

Material Safety Data Sheet

Diphenylamine

ACC# 08100

Section 1 - Chemical Product and Company Identification

MSDS Name: Diphenylamine

Catalog Numbers: S80000, O2611 100, O2611 500, O2611-100, O2611-500, O2611100, O2611500

Synonyms: N-Phenylamine, Anilinobenzene, N-Phenylbenzeneamine, DPA

Company Identification:

Fisher Scientific

1 Reagent Lane

Fair Lawn, NJ 07410

For information, call: 201-796-7100

Emergency Number: 201-796-7100

For CHEMTREC assistance, call: 800-424-9300

For International CHEMTREC assistance, call: 703-527-3887

Section 2 - Composition, Information on Ingredients

CAS#	Chemical Name	Percent	EINECS/ELINCS
122-39-4	Diphenylamine	100.0	204-539-4

Hazard Symbols: T N

Risk Phrases: 23/24/25 33 50/53

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Appearance: colorless to grayish. **Caution!** May cause allergic skin reaction. May be absorbed through intact skin. May cause methemoglobinemia. Light sensitive. Causes eye and skin irritation. Causes digestive and respiratory tract irritation.

Target Organs: Kidneys, central nervous system, liver, red blood cells, bladder.

Potential Health Effects

Eye: Causes eye irritation.

Skin: Causes skin irritation. May cause skin sensitization, an allergic reaction, which becomes evident upon re-exposure to this material.

Ingestion: May cause irritation of the digestive tract. May cause effects similar to those of acute inhalation.

Inhalation: Inhalation of vapor may cause respiratory tract irritation. May cause methemoglobinemia, cyanosis, convulsions, tachycardia, dyspnea (labored breathing), and death. May cause adverse central nervous system effects including headache, convulsions, and possible death. May cause bladder injury and hypertension.

Chronic: Prolonged or repeated skin contact may cause dermatitis. May cause reproductive and fetal effects. There is a danger of cumulative effects.

Section 4 - First Aid Measures

Eyes: Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.

Skin: Get medical aid. Flush skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Destroy contaminated shoes.

Ingestion: Never give anything by mouth to an unconscious person. Get medical aid immediately. Do NOT induce vomiting. If conscious and alert, rinse mouth and drink 2-4 cupfuls of milk or water.

Inhalation: Remove from exposure to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.

Notes to Physician: Absorption of this product into the body may cause cyanosis (bluish discoloration of skin due to deficient oxygenation of the blood). Moderate degrees of cyanosis need to be treated only by supportive measures: bed rest and oxygen inhalation. For methemoglobinemia, administer oxygen alone or with Methylene blue depending on the methemoglobinemia concentration in the blood. Cleansing of the entire contaminated area of the body is of utmost importance.

Section 5 - Fire Fighting Measures

General Information: As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. This material in sufficient quantity and reduced particle size is capable of creating a dust explosion.

Extinguishing Media: Water or foam may cause frothing. In case of fire, use carbon dioxide, dry chemical powder or appropriate foam.

Section 6 - Accidental Release Measures

General Information: Use proper personal protective equipment as indicated in

Section 8.

Spills/Leaks: Vacuum or sweep up material and place into a suitable disposal container. Clean up spills immediately, observing precautions in the Protective Equipment section. Avoid generating dusty conditions. Provide ventilation.

Section 7 - Handling and Storage

Handling: Remove contaminated clothing and wash before reuse. Use with adequate ventilation. Avoid contact with eyes, skin, and clothing. Do not ingest or inhale. Store protected from light.

Storage: Keep away from sources of ignition. Do not store in direct sunlight. Store in a tightly closed container. Keep from contact with oxidizing materials. Store in a cool, dry, well-ventilated area away from incompatible substances. Store protected from light.

Section 8 - Exposure Controls, Personal Protection

Engineering Controls: Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits.

Exposure Limits

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Diphenylamine	10 mg/m ³ TWA	10 mg/m ³ TWA	none listed

OSHA Vacated PELs: Diphenylamine: 10 mg/m³ TWA

Personal Protective Equipment

Eyes: Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin: Wear appropriate protective gloves to prevent skin exposure.

Clothing: Wear appropriate protective clothing to prevent skin exposure.

Respirators: Follow the OSHA respirator regulations found in 29CFR 1910.134 or European Standard EN 149. Always use a NIOSH or European Standard EN 149 approved respirator when necessary.

Section 9 - Physical and Chemical Properties

Physical State: Solid

Appearance: colorless to grayish

Odor: floral-like
pH: Not available.
Vapor Pressure: 1 mm Hg @ 108 C
Vapor Density: 5.82
Evaporation Rate: Negligible.
Viscosity: Not available.
Boiling Point: 576 deg F
Freezing/Melting Point: 129 - 131F
Autoignition Temperature: 634 deg C (1,173.20 deg F)
Flash Point: 153 deg C (307.40 deg F)
Decomposition Temperature: Not available.
NFPA Rating: (estimated) Health: 3; Flammability: 1; Reactivity: 0
Explosion Limits, Lower: Not available.
Upper: Not available.
Solubility: Negligible in water.
Specific Gravity/Density: 1.160
Molecular Formula: C₁₂H₁₁N
Molecular Weight: 169.0837

Section 10 - Stability and Reactivity

Chemical Stability: Stable.
Conditions to Avoid: Incompatible materials, light, ignition sources, excess heat.
Incompatibilities with Other Materials: Oxidizing agents, strong acids, isocyanates, hexachloromelamine, organic anhydrides, aldehydes, trichloromelamine.
Hazardous Decomposition Products: Nitrogen oxides, carbon monoxide, carbon dioxide.
Hazardous Polymerization: Has not been reported.

