

## Chemical Safety Data Sheet MSDS / SDS

## Diphenylamine

Revision Date:2026-06-06 Revision Number:1

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

## Product identifier

Product name : Diphenylamine  
CBnumber : CB7852949  
CAS : 122-39-4  
EINECS Number : 204-539-4  
Synonyms : DPA,diphenylamine

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

Relevant identified uses : For R&D use only. Not for medicinal, household or other use.  
Uses advised against : none

## Company Identification

Company : Chemicalbook  
Address : Building 1, Huihuang International, Shangdi 10th Street, Haidian District, Beijing  
Telephone : 010-86108875

## SECTION 2: Hazards identification

## GHS Label elements, including precautionary statements

Symbol(GHS)



Signal word

Danger

## Precautionary statements

P314 Get medical advice/attention if you feel unwell.

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

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

P273 Avoid release to the environment.

## Hazard statements

H410 Very toxic to aquatic life with long lasting effects

H373 May cause damage to organs through prolonged or repeated exposure

## SECTION 3: Composition/information on ingredients

## Substance

Product name	: Diphenylamine
Synonyms	: DPA,diphenylamine
CAS	: 122-39-4
EC number	: 204-539-4
MF	: C12H11N
MW	: 169.22

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## SECTION 4: First aid measures

### Description of first aid measures

#### General information

Immediately remove any clothing soiled by the product.

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

Remove breathing apparatus only after contaminated clothing have been completely removed.

In case of irregular breathing or respiratory arrest provide artificial respiration.

#### After inhalation

Supply fresh air or oxygen; call for doctor.

In case of unconsciousness place patient stably in side position for transportation.

#### After skin contact

Immediately wash with water and soap and rinse thoroughly.

#### After eye contact

Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

#### After swallowing

Do not induce vomiting; immediately call for medical help.

#### Information for doctor

#### Most important symptoms and effects, both acute and delayed

No further relevant information available.

#### Indication of any immediate medical attention and special treatment needed

No further relevant information available.

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## SECTION 5: Firefighting measures

### Extinguishing media

## Suitable extinguishing agents

Use fire fighting measures that suit the environment.

A solid water stream may be inefficient.

## Special hazards arising from the substance or mixture

No further relevant information available.

## Advice for firefighters

## Protective equipment

Mouth respiratory protective device.

## NFPA 704



HEALTH 2 Intense or continued but not chronic exposure could cause temporary incapacitation or possible residual injury (e.g. [diethyl ether](#), ammonium phosphate, iodine)

FIRE 1 Materials that require considerable preheating, under all ambient temperature conditions, before ignition and combustion can occur. Includes some finely divided suspended solids that do not require heating before ignition can occur. Flash point at or above 93.3 °C (200 °F). (e.g. [mineral oil](#), ammonia)

REACT 0 Normally stable, even under fire exposure conditions, and is not reactive with water (e.g. helium, [N2](#))

SPEC.  
 HAZ.

## SECTION 6: Accidental release measures

### Personal precautions, protective equipment and emergency procedures

Not required.

### Environmental precautions

Inform respective authorities in case of seepage into water course or sewage system.

Do not allow to enter sewers/ surface or ground water.

### Methods and material for containment and cleaning up

Dispose contaminated material as waste according to section 13.

Ensure adequate ventilation.

### Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

### **Protective Action Criteria for Chemicals**

#### **PAC-1**

30 mg/m<sup>3</sup>

#### **PAC-2**

180 mg/m<sup>3</sup>

#### **PAC-3**

220 mg/m<sup>3</sup>

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## SECTION 7: Handling and storage

### **Handling**

#### **Precautions for safe handling**

Thorough dedusting.

Ensure good ventilation/exhaustion at the workplace.

Open and handle receptacle with care.

#### **Information about protection against explosions and fires**

Keep respiratory protective device available.

#### **Conditions for safe storage, including any incompatibilities**

### **Storage**

Store in accordance with information listed on the product insert.

#### **Requirements to be met by storerooms and receptacles**

No special requirements.

#### **Information about storage in one common storage facility**

Not required.

#### **Further information about storage conditions**

Keep receptacle tightly sealed.

#### **Specific end use(s)**

No further relevant information available.

## SECTION 8: Exposure controls/personal protection

### Additional information about design of technical systems

No further data; see section 7.

