Safety Data Sheet

Diphenylamine

CAROLINA®
www.carolina.com

Section 1 Product Description

Product Name:	Diphenylamine
Recommended Use:	Science education applications
Synonyms:	N-Phenylbenzeneamine, N,N-Diphenylamine, N-Phenylaniline, Anilinobenzene
Distributor:	Carolina Biological Supply Company 2700 York Road, Burlington, NC 27215 1-800-227-1150
Chemical Information:	800-227-1150 (8am-5pm (ET) M-F)
Chemtrec:	800-424-9300 (Transportation Spill Response 24 hours)

Section 2 Hazard Identification

Classification of the chemical in accordance with paragraph (d) of §1910.1200;

DANGER

Toxic if swallowed, in contact with skin or if inhaled. May cause damage to organs through prolonged or repeated exposure. Toxic to aquatic life.

GHS Classification:
Specific Target Organ Systemic Toxicity (STOT) - Repeated Exposure Category 2, Hazardous to the aquatic environment - Acute Category 2, Acute Toxicity - Inhalation Vapor Category 3, Acute Toxicity - Dermal Category 3, Acute Toxicity - Oral Category 3

Acute Toxicity Inhalation Gas Contains	100 % of the mixture consists of ingredient(s) of unknown toxicity
Acute Toxicity Inhalation Dust/Mist Contains	100 % of the mixture consists of ingredient(s) of unknown toxicity

Section 3 Composition / Information on Ingredients

Chemical Name	CAS #	%
Diphenylamine	122-39-4	100

Section 4 First Aid Measures

Emergency and First Aid Procedures

Inhalation:	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
Eyes:	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
Skin Contact:	IF ON SKIN: Wash with plenty of soap and water. Remove/Take off immediately all contaminated clothing. Wash contaminated clothing before reuse.
Ingestion:	IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.

Section 5 Firefighting Procedures

Extinguishing Media:	Use dry chemical, CO2 or appropriate foam.
Fire Fighting Methods and Protection:	Firefighters should wear full protective equipment and NIOSH approved self-contained breathing apparatus.
Fire and/or Explosion Hazards:	Fire or excessive heat may produce hazardous decomposition products.
Hazardous Combustion Products:	Carbon dioxide, Carbon monoxide, Nitrogen containing gases, Phenol

Section 6 Spill or Leak Procedures

Steps to Take in Case Material Is Released or Spilled: Exposure to the spilled material may be severely irritating or toxic. Follow personal protective equipment recommendations found in Section 8 of this SDS. Personal protective equipment needs must be evaluated based on information provided on this sheet and the special circumstances created by the spill including; the material spilled, the quantity of the spill, the area in which the spill occurred, and the expertise of employees in the area responding to the spill. Never exceed any occupational exposure limits.
Prevent the spread of any spill to minimize harm to human health and the environment if safe to do so. Wear complete and proper personal protective equipment following the recommendation of Section 8 at a minimum. Dike with suitable absorbent material like granulated clay. Gather and store in a sealed container pending a waste disposal evaluation.

Section 7 Handling and Storage

Handling: Do not breathe dust/fume/gas/mist/vapors/spray. Avoid breathing dust/fume/gas/mist/vapors/spray. Wash thoroughly after handling. Do no eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Avoid release to the environment. Wear protective gloves/protective clothing/eye protection/face protection.

Storage: Store in a well-ventilated place. Keep container tightly closed. Store locked up. Keep container tightly closed in a cool, well-ventilated place.

Storage Code: Blue - Toxic. Store separately in a secured area.

Section 8 Protection Information

	ACGIH		OSHA PEL	
Chemical Name	**(TWA)**	**(STEL)**	**(TWA)**	**(STEL)**
Diphenylamine	10 mg/m3 TWA	N/A	N/A	N/A

Control Parameters

Engineering Measures: Local exhaust ventilation, process enclosures, or other engineering controls are necessary when handling or using this product to avoid overexposure.

Personal Protective Equipment (PPE): Lab coat, apron, eye wash, safety shower.

Respiratory Protection: Respiratory protection may be required to avoid overexposure when handling this product. General or local exhaust ventilation is the preferred means of protection. Use a respirator if general room ventilation is not available or sufficient to eliminate symptoms.

Respirator Type(s): NIOSH approved air purifying respirator with organic vapor cartridge.

Eye Protection: Wear chemical splash goggles when handling this product. Have an eye wash station available.

Skin Protection: Avoid skin contact by wearing chemically resistant gloves, an apron and other protective equipment depending upon conditions of use. Inspect gloves for chemical break-through and replace at regular intervals. Clean protective equipment regularly. Wash hands and other exposed areas with mild soap and water before eating, drinking, and when leaving work.