Section 11 - Toxicological Information

RTECS#:
CAS# 122-39-4: JJ7800000
LD50/LC50:
CAS# 122-39-4:
Oral, mouse: LD50 = 1230 mg/kg;
Oral, rat: LD50 = 1120 mg/kg; <BR.
Carcinogenicity:
CAS# 122-39-4:
ACGIH: A4 - Not Classifiable as a Human Carcinogen
Epidemiology: No information available.
Teratogenicity: No information available.
Reproductive Effects: No information available.
Neurotoxicity: No information available.

Mutagenicity: No information available.

Other Studies: No data available.

Section 12 - Ecological Information

Ecotoxicity: Bacteria: Phytobacterium phosphoreum: EC50 =4.77 mg/L; 5,15,30 minutes; Microtox test

Section 13 - Disposal Considerations

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

RCRA P-Series: None listed.

RCRA U-Series: None listed.

Section 14 - Transport Information

	US DOT	IATA	RID/ADR	IMO	Canada TDG
Shipping Name:	No information available.				No information available.
Hazard Class:					
UN Number:					
Packing Group:					

Section 15 - Regulatory Information

US FEDERAL

TSCA

CAS# 122-39-4 is listed on the TSCA inventory.

Health & Safety Reporting List

None of the chemicals are on the Health & Safety Reporting List.

Chemical Test Rules

None of the chemicals in this product are under a Chemical Test Rule.

Section 12b

None of the chemicals are listed under TSCA Section 12b.

TSCA Significant New Use Rule

None of the chemicals in this material have a SNUR under TSCA.

SARA

Section 302 (RQ)

CAS# 122-39-4: (This CAS Number is listed in Appendix A but is NOT listed in Table 302.4)

Section 302 (TPQ)

None of the chemicals in this product have a TPQ.

SARA Codes

CAS # 122-39-4: acute, chronic.

Section 313

This material contains Diphenylamine (CAS# 122-39-4, 100 0%), which is subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR Part 373.

Clean Air Act:

This material does not contain any hazardous air pollutants. This material does not contain any Class 1 Ozone depleters. This material does not contain any Class 2 Ozone depleters.

Clean Water Act:

None of the chemicals in this product are listed as Hazardous Substances under the CWA. None of the chemicals in this product are listed as Priority Pollutants under the CWA. None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

OSHA:

None of the chemicals in this product are considered highly hazardous by OSHA.

STATE

CAS# 122-39-4 can be found on the following state right to know lists: California, New Jersey, Florida, Pennsylvania, Minnesota, Massachusetts.

California No Significant Risk Level: None of the chemicals in this product are listed.

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols:

T N

Risk Phrases:

R 23/24/25 Toxic by inhalation, in contact with skin and if swallowed.

R 33 Danger of cumulative effects.

R 50/53 Very toxic to aquatic organisms; may cause long-term adverse effects in the aquatic environment.

Safety Phrases:

S 28 After contact with skin, wash immediately with...

S 36/37 Wear suitable protective clothing and gloves.

S 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

S 60 This material and/or its container must be disposed of as hazardous waste.

S 61 Avoid release to the environment. Refer to special instructions/Safety data sheets.

WGK (Water Danger/Protection)

CAS# 122-39-4: 3

Canada

CAS# 122-39-4 is listed on Canada's DSL List. CAS# 122-39-4 is listed on Canada's DSL List.

This product has a WHMIS classification of D2B.

CAS# 122-39-4 is listed on Canada's Ingredient Disclosure List.

Exposure Limits

CAS# 122-39-4: OEL-AUSTRALIA:TWA 10 mg/m³ OEL-BELGIUM:TWA 10 mg/m³ OEL-CZECHOSLOVAKIA:TWA 5 mg/m³;STEL 10 mg/m³ JAN9 OEL-DENMARK:TWA 5 mg/m³ OEL-FRANCE:TWA 10 mg/m³ OEL-THE NETHERLANDS:TWA 10 mg/m³ OEL-SWITZERLAND:TWA 10 mg/m³ OEL-UNITED KINGDOM:TWA 10 mg/m³;STEL 20 mg/m

3 OEL IN BULGARIA, COLOMBIA, JORDAN, KOREA check ACGIH TLV OEL IN NEW ZEALAND, SINGAPORE, VIETNAM check ACGI TLV

Section 16 - Additional Information

MSDS Creation Date: 6/16/1999

Revision #1 Date: 8/02/2000

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall Fisher be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if Fisher has been advised of the possibility of such damages.