### Control parameters

Components with limit values that require monitoring at the workplace:

122-39-4 Diphenylamine	
REL	Long-term value: 10 mg/m <sup>3</sup>
TLV	Long-term value: 10 mg/m <sup>3</sup> A4

### Additional information

The lists that were valid during the creation were used as basis.

### Exposure controls

### Personal protective equipment

### General protective and hygienic measures

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

Store protective clothing separately.

Avoid contact with the eyes.

Avoid contact with the eyes and skin.

### Breathing equipment

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

### Protection of hands

Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

### Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

### Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

### Eye protection

## SECTION 9: Physical and chemical properties

### Information on basic physicochemical properties

#### Appearance

#### Physical State

Solid

#### Color

tan

#### Odor

Characteristic

#### Structural Formula

C<sub>12</sub>H<sub>11</sub>N

#### Molecular Weight

169.2 g/mol

#### Odor Threshold

Not determined.

#### pH

Not applicable.

#### Change in condition

#### Melting point/Melting range

Undetermined.

#### Boiling point/Boiling range

302 °C(lit.)

#### Flash point

307 °F

#### Flammability

Product is not flammable.

#### Decomposition temperature

Not determined.

**Ignition temperature**

Not determined.

**Danger of explosion**

Product does not present an explosion hazard.

**Explosion limits**

Lower: Not determined.

Upper: Not determined.

**Vapor Pressure**

0 hPa

**Density**

1.16

**Relative Density**

1.16

**Vapor Density**

5.82 (vs air)

**Evaporation Rate**

Not applicable.

**Solubility in / Miscibility with**

alcohol: passes test

**Water at 25 °C (77 °F)**

0.2 g/l

**Partition coefficient (n-octanol/water)**

Not determined.

**Viscosity****Dynamic**

Not applicable.

**Kinematic**

Not applicable.

**SOLUBILITY**

Chloroform: Slightly Soluble; Methanol: Slightly Soluble

**Water solubility**

Slightly soluble. 0.03 g/100 mL

No information available

### Dielectric constant

3.3 (11°C)

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## SECTION 10: Stability and reactivity

### Reactivity

No further relevant information available.

### Chemical stability

### Thermal decomposition / conditions to be avoided

No decomposition if used according to specifications.

### Possibility of hazardous reactions

No dangerous reactions known.

### Conditions to avoid

No further relevant information available.

### Incompatible materials

strong oxidizing agents, strong acids

### Hazardous decomposition products

carbon dioxide, carbon monoxide, nitrogen oxides

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## SECTION 11: Toxicological information

### RTECS Number

JJ7800000

### Information on toxicological effects

### Acute toxicity

LD/LC50 values that are relevant for classification:

Route	Endpoint	Value
Oral	LD50	1,120 mg/kg (rat)

### Primary irritant effect

### on the skin

No irritant effect.

### **on the eye**

Irritating effect.

### **Sensitization**

No sensitizing effects known.

### **Additional toxicological information**

#### **Carcinogenic categories**

#### **IARC (International Agency for Research on Cancer)**

2B

#### **NTP (National Toxicology Program)**

Substance is not listed.

#### **OSHA-Ca (Occupational Safety & Health Administration)**

Substance is not listed.

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## SECTION 12: Ecological information

### **Toxicity**

#### **Aquatic toxicity**

No further relevant information available.

#### **Persistence and degradability**

No further relevant information available.

#### **Behavior in environmental systems**

#### **Bioaccumulative potential**

No further relevant information available.

#### **Mobility in soil**

No further relevant information available.

#### **Ecotoxicological effects**

#### **Remark**

Very toxic for fish

#### **Additional ecological information**

#### **General notes**

Water hazard class 3 (Assessment by list): extremely hazardous for water

Do not allow product to reach ground water, water course or sewage system, even in small quantities.

Danger to drinking water if even extremely small quantities leak into the ground.

Also poisonous for fish and plankton in water bodies.

Very toxic for aquatic organisms

### **Results of PBT and vPvB assessment**

#### **PBT**

Not applicable.

#### **vPvB**

Not applicable.

#### **PBT:**

Not applicable.

#### **vPvB:**

Not applicable.

#### **Other adverse effects**

No further relevant information available.

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## SECTION 13: Disposal considerations

### **Waste treatment methods**

#### **Recommendation**

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

#### **Uncleaned packagings**

#### **Recommendation**

Disposal must be made according to official regulations.

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## SECTION 14: Transport information

### **UN-Number**

DOT, IMDG, IATA UN2811

### **UN proper shipping name**

DOT Toxic solids, organic, n.o.s. (Diphenylamine)

IMDG TOXIC SOLID, ORGANIC, N.O.S. (Diphenylamine)

IATA Toxic solid, organic, n.o.s. (Diphenylamine)

### **Transport hazard class(es)**

#### **DOT**

Class: 6.1 Toxic substances

Label: 6.1

#### **IMDG**

Class: 6.1 Toxic substances

Label: 6.1

#### **IATA**

Class: 6.1 Toxic substances

Label: 6.1

### **Packing group**

DOT, IMDG, IATA II

### **Environmental hazards**

Environmentally hazardous substance, solid

### **Marine pollutant**

Symbol (fish and tree)

### **Special precautions for user**

Warning: Toxic substances

### **Hazard identification number (Kemler code)**

60

### **EMS Number**

F-A,S-A

### **Stowage Category**

B

### **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**

Not applicable.

### **Transport/Additional information**

**DOT:**

### **Quantity limitations**

On passenger aircraft/rail: 25 kg

On cargo aircraft only: 100 kg

**IMDG:**

### Limited quantities (LQ)

500 g

### Excepted quantities (EQ)

Code: E4

Maximum net quantity per inner packaging: 1 g

Maximum net quantity per outer packaging: 500 g

### IATA:

### Remarks

When sold in quantities of less than or equal to 1 mL, or 1 g, with an Excepted Quantity Code of E1, E2, E4, or E5, this item meets the De Minimis Quantities exemption, per IATA 2.6.10. Therefore packaging does not have to be labeled as Dangerous Goods/Excepted Quantity.

### UN "Model Regulation"

UN 2811 TOXIC SOLID, ORGANIC, N.O.S.  
(DIPHENYLAMINE), 6.1, II, ENVIRONMENTALLY  
HAZARDOUS

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## SECTION 15: Regulatory information

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

No further relevant information available.

### Sara

Section 355 (extremely hazardous substances):	Substance is not listed.
Section 313 (Specific toxic chemical listings):	Substance is listed.
TSCA (Toxic Substances Control Act):	ACTIVE
Hazardous Air Pollutants:	Substance is not listed.

### Proposition 65

Chemicals known to cause cancer:	Substance is not listed.
Chemicals known to cause reproductive toxicity for females:	Substance is not listed.
Chemicals known to cause reproductive toxicity for males:	Substance is not listed.
Chemicals known to cause developmental toxicity:	Substance is not listed.

### Chemicals known to cause cancer

Substance is not listed.

### Chemicals known to cause reproductive toxicity for females

Substance is not listed.

### **Chemicals known to cause reproductive toxicity for males**

Substance is not listed.

### **Chemicals known to cause developmental toxicity**

Substance is not listed.

### **Carcinogenic categories**

EPA (Environmental Protection Agency):	Substance is not listed.
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### **TLV (Threshold Limit Value)**

A4

### **NIOSH-Ca (National Institute for Occupational Safety and Health)**

Substance is not listed.

### **Chemical safety assessment**

A Chemical Safety Assessment has not been carried out.

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## **SECTION 16: Other information**

### **Abbreviations and acronyms**

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

EINECS: European Inventory of Existing Commercial Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMS: Hazardous Materials Identification System (USA)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic vPvB: very Persistent and very Bioaccumulative

NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety & Health

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

Acute Toxicity - Oral 3: Acute toxicity – Category 3

Eye Irritation 2A: Serious eye damage/eye irritation – Category 2A

Carcinogenicity 2: Carcinogenicity – Category 2

Specific Target Organ Toxicity - Repeated Exposure 2: Specific target organ toxicity (repeated exposure) – Category 2

Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1

Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1

**Disclaimer:**

The information in this MSDS is only applicable to the specified product, unless otherwise specified, it is not applicable to the mixture of this product and other substances. This MSDS only provides information on the safety of the product for those who have received the appropriate professional training for the user of the product. Users of this MSDS must make independent judgments on the applicability of this SDS. The authors of this MSDS will not be held responsible for any harm caused by the use of this MSDS.