

#### 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: Difficulty in breathing. Unconsciousness, possibly death.

#### Skin contact

Single exposure may cause the following adverse effects: May cause skin irritation/eczema.

#### Eye contact

Single exposure may cause the following adverse effects: May cause temporary blindness and severe eye damage.

#### Ingestion

Single exposure may cause the following adverse effects: The product causes irritation of mucous membranes and may cause abdominal discomfort if swallowed.

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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

In case of fire: Use foam, carbon dioxide, dry powder or water fog to extinguish.

#### Unsuitable extinguishing media

No specific fire fighting procedure given.

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

Specific hazards: Highly flammable liquid and vapour. Toxic.

Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapours.

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

Vapours may form explosive air mixtures even at room temperature.

Development of hazardous combustion gases or vapours possible in the event of fire. Vapours are heavier than air and may travel along the floor and in the bottom of containers. Vapours may be ignited by a spark, a hot surface or an ember.

Pay attention to flashback.

### 5.3. Advice for firefighters

#### Special protective equipment for fire-fighters

Evacuate area. Avoid breathing gas, fume, vapours or spray. 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 breathing dust/fume/gas/mist/vapours/spray. Provide adequate ventilation. Avoid contact with skin and eyes. Avoid dust formation. For personal protection, see section 8.

### 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 spillage with shovel, broom or the like and reuse, if possible. Dispose of large amounts of spillage/waste according to agreement with local authorities.

### 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. Do not handle until all safety precautions have been read and understood. Do not handle broken packages without protective equipment. This product is toxic. Keep containers tightly closed. Immediate first aid is necessary. Wear protective clothing, gloves, eye and face protection. Avoid contact with skin and eyes. Do not breathe dust/fume/gas/mist/vapours/spray. Avoid ingestion and inhalation. Keep away from food, drink and animal feeding stuffs. Do not eat, drink or smoke when using this product. Do not reuse empty containers.

#### General hygiene

Observe good chemical hygiene practices. Remove contaminated clothing immediately and wash skin with soap and water. 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.

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

#### DNEL/DMEL

Product/Substance name (CAS No./EC No.)	Type	Exposure	Value	Population	Effects
N-Ethyl-N-isopropyl-2-propanamine (7087-68-5/230-392-0)	DNEL	Chronic (long term) Inhalation	4.2 mg/m <sup>3</sup>	Workers	Systemic
N-Ethyl-N-isopropyl-2-propanamine (7087-68-5/230-392-0)	DNEL	Chronic (long term) Inhalation	4.2 mg/m <sup>3</sup>	Workers	Local
N-Ethyl-N-isopropyl-2-propanamine (7087-68-5/230-392-0)	DNEL	Chronic (long term) Dermal	2.96 mg/kg bw/day	Workers	Systemic
N-Ethyl-N-isopropyl-2-propanamine (7087-68-5/230-392-0)	DNEL	Acute (short term) Inhalation	12.6 mg/m <sup>3</sup>	Workers	Systemic
N-Ethyl-N-isopropyl-2-propanamine (7087-68-5/230-392-0)	DNEL	Acute (short term) Inhalation	12.6 mg/m <sup>3</sup>	Workers	Local

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## PNEC/PEC

Product/Substance name (CAS No./EC No.)	Type	Environmental compartment	Value
N-Ethyl-N-isopropyl-2-propanamine (7087-68-5/230-392-0)	PNEC	Freshwater	0.173 mg/l
N-Ethyl-N-isopropyl-2-propanamine (7087-68-5/230-392-0)	PNEC	Marine water	0.0173 mg/l
N-Ethyl-N-isopropyl-2-propanamine (7087-68-5/230-392-0)	PNEC	Sediment (freshwater)	41.09 mg/kg dwt
N-Ethyl-N-isopropyl-2-propanamine (7087-68-5/230-392-0)	PNEC	Sediment (marine water)	4.11 mg/kg dwt
N-Ethyl-N-isopropyl-2-propanamine (7087-68-5/230-392-0)	PNEC	Intermittent releases	0.281 mg/l
N-Ethyl-N-isopropyl-2-propanamine (7087-68-5/230-392-0)	PNEC	Sewage Treatment Plant	9.12 mg/l
N-Ethyl-N-isopropyl-2-propanamine (7087-68-5/230-392-0)	PNEC	Soil	8.12 mg/kg soil dry weight

## 8.2. Exposure controls

### Personal Protective Equipment Symbols



### Eye / face protection

Wear eye protection.

### Hand protection

Wear protective gloves.

Recommended gloves: Nitrile.

Glove Thickness: 0.4mm

Breakthrough time: 8 hours

Always inspect gloves before use. If signs of wear and tear are noticed then the gloves should be replaced.

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.

## Thermal hazards

Risk of explosion.

## Environmental exposure controls

Avoid discharge into drains.

## SECTION 9: Physical and chemical properties

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

#### Physical state

Liquid

#### Colour

Colourless.

#### Odour

Ammonia or amines.

#### Melting point / freezing point

~ -50 °C

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

127 °C

#### Flammability

No data available

#### Lower and upper explosion limit

No data available

#### Flash point

6 °C

#### Auto-ignition temperature

260 °C

#### Decomposition temperature

No data available

#### pH

No data available



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## Kinematic viscosity

0.88 mm<sup>2</sup>/s

### Method

(20°C)

## Solubility

4.01 g/l

### Method

(20°C)

## Partition coefficient n-octanol/water

No data available

## Vapour pressure

~ 14 hPa

### Method

(20°C)

## Density and/or relative density

0.742 g/cm<sup>3</sup>

### Method

(25°C)

## Relative vapour density

No data available

## Explosive properties

Vapours may form explosive mixture with air at room temperature.

## Particle characteristics

No data available

## 9.2. Other information

No data available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Vapours may form explosive air mixtures even at room temperature.

### 10.2. Chemical stability

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

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## 10.3. Possibility of hazardous reactions

Caution! In contact with nitrites, nitrates, nitrous acid possible liberation of nitrosamines!

Violent reactions possible with:

Strong acids. Strong oxidising agents.

## 10.4. Conditions to avoid

Avoid heat, flames and other sources of ignition.

Protect from moisture.

## 10.5. Incompatible materials

Strong acids. Strong oxidising agents.

## 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 exposure	Test animals	Remarks
N-Ethyl-N-isopropyl- 2-propanamine 7087-68-5 / 230- 392-0	Acute Toxicity (Oral LD50):	317mg/kg	-	Rat	Liquid irritates mucous membranes and may cause abdominal pain if swallowed.
N-Ethyl-N-isopropyl- 2-propanamine 7087-68-5 / 230- 392-0	Acute Toxicity (Dermal LD50):	> 2,000mg/kg	-	Rat	-
N-Ethyl-N-isopropyl- 2-propanamine 7087-68-5 / 230- 392-0	Acute Toxicity (Inhalation LC50):	2.63mg/l - vapour	4 hours	Rat	-

#### Skin corrosion/irritation

Product / Substance name CAS / EC no.	Result	Duration of exposure	Species
N-Ethyl-N-isopropyl-2-pro- panamine	Skin irritation.	4 hours	Rabbit

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Product / Substance name CAS / EC no.	Result	Duration of exposure	Species
7087-68-5 / 230-392-0			

## Serious eye damage/irritation

Product / Substance name CAS / EC no.	Result	Species
N-Ethyl-N-isopropyl-2-propanamine 7087-68-5 / 230-392-0	Irreversible effects on the eye - Causes serious eye damage.	Bovine cornea

## Respiratory or skin sensitisation

Product / Substance name CAS / EC no.	Result	Species
N-Ethyl-N-isopropyl-2-propanamine 7087-68-5 / 230-392-0	Negative.	Guinea Pig

## STOT-single exposure

Product / Substance name CAS / EC no.	Exposure route	Target organs	Result
N-Ethyl-N-isopropyl-2-propanamine 7087-68-5 / 230-392-0	Inhalation.	Respiratory system, lungs.	May cause respiratory irritation.

## 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

#### Acute fish toxicity

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Product / Substance name CAS / EC no.	Measurement type	Value / Result	Duration of exposure	Species
N-Ethyl-N-isopropyl-2-propanamine 7087-68-5 / 230-392-0	LC50	69.7mg/l	96 hours	Brachydanio rerio (Zebra Fish)

## Acute algae toxicity

Product / Substance name CAS / EC no.	Measurement type	Value / Result	Duration of exposure	Species
N-Ethyl-N-isopropyl-2-propanamine 7087-68-5 / 230-392-0	ErC50	150mg/l	72 hours	Pseudokirchneriella subcapitata

## Acute crustacean toxicity

Product / Substance name CAS / EC no.	Measurement type	Value / Result	Duration of exposure	Species
N-Ethyl-N-isopropyl-2-propanamine 7087-68-5 / 230-392-0	EC50	28.1mg/l	48 hours	Daphnia magna

## 12.2. Persistence and degradability

### Persistence and degradability

Product / Substance name CAS / EC no.	Type of test	Duration	Result	Degradation
N-Ethyl-N-isopropyl-2-propanamine 7087-68-5 / 230-392-0	OECD Test Guideline : 301D	28 days	The product is not readily biodegradable.	2.0%

## 12.3. Bioaccumulative potential

No data available

## 12.4. Mobility in soil

No data available

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## 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.

## 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/regional/national/international 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-Diisopropylethylamine (Hunigs base))

#### 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-Diisopropylethylamine (Hunigs base))

#### 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-Diisopropylethylamine (Hunigs base))

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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

Not applicable

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## 14.6. Special precautions for user

### Special precautions for user

Tunnel restriction code: C/D

Transport category: 1

### IMDG EmS

F-E, S-D

## 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. 2 - Flammable liquids, hazard category 2

Acute Tox. 4 - oral - Acute toxicity, oral, hazard category 4

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

Acute Tox. 3 - inhalation - Acute toxicity, inhalation, hazard category 3

STOT SE 3 - resp. tract irrit. - Specific Target Organ Toxicity — Single exposure, hazard category 3 - respiratory tract irritation

Aquatic Chronic 2 - Hazardous to the aquatic environment — Chronic hazard category 2

H225 Highly flammable liquid and vapour.

H302 Harmful if swallowed.

H318 Causes serious eye damage.

H331 Toxic if inhaled.

H335 May cause respiratory irritation.

H411 Toxic to aquatic life with long lasting effects.