

Safety Data Sheet

according to Regulation (EC) No 1907/2006 (REACH)
Classifications according to Regulation (EC) No 1272/2008.
Printdate 15 Aug 2024

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product name:

Diphenylamine

1.1. Catalog No.:

672845

1.2. Relevant identified uses of the substance or mixture

Identified: Laboratory chemical
uses: R&D

1.3. Uses advised against:

HPC Standards GmbH
Am Wieseneck 7

04451 Cunnersdorf
Deutschland

Tel. +49 34291 3372-36
Fax. +49 34291 3372-39
contact@hpc-standards.com

1.4. Emergency telephone number

HPC Standards Tel. +49 34291 3372-36
This number is only available during office hours.

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture
Classification according to Regulation (EC) No 1272/2008 [EU-GHS/CLP]
Acute toxicity, Inhalation (Category 3)
Acute toxicity, Dermal (Category 3)
Acute toxicity, Oral (Category 3)
Specific target organ toxicity - repeated exposure (Category 2)
Acute aquatic toxicity (Category 1)
Chronic aquatic toxicity (Category 1)
Classification according to EU Directives 67/548/EEC or 1999/45/EC
Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. Danger of cumulative effects. Toxic by inhalation, in contact with skin and if swallowed.

2.2. Label elements

2.2.1. Pictogram



2.2.2.

Signal word Danger
Hazard statement(s)
H301 Toxic if swallowed.
H311 Toxic in contact with skin.
H331 Toxic if inhaled.
H373 May cause damage to organs through prolonged or repeated exposure.
H410 Very toxic to aquatic life with long lasting effects. Precautionary statement(s)
P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
P273 Avoid release to the environment.
P280 Wear protective gloves/ protective clothing.
P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/ physician.
P311 Call a POISON CENTER or doctor/ physician.
P501 Dispose of contents/ container to an approved waste disposal plant.
Supplemental Hazard Statements
none
According to European Directive 67/548/EEC as amended.
Hazard symbol(s) R-phrase(s)
R23/24/25 Toxic by inhalation, in contact with skin and if swallowed.
R33 Danger of cumulative effects.
R50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
S-phrase(s)
S28 After contact with skin, wash immediately with plenty of soap and water.
S36/37 Wear suitable protective clothing and gloves.
S45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
S60 This material and its container must be disposed of as hazardous waste.
S61 Avoid release to the environment. Refer to special instructions/ Safety data sheets.
2.3 Other hazards - none

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances
Formula : C12H11N
Molecular Weight : 169,22 g/mol
Component Concentration
Diphenylamine
CAS-No.
EC-No.
Index-No.
122-39-4
204-539-4
612-026-00-5
-

3.1.1. Formula

C12H11N

3.1.2. Molecular Weight (g/mol)

169.06

3.1.3. CAS-No.

122-39-4

4. FIRST AID MEASURES

4.1 Description of first aid measures

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance.

If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact

Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.

In case of eye contact

Flush eyes with water as a precaution.

If swallowed

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician. 4.2 Most important symptoms and effects, both acute and delayed

Absorption into the body leads to the formation of methemoglobin which in sufficient concentration causes cyanosis. Onset may be delayed 2 to 4 hours or longer., Nausea, Vomiting, Liver injury may occur., Kidney injury may occur.

4.3 Indication of any immediate medical attention and special treatment needed

no data available

5. FIRE-FIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 Special hazards arising from the substance or mixture

Carbon oxides, nitrogen oxides (NOx)

5.3 Advice for firefighters

Wear self contained breathing apparatus for fire fighting if necessary.

5.4 Further information

no data available

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures
Wear respiratory protection. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.

6.2 Environmental precautions
Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

6.3 Methods and materials for containment and cleaning up
Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

6.4 Reference to other sections
For disposal see section 13.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling
Avoid contact with skin and eyes. Avoid formation of dust and aerosols.
Provide appropriate exhaust ventilation at places where dust is formed.

7.2 Conditions for safe storage, including any incompatibilities
Store in cool place. Keep container tightly closed in a dry and well-ventilated place.

7.3 Specific end use(s)
no data available

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters
Components with workplace control parameters

8.2 Exposure controls
Appropriate engineering controls
Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

Personal protective equipment
Eye/face protection

Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices.

