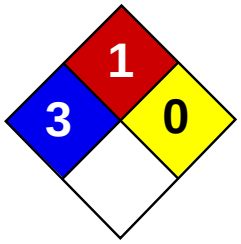

Health	2
Fire	1
Reactivity	0
Personal Protection	E

Material Safety Data Sheet
Diphenylamine MSDS

Section 1: Chemical Product and Company Identification

Product Name: Diphenylamine

Catalog Codes: SLD2347

CAS#: 122-39-4

RTECS: JJ7800000

TSCA: TSCA 8(b) inventory: Diphenylamine

CI#: Not available.

Synonym: DFA, Deccoscald 282, Naugalube 428 L, Scaldip, Shield DPA; Aniline, N-Phenyl-; Anilinobenzene; Benzenamine, N-phenyl-; Benzene, anilino-; N,N-Diphenylamine; N-Phenylaniline; N-Phenylbenzenamine

Chemical Name: Diphenylamine

Chemical Formula: C12-H11-N

Contact Information:

Sciencelab.com, Inc.
14025 Smith Rd.
Houston, Texas 77396

US Sales: **1-800-901-7247**
International Sales: **1-281-441-4400**

Order Online: ScienceLab.com

CHEMTREC (24HR Emergency Telephone), call: 1-800-424-9300

International CHEMTREC, call: 1-703-527-3887

For non-emergency assistance, call: 1-281-441-4400

Section 2: Composition and Information on Ingredients

Composition:

Name	CAS #	% by Weight
Diphenylamine	122-39-4	100

Toxicological Data on Ingredients: Diphenylamine: ORAL (LD50): Acute: 1120 mg/kg [Rat]. 1230 mg/kg [Mouse]. 300 mg/kg [Guinea pig].

Section 3: Hazards Identification

Potential Acute Health Effects:
Hazardous in case of skin contact (irritant, permeator), of eye contact (irritant), of ingestion, of inhalation. Severe over-exposure can result in death.

Potential Chronic Health Effects:
CARCINOGENIC EFFECTS: Not available. MUTAGENIC EFFECTS: Not available. TERATOGENIC EFFECTS: Not available. DEVELOPMENTAL TOXICITY: Not available. The substance may be toxic to blood, kidneys, liver, bladder. Repeated or prolonged exposure to the substance can produce target organs damage. Repeated exposure to a highly toxic material may produce general deterioration of health by an accumulation in one or many human organs.

Section 4: First Aid Measures

Eye Contact:
Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention.

Skin Contact:
In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Cover the irritated skin with an emollient. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention immediately.

Serious Skin Contact:
Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek immediate medical attention.

Inhalation:
If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.

Serious Inhalation: Not available.

Ingestion:
If swallowed, do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.

Serious Ingestion: Not available.

Section 5: Fire and Explosion Data

Flammability of the Product: May be combustible at high temperature.

Auto-Ignition Temperature: 634°C (1173.2°F)

Flash Points: CLOSED CUP: 153°C (307.4°F).

Flammable Limits: Not available.

Products of Combustion: These products are carbon oxides (CO, CO2).

Fire Hazards in Presence of Various Substances:
Slightly flammable to flammable in presence of open flames and sparks, of heat. Non-flammable in presence of shocks.

Explosion Hazards in Presence of Various Substances:
Slightly explosive in presence of open flames and sparks. Non-explosive in presence of shocks.

Fire Fighting Media and Instructions:
SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use water spray, fog or foam. Do not use water jet.

Special Remarks on Fire Hazards:
When heated to decomposition it emits highly toxic fumes of Nitrogen oxides As with most organic solids, fire is possible at elevated temperatures

Special Remarks on Explosion Hazards:
Fine dust dispersed in air in sufficient concentrations, and in the presences of an ignition source is a potential dust explosion hazard.

Section 6: Accidental Release Measures

Small Spill:
Use appropriate tools to put the spilled solid in a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority requirements.

Large Spill:
Poisonous solid. Stop leak if without risk. Do not get water inside container. Do not touch spilled material. Use water spray to reduce vapors. Prevent entry into sewers, basements or confined areas; dike if needed. Eliminate all ignition sources. Call for

assistance on disposal. Finish cleaning by spreading water on the contaminated surface and allow to evacuate through the sanitary system. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

Section 7: Handling and Storage

Precautions:
Keep locked up.. Keep away from heat. Keep away from sources of ignition. Empty containers pose a fire risk, evaporate the residue under a fume hood. Ground all equipment containing material. Do not ingest. Do not breathe dust. Wear suitable protective clothing. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes. Keep away from incompatibles such as oxidizing agents.

Storage: Keep container tightly closed. Keep container in a cool, well-ventilated area.

Section 8: Exposure Controls/Personal Protection

Engineering Controls:
Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

Personal Protection:
Splash goggles. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

Personal Protection in Case of a Large Spill:
Splash goggles. Full suit. Dust respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Exposure Limits:
TWA: 10 (mg/m3) from ACGIH (TLV) [United States] TWA: 10 (mg/m3) from OSHA (PEL) [United States] TWA: 10 (mg/m3) from NIOSH [United States] TWA: 10 STEL: 20 (mg/m3) [United Kingdom (UK)]Consult local authorities for acceptable exposure limits.

Section 9: Physical and Chemical Properties

Physical state and appearance: Solid. (Crystals solid.)

Odor: Floral.

Taste: Not available.

Molecular Weight: 169.23 g/mole

Color:
Colorless. White. Off-white. Tan. Amber. Brown. White to yellowish.

pH (1% soln/water): Not applicable.

Boiling Point: 302°C (575.6°F)

Melting Point: 53°C (127.4°F) - 54 C

Critical Temperature: Not available.

Specific Gravity: Density: 1.16 (Water = 1)

Vapor Pressure: 1 mmHg at 108 C

Vapor Density: 5.82 (Air = 1)

Volatility: Not available.

Odor Threshold: Not available.

Water/Oil Dist. Coeff.: Not available.

Ionicity (in Water): Not available.

Dispersion Properties: See solubility in water, diethyl ether, acetone.

Solubility:
Easily soluble in diethyl ether, acetone. Insoluble in cold water, hot water. Freely soluble in benzene, glacial acetic acid, carbon disulfide. I g dissolves in 2.2 ml alcohol. 1 g dissolves in 4.5 ml of propyl alcohol. Very soluble in ethyl acetate, carbon tetrachloride, pyridine. Soluble in petroleum ether

Section 10: Stability and Reactivity Data

Stability: The product is stable.

Instability Temperature: Not available.

Conditions of Instability: Excess heat, ignition sources, incