

According to Regulation (EC) No 1907/2006

4-Amino-N,N-diethylaniline



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

1.1. Product identifier

Trade name

4-Amino-N,N-diethylaniline

CAS number

93-05-0

EC number

202-214-1

Synonyms

N,N-Diethyl-1,4-phenylenediamine

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

Acute toxicity, oral, hazard category 3

Hazard statements

H301, H314

2.2. Label elements

Labelling according to Regulation (EC) No 1272/2008

Hazard pictograms



Signal word

Danger

Hazard statements

H301 Toxic if swallowed.

H314 Causes severe skin burns and eye damage.

Precautionary statements

P260 Do not breathe dust/fumes/gas/mist/vapours/spray.

P264 Wash skin thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER/doctor.

P301 + P330 + P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting.

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.

P310 Immediately call a POISON CENTER/doctor.

P363 Wash contaminated clothing before reuse.

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
4-amino-N,N-diethylaniline; N,N-diethyl-p-phenyldiam- ine	93-05-0 202-214-1 01-2120084357-49 612-080-00-X	100%	Acute Tox. 3 - oral, Skin Corr. 1B	H301, H314 - -	-

Molecular weight

308.4954

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

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.

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.

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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: Unconsciousness, possibly death.

Eye contact

Single exposure may cause the following adverse effects: Severe irritation. 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. No special treatment requirement.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Use 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:

Carbon dioxide (CO₂). Carbon monoxide (CO).

Nitrous gases (NO_x).

Combustible.

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

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

Forms explosive mixtures with air on intense heating.

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 inhalation of vapours and spray mist and contact with skin and eyes. Provide adequate ventilation.

For personal protection, see section 8.

6.2. Environmental precautions

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

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6.3. Methods and material for containment and cleaning up

Absorb spillage with suitable absorbent material. 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.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Preventive handling precautions

For precautions see section 2.2.

7.2. Conditions for safe storage, including any incompatibilities

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

Air sensitive. Light sensitive.

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.

Hand protection

Wear protective gloves.

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.

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SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state

Liquid

Colour

Dark brown.

Odour

No data available

Melting point / freezing point

19 - 21 °C - lit.

Boiling point or initial boiling point and boiling range

115 - 116 °C at 7 hPa - lit.

Flammability

No data available

Lower and upper explosion limit

No data available

Flash point

139 °C

Method

CC (Closed cup).

Auto-ignition temperature

No data available

Decomposition temperature

No data available

pH

No data available

Kinematic viscosity

No data available

Solubility

Insoluble.

Partition coefficient n-octanol/water

log Pow: 2.24

Vapour pressure

No data available

Density and/or relative density

0.988 g/cm³ at 25 °C - lit.

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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

Forms explosive mixtures with air on intense heating.

15 (approx) Kelvin below the flash point is to be rated as critical.

10.2. Chemical stability

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

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

Product quality may be affected by exposure to:

Air

Light.

10.5. Incompatible materials

Strong oxidising agents. Strong acids.

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 / Substance name CAS / EC no.	Dose descriptor	Value / Dose	Exposure route	Test animals
4-amino-N,N-diethylaniline; N,N-diethyl-p-phenylenediamine 93-05-0 / 202-214-1	LD50	>202 mg/kg	Oral	Rat

Serious eye damage/irritation

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Product / Substance name CAS / EC no.	Result	Duration of exposure	Species
4-amino-N,N-diethylaniline; N,N-diethyl-p-phenylenediamine 93-05-0 / 202-214-1	Severe eye irritation.	24 hours	Rabbit

Germ cell mutagenicity

Product / Substance name CAS / EC no.	Species	Method / Guideline
4-amino-N,N-diethylaniline; N,N-diethyl-p-phenylenediamine 93-05-0 / 202-214-1	Chinese hamster lung cells	Cytogenetic analysis

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

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.

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SECTION 14: Transport information

14.1. UN number

2922

14.2. UN proper shipping name

ADR / RID / ADN proper shipping name

CORROSIVE LIQUID, TOXIC, N.O.S. (4-Amino-N,N-diethylaniline)

IMDG proper shipping name

CORROSIVE LIQUID, TOXIC, N.O.S. (4-Amino-N,N-diethylaniline)

IATA proper shipping name

Corrosive liquid, toxic, n.o.s. (4-Amino-N,N-diethylaniline)

14.3. Transport hazard class(es)

Label

ADR/RID/ADN



8



6.1

IMDG



8



6.1

IATA



8



6.1

ADR / RID Class

8

ADR / RID Classification code

CT1

ADR / RID hazard identification number

86

IMDG Class

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IATA Class

8 (6.1)

ADN Class

8

ADN Class Code

CT1

14.4. Packing group

ADR / RID / ADN: II

IMDG: II

IATA: II

14.5. Environmental hazards

IMDG EmS

F-A, S-B

14.6. Special precautions for user

Tunnel restriction code: E

Transport category: 2

14.7. Maritime transport in bulk according to IMO instruments

IBC Instruction: IBC02

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

No data available

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

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

H301 Toxic if swallowed.

H314 Causes severe skin burns and eye damage.