Wash and dry hands. Body Protection
Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection
Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

- a) Appearance Form: crystalline
Colour: white
 - b) Odour no data available
 - c) Odour Threshold no data available
 - d) pH no data available
 - e) Melting point/freezing
point
Melting point/range: 50 - 53 °C - lit.
 - f) Initial boiling point and
boiling range
302 °C - lit.
 - g) Flash point 153 °C - closed cup
 - h) Evaporation rate no data available
 - i) Flammability (solid, gas) no data available
 - j) Upper/lower
flammability or
explosive limits
no data available
 - k) Vapour pressure 1 hPa at 108 °C
 - l) Vapour density no data available m) Relative density 1,160 g/cm³
 - n) Water solubility insoluble
 - o) Partition coefficient: noctanol/
water
log Pow: 3,5
 - p) Auto-ignition
temperature
no data available
 - q) Decomposition
temperature
no data available
 - r) Viscosity no data available
 - s) Explosive properties no data available
 - t) Oxidizing properties no data available
- 9.2 Other safety information
Bulk density 0,61 g/l
Surface tension 39,3 mN/m at 60 °C

10. STABILITY AND REACTIVITY

- 10.1 Reactivity
no data available
- 10.2 Chemical stability
no data available
- 10.3 Possibility of hazardous reactions
no data available
- 10.4 Conditions to avoid
no data available
- 10.5 Incompatible materials
Strong oxidizing agents, Strong acids
- 10.6 Hazardous decomposition products
Other decomposition products - no data available

11. TOXICOLOGICAL INFORMATION

- 11.1 Information on toxicological effects
Acute toxicity
LD50 Oral - rat - 1.120 mg/kg
Remarks: Behavioral: Somnolence (general depressed activity). Respiratory disorder
Blood: Methemoglobinemia-Carboxyhemoglobin.
Inhalation: no data available

Dermal: no data available
Skin corrosion/irritation
no data available
Serious eye damage/eye irritation
no data available
Respiratory or skin sensitization
no data available
Germ cell mutagenicity
no data available
Carcinogenicity
This product is or contains a component that is not classifiable as to its carcinogenicity based on its IARC, ACGIH, NTP, or EPA classification.
IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
Reproductive toxicity
Developmental Toxicity - rat - Oral
Specific Developmental Abnormalities: Urogenital system.
Specific target organ toxicity - single exposure
no data available
Specific target organ toxicity - repeated exposure
May cause damage to organs through prolonged or repeated exposure.
Aspiration hazard
no data available
Potential health effects
Inhalation May be fatal if inhaled. May cause respiratory tract irritation.
Ingestion Harmful if swallowed.
Skin Toxic if absorbed through skin. May cause skin irritation.
Eyes May cause eye irritation.
Signs and Symptoms of Exposure
Absorption into the body leads to the formation of methemoglobin which in sufficient concentration causes cyanosis. Onset may be delayed 2 to 4 hours or longer., Nausea, Vomiting, Liver injury may occur., Kidney injury may occur.
Additional Information
RTECS: JJ7800000

12. ECOLOGICAL INFORMATION

12.1 Toxicity
Toxicity to fish LC50 - Pimephales promelas (fathead minnow) - 3,79 mg/l - 96,0 h
LC0 - Leuciscus idus (Golden orfe) - 20 mg/l - 48,0 h
Toxicity to daphnia and other aquatic invertebrates
EC50 - Daphnia magna (Water flea) - 0,27 - 0,36 mg/l - 48 h
Toxicity to algae EC50 - Desmodesmus subspicatus (green algae) - 0,048 mg/l - 72 h
IC50 - Desmodesmus subspicatus (green algae) - 1,5 mg/l - 72 h
12.2 Persistence and degradability
Biodegradability Result: - According to the results of tests of biodegradability this product is not readily biodegradable.
no data available
12.3 Bioaccumulative potential
Bioaccumulation Cyprinus carpio (Carp) -
Bioconcentration factor (BCF): 253
12.4 Mobility in soil
no data available
12.5 Results of PBT and vPvB assessment
no data available
12.6 Other adverse effects
Very toxic to aquatic life.

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product

Offer surplus and non-recyclable solutions to a licensed disposal company. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

Contaminated packaging

Dispose of as unused product.

14. TRANSPORT INFORMATION

14.1 UN number

ADR/RID: 3077 IMDG: 3077 IATA: 3077

14.2 UN proper shipping name

ADR/RID: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Diphenylamine)

IMDG: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Diphenylamine)

IATA: Environmentally hazardous substance, solid, n.o.s. (Diphenylamine)

14.3 Transport hazard class(es)

ADR/RID: 9 IMDG: 9 IATA: 9

14.4 Packaging group

ADR/RID: III IMDG: III IATA: III

14.5 Environmental hazards

ADR/RID: yes IMDG Marine Pollutant: yes IATA: yes

14.6 Special precautions for user

Further information

EHS-Mark required (ADR 2.2.9.1.10, IMDG code 2.10.3) for single packagings and combination packagings containing inner packagings with Dangerous Goods > 5L for liquids or > 5kg for solids.

15. REGULATORY INFORMATION

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

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

no data available

15.2 Chemical Safety Assessment

no data available

16. OTHER INFORMATION

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. For lab use only!