

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Revision Date 05.11.2010

Version 5.6

1. Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Catalogue No.	806206
Product name	1,8-Naphthalenediamine for synthesis
REACH Registration Number	A registration number is not available for this substance as the substance or its use are exempted from registration according to Article 2 REACH Regulation (EC) No 1907/2006, the annual tonnage does not require a registration or the registration is envisaged for a later registration deadline.

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

Identified uses	Chemical for synthesis For additional information on uses please refer to the Merck Chemicals portal (www.merck-chemicals.com).
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1.3 Details of the supplier of the safety data sheet

Company	Merck KGaA * 64271 Darmstadt * Germany * Phone:+49 6151 72-0
Responsible Department	LS-QHC * e-mail: prodsafe@merckgroup.com

1.4 Emergency telephone number	Please contact the regional company representation in your country.
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2. Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Acute toxicity, Category 4, Oral, H302

Skin sensitization, Category 1, H317

For the full text of the H-Statements mentioned in this Section, see Section 16.

Classification (67/548/EEC or 1999/45/EC)

R43

Xn; R22

For the full text of the R-phrases mentioned in this Section, see Section 16.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms



Signal word

Warning

Hazard statements

H302 Harmful if swallowed.

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H317 May cause an allergic skin reaction.

Precautionary statements

P262 Do not get in eyes, on skin, or on clothing.

P280 Wear protective gloves.

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

Reduced labelling (≤125 ml)

Hazard pictograms



Signal word

Warning

Hazard statements

H317 May cause an allergic skin reaction.

Precautionary statements

P280 Wear protective gloves.

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

CAS-No. 479-27-6

Labelling (67/548/EEC or 1999/45/EC)

Symbol(s)	Xn	Harmful
R-phrase(s)	22-43	Harmful if swallowed. May cause sensitization by skin contact.
S-phrase(s)	24-37	Avoid contact with skin. Wear suitable gloves.
EC-No.	207-529-8	

2.3 Other hazards

None known.

3. Composition/information on ingredients

Formula	C ₁₀ H ₁₀ N ₂ (Hill)
CAS-No.	479-27-6
EC-No.	207-529-8
Molar mass	158,2 g/mol

4. First aid measures

4.1 Description of first aid measures

After inhalation: fresh air. Consult doctor if feeling unwell.

After skin contact: wash off with plenty of water. Remove contaminated clothing.

After eye contact: rinse out with plenty of water with the eyelid held wide open. Call in ophthalmologist if necessary.

After swallowing: immediately make victim drink water (two glasses at most). Consult a physician.

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4.2 Most important symptoms and effects, both acute and delayed

Allergic reactions

The following applies to aromatic amines in general: systemic effect: methaemoglobinaemia with headache, cardiac dysrhythmia, drop in blood pressure, dyspnoea, and spasms, principal symptom: cyanosis (blue discolouration of the blood).

4.3 Indication of immediate medical attention and special treatment needed

No information available.

5. Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media

Water, Carbon dioxide (CO₂), Foam, Dry powder

Unsuitable extinguishing media

For this substance/mixture no limitations of extinguishing agents are given.

5.2 Special hazards arising from the substance or mixture

Combustible material

Development of hazardous combustion gases or vapours possible in the event of fire.

Fire may cause evolution of:

nitrogen oxides

5.3 Advice for firefighters

Special protective equipment for fire-fighters

Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

Further information

Suppress (knock down) gases/vapours/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel: Avoid substance contact. Avoid inhalation of dusts. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert.

Advice for emergency responders: Protective equipment see section 8.

6.2 Environmental precautions

Do not empty into drains.

6.3 Methods and materials for containment and cleaning up

Cover drains. Collect, bind, and pump off spills.

Observe possible material restrictions (see sections 7.2 and 10.5).

Take up dry. Dispose of properly. Clean up affected area. Avoid generation of dusts.

6.4 Reference to other sections

Indications about waste treatment see section 13.

7. Handling and storage

7.1 Precautions for safe handling

Observe label precautions.

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7.2 Conditions for safe storage, including any incompatibilities

Tightly closed. Dry. Protected from light.

Store at +15°C to +25°C.

7.3 Specific end uses

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

8. Exposure controls/personal protection

8.1 Control parameters

8.2 Exposure controls

Engineering measures

Technical measures and appropriate working operations should be given priority over the use of personal protective equipment.

See section 7.1.

Individual protection measures

Protective clothing needs to be selected specifically for the workplace, depending on concentrations and quantities of the hazardous substances handled. The chemical resistance of the protective equipment should be enquired at the respective supplier.

Hygiene measures

Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.

Eye/face protection

Safety glasses

Hand protection

full contact:

Glove material:	Nitrile rubber
Glove thickness:	0,11 mm
Break through time:	> 480 min

splash contact:

Glove material:	Nitrile rubber
Glove thickness:	0,11 mm
Break through time:	> 480 min

The protective gloves to be used must comply with the specifications of EC Directive 89/686/EEC and the related standard EN374, for example KCL 741 Dermatril® L (full contact), KCL 741 Dermatril® L (splash contact).

The breakthrough times stated above were determined by KCL in laboratory tests acc. to EN374 with samples of the recommended glove types.

This recommendation applies only to the product stated in the safety data sheet(>,<)> supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).

Respiratory protection

required when dusts are generated.

Environmental exposure controls

Do not empty into drains.

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9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

Form	powder, finecrystalline
Colour	dark brown
Odour	odourless
Odour Threshold	No information available.
pH	No information available.
Melting point	64 - 65 °C
Boiling point/boiling range	205 °C at 15,6 hPa
Flash point	195 °C
Evaporation rate	No information available.
Flammability (solid, gas)	No information available.
Lower explosion limit	No information available.
Upper explosion limit	No information available.
Vapour pressure	No information available.
Relative vapour density	No information available.
Relative density	No information available.
Water solubility	at 20 °C slightly soluble
Partition coefficient: n-octanol/water	log Pow: 1,78 Method: (experimental) (Lit.) No remarkable bioaccumulation potential is expected (log Pow 1-3).
Autoignition temperature	No information available.
Decomposition temperature	No information available.
Viscosity, dynamic	No information available.
Explosive properties	No information available.
Oxidizing properties	No information available.

9.2 Other data

none

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10. Stability and reactivity

10.1 Reactivity

The following applies in general to flammable organic substances and preparations: in correspondingly fine distribution, when whirled up a dust explosion potential may generally be assumed.

10.2 Chemical stability

heat-sensitive
Sensitivity to light

10.3 Possibility of hazardous reactions

Strong oxidizing agents, Strong acids, acid halides, Acid anhydrides
Violent reactions possible with:

10.4 Conditions to avoid

A range from approx. 15 Kelvin below the flash point is to be rated as critical.

10.5 Incompatible materials

no information available

10.6 Hazardous decomposition products

in the event of fire: See chapter 5.

11. Toxicological information

11.1 Information on toxicological effects

Acute oral toxicity

LD50 rat
Dose: 800 mg/kg
(External MSDS)

absorption

Sensitisation

May cause sensitization by skin contact.
May cause an allergic skin reaction.

Specific target organ toxicity - single exposure

The substance or mixture is not classified as specific target organ toxicant, single exposure.

Specific target organ toxicity - repeated exposure

The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

Aspiration hazard

No aspiration toxicity classification

11.2 Further information

Further information

The following applies to aromatic amines in general: systemic effect: methaemoglobinaemia with headache, cardiac dysrhythmia, drop in blood pressure, dyspnoea, and spasms, principal symptom: cyanosis (blue discolouration of the blood).

Further data:

Other dangerous properties can not be excluded.

Handle in accordance with good industrial hygiene and safety practice.

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12. Ecological information

12.1 Toxicity

No information available.

12.2 Persistence and degradability

No information available.

12.3 Bioaccumulative potential

Partition coefficient: n-octanol/water

log Pow: 1,78

Method: (experimental)

(Lit.) No remarkable bioaccumulation potential is expected (log Pow 1-3).

12.4 Mobility in soil

No information available.

12.5 Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted.

12.6 Other adverse effects

Additional ecological information

We have no quantitative data concerning the ecological effects of this product.

Further information on ecology

Depending on the concentration, phosphorus and/or nitrogen compounds may contribute to the eutrophication of drinking- water supplies.

Do not allow to run into surface waters, wastewater, or soil.

13. Disposal considerations

Waste treatment methods

See www.retrologistik.com for processes regarding the return of chemicals and containers, or contact us there if you have further questions.

14. Transport information

ADR/RID

UN 3259 POLYAMINES, SOLID, CORROSIVE, N.O.S. (1,8-NAPHTHALENEDIAMINE), 8, III

IATA

UN 3259 POLYAMINES, SOLID, CORROSIVE, N.O.S. (1,8-NAPHTHALENEDIAMINE), 8, III

IMDG

UN 3259 POLYAMINES, SOLID, CORROSIVE, N.O.S. (1,8-NAPHTHALENEDIAMINE), 8, III

EmS F-A S-B

The transport regulations are cited according to international regulations and in the form applicable in Germany. Possible national deviations in other countries are not considered.

15. Regulatory information

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

EU regulations

Major Accident Hazard 96/82/EC

Legislation Directive 96/82/EC does not apply

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Occupational restrictions Take note of Dir 94/33/EC on the protection of young people at work. Take note of Dir 92/85/EEC on the safety and health at work of pregnant workers.

National legislation

15.2 Chemical Safety Assessment

For this product a chemical safety assessment was not carried out.

16. Other information

Full text of H-Statements referred to under sections 2 and 3.

H302 Harmful if swallowed.
H317 May cause an allergic skin reaction.

Full text of R-phrases referred to under sections 2 and 3

R22 Harmful if swallowed.
R43 May cause sensitization by skin contact.

Training advice

Provide adequate information, instruction and training for operators.

Regional representation: This information is given on the authorised Safety Data Sheet for your country.

Key or legend to abbreviations and acronyms used in the safety data sheet

Used abbreviations and acronyms can be looked up at www.wikipedia.org.

The information contained herein is based on the present state of our knowledge. It characterises the product with regard to the appropriate safety precautions. It does not represent a guarantee of any properties of the product.