Gloves: Nitrile

Section 9 Physical Data

Formula: C12H11N
Molecular Weight: 169.23
Appearance: Off-white to tan Solid
Odor: Moderate Pleasant, Floral
Odor Threshold: No data available
pH: No data available
Melting Point: 53 C
Boiling Point: 302 C
Flash Point: 153 C
Flammable Limits in Air: No data available

Vapor Pressure: 1 mm @ 108.3 C
Evaporation Rate (BuAc=1): N/A
Vapor Density (Air=1): 5.82
Specific Gravity: 1.16
Solubility in Water: Practically Insoluble
Log Pow (calculated): 3.5
Autoignition Temperature: No data available
Decomposition Temperature: No data available
Viscosity: No data available
Percent Volatile by Volume: No data available

Section 10 Reactivity Data

Reactivity: Not generally reactive under normal conditions.

Chemical Stability: Stable under normal conditions.

Conditions to Avoid: Temperatures above the high flash point of this combustible material in combination with sparks, open flames, or other sources of ignition.
Incompatible Materials: Strong oxidizing agents
Hazardous Decomposition Products: Phenol, Nitrogen containing gases, Carbon dioxide, Carbon monoxide
Hazardous Polymerization: Will not occur

Section 11 Toxicity Data

Routes of Entry Inhalation, Ingestion, and Skin contact.
Symptoms (Acute): None Known, Respiratory disorders, Methemoglobinemia, Depressed Activity, Tachycardia, urinary symptoms
Delayed Effects: No data available

Acute Toxicity:

Chemical Name	CAS Number	Oral LD50	Dermal LD50	Inhalation LC50
Diphenylamine	122-39-4	Oral LD50 GUINEA PIG 300 mg/kg Oral LD50 Mouse 1230 mg/kg Oral LD50 Rat 1120 mg/kg	Not determined	Not determined

Carcinogenicity:

Chemical Name	CAS Number	IARC	NTP	OSHA
Diphenylamine	122-39-4	Not listed	Not listed	Not listed

Chronic Effects:
Mutagenicity: No evidence of a mutagenic effect.
Teratogenicity: Evidence of a teratogenic effect (birth defect).
Sensitization: No evidence of a sensitization effect.
Reproductive: No evidence of negative reproductive effects.
Target Organ Effects:
Acute: Blood, Cardiovascular system, Bladder
Chronic: Blood

Section 12 Ecological Data

Overview: Severe ecological hazard. This product may be toxic to plants and/or wildlife.
Mobility: This material is expected to have only slight mobility in soil. It absorbs strongly to most soil types.
Persistence: Adsorbs to soil.
Bioaccumulation: Bioconcentration may occur.
Degradability: Does not biodegrade readily.
Other Adverse Effects: No data

Chemical Name	CAS Number	Eco Toxicity
Diphenylamine	122-39-4	Aquatic EC50 (48h) Daphnia 1.69 - 2.46 MG/L 72 HR EC50 SCENEDESMUS SUBSPICATUS 1.5 MG/L

Section 13 Disposal Information

Disposal Methods: Dispose in accordance with all applicable Federal, State and Local regulations. Always contact a permitted waste disposer (TSD) to assure compliance.
Waste Disposal Code(s): Not Determined

Section 14 Transport Information

Ground - DOT Proper Shipping Name:
Not regulated for transport by US DOT.

Air - IATA Proper Shipping Name:
Not regulated for air transport by IATA.

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Section 15 Regulatory Information

TSCA Status: All components in this product are on the TSCA Inventory.

Chemical Name	CAS Number	§ 313 Name	§ 304 RQ	CERCLA RQ	§ 302 TPQ	CAA 112(2) TQ
Diphenylamine	122-39-4	Diphenylamine	No	No	No	No

Section 16 Additional Information

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The information provided in this (Material) Safety Data Sheet represents a compilation of data drawn directly from various sources available to us. Carolina Biological Supply makes no representation or guarantee as to the suitability of this information to a particular application of the substance covered in the (Material) Safety Data Sheet.

Glossary

ACGIH	American Conference of Governmental Industrial Hygienists	NTP	National Toxicology Program
CAS	Chemical Abstract Service Number	OSHA	Occupational Safety and Health Administration
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act	PEL	Permissible Exposure Limit
DOT	U.S. Department of Transportation	ppm	Parts per million
IARC	International Agency for Research on Cancer	RCRA	Resource Conservation and Recovery Act
N/A	Not Available	SARA	Superfund Amendments and Reauthorization Act
		TLV	Threshold Limit Value
		TSCA	Toxic Substances Control Act
		IDLH	Immediately dangerous to life and health