

According to Regulation (EC) No 1907/2006

N-Ethylmaleimide



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

1.1. Product identifier

Trade name

N-Ethylmaleimide

CAS number

128-53-0

EC number

204-892-4

Synonyms

1-ethyl-2,5-dihydro-1H-pyrrole-2,5-dione

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

Street 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 address

+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

Serious eye damage, hazard category 1
 Skin corrosion, hazard category 1B
 Skin sensitisation, hazard category 1
 Acute toxicity, oral, hazard category 1
 Acute toxicity, dermal, hazard category 3

Hazard statements

H300, H311, H314, H317, H318

2.2. Label elements

Labelling according to Regulation (EC) No 1272/2008

Hazard pictograms



Signal word

Danger

Hazard statements

H300 Fatal if swallowed.
 H311 Toxic in contact with skin.
 H314 Causes severe skin burns and eye damage.
 H317 May cause an allergic skin reaction.

Precautionary statements

P260 Do not breathe dust.
 P264 Wash skin thoroughly after handling.
 P270 Do not eat, drink or smoke when using this product.
 P272 Contaminated work clothing should not be allowed out of the workplace.
 P280 Wear protective gloves/protective clothing/eye protection/face protection.
 P363 Wash contaminated clothing before reuse.
 P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER/doctor.
 P301 + P330 + P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
 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.
 P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P361 + P364 Take off immediately all contaminated clothing and wash it before reuse.
 P333 + P313 If skin irritation or rash occurs: Get medical advice/attention.

2.3. Other hazards

No data available

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SECTION 3: Composition/information on ingredients

3.2. Mixtures

Chemical name	CAS No. EC No. REACH No. Index No.	Concentration	Classification	H-phrase M factor acute M factor chronic	Note
N-Ethylmaleimide	128-53-0 204-892-4 - -	100%	Acute Tox. 2 - oral, Acute Tox. 3 - dermal, Skin Corr. 1B, Skin Sens. 1, Eye Dam. 1	H300, H311, H314, H317 - -	-

Molecular weight

125.13

Substance additional information

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

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

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

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower]. Immediately call a POISON CENTER/doctor.

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). Administer activated charcoal (20 - 40g in a 10% slurry) and consult a doctor as quickly as possible. Do not attempt to neutralise.

Information for doctors

No data available.

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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. Causes burns by all exposure routes.

See section 11 for more detailed information on health effects and symptoms.

Inhalation

Single exposure may cause the following adverse effects: Causes severe burns. Difficulty in breathing. Unconsciousness, possibly death.

Skin contact

Single exposure may cause the following adverse effects: Causes severe burns. Blistering may occur. May be absorbed in the body and cause dizziness, nausea and vomiting. Unconsciousness, death.

Eye contact

Single exposure may cause the following adverse effects: Causes serious eye damage. Unconsciousness, possibly death.

Ingestion

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

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

Treat symptomatically. Immediately call a POISON CENTER/doctor.

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: Corrosive.

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

Carbon monoxide (CO). Carbon dioxide (CO₂). Nitrous gases (NO_x). Combustible.

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.

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SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Do not breathe vapour/spray. Avoid contact with skin and eyes. For personal protection, see section 8.

In case of fire: Evacuate area. Fight fire remotely due to the risk of explosion.

6.2. Environmental precautions

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

6.3. Methods and material for containment and cleaning up

Collect with absorbent, non-combustible material into suitable containers. Avoid dust formation.

6.4. Reference to other sections

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

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Preventive handling precautions

Avoid contact with skin and eyes. Avoid dust formation. Provide adequate ventilation.

General hygiene

Wash hands after contact.

7.2. Conditions for safe storage, including any incompatibilities

Store in a dry place. Store in a closed container.

Store at specified temperature. 2 to 8 °C

Light sensitive.

For precautions see section 2.2.

7.3. Specific end use(s)

No specific usage precautions noted.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No data available

8.2. Exposure controls

Eye / face protection

Wear eye protection.

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Hand protection

Wear protective gloves. Recommended gloves: Nitrile.

Glove Thickness: 0.11mm

Breakthrough time: 480 minutes

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.

Respiratory protection

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

Environmental exposure controls

Avoid discharge into drains.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state

Solid

Colour

White / off-white.

Odour

Pungent.

Melting point / freezing point

41 - 45 °C / 105.8 - 11

Boiling point or initial boiling point and boiling range

210 °C / 410 °F @ 760 mmHg

Flammability

No data available

Lower and upper explosion limit

No data available

Flash point

73 °C

Auto-ignition temperature

No data available

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Decomposition temperature

No data available

pH

5.1

Kinematic viscosity

No data available

Solubility

No data available

Water solubility

Water-soluble.

Partition coefficient n-octanol/water

No data available

Vapour pressure

No data available

Density and/or relative density

No data available

Relative vapour density

No data available

Particle characteristics

No data available

9.2. Other information

No data available

SECTION 10: Stability and reactivity

10.1. Reactivity

There are no known reactivity hazards associated with this product.

10.2. Chemical stability

May discolour on exposure to light. Stable under the prescribed storage conditions.

10.3. Possibility of hazardous reactions

No data available

10.4. Conditions to avoid

No data available

10.5. Incompatible materials

Strong oxidising agents.

10.6. Hazardous decomposition products

See section 5.

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SECTION 11: Toxicological information

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

Acute toxicity

Product / Substance name CAS / EC no.	Dose descriptor	Value / Dose	Test animals	Remarks
N-Ethylmaleimide 128-53-0 / 204-892-4	Acute Toxicity (Oral LD50):	25 mg/kg	Rat	-
N-Ethylmaleimide 128-53-0 / 204-892-4	Acute Toxicity (Dermal LD50):	500mg/kg	Guinea Pig	RTECS = Registry of Toxic Effects of Chemical Substances.

Skin corrosion/irritation

Product / Substance name CAS / EC no.	Other
N-Ethylmaleimide 128-53-0 / 204-892-4	Causes skin burns.

Serious eye damage/irritation

Product / Substance name CAS / EC no.	Result
N-Ethylmaleimide 128-53-0 / 204-892-4	Causes serious eye damage.

Respiratory or skin sensitisation

Product / Substance name CAS / EC no.	Result
N-Ethylmaleimide 128-53-0 / 204-892-4	May cause an allergic skin reaction.

Carcinogenicity

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

STOT-repeated exposure

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

Aspiration hazard

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

11.2. Information on other hazards

No data available

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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

No data available

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

2928

14.2. UN proper shipping name

ADR / RID / ADN proper shipping name

TOXIC SOLID, CORROSIVE, ORGANIC, N.O.S.

IMDG proper shipping name

TOXIC SOLID, CORROSIVE, ORGANIC, N.O.S.

IATA proper shipping name

Toxic solid, corrosive, organic, n.o.s.

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14.3. Transport hazard class(es)

Label

ADR/RID/ADN



6.1

8

IMDG



6.1

8

IATA



6.1

8

ADR / RID Class

6.1

ADR / RID Classification code

TC2

ADR / RID hazard identification number

68

IMDG Class

6.1 (8)

IATA Class

6.1 (8)

ADN Class

6.1

ADN Class Code

TC2

14.4. Packing group

ADR / RID / ADN: II

IMDG: II

IATA: II

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14.5. Environmental hazards

IMDG EmS

F-A, S-B

14.6. Special precautions for user

Tunnel restriction code: D/E

Transport category: 2

14.7. Maritime transport in bulk according to IMO instruments

IBC Instruction: IBC06

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.

National regulations

Directive: 2012/18/EU

15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

SECTION 16: Other information

Phrase meaning

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

Skin Corr. 1B - Skin corrosion, hazard category 1B

Skin Sens. 1 - Skin sensitisation, hazard category 1

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

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

Acute Tox. 2 - oral - Acute toxicity, oral, hazard category 2

H300 Fatal if swallowed.

H311 Toxic in contact with skin.

H314 Causes severe skin burns and eye damage.

H317 May cause an allergic skin reaction.

H318 Causes serious eye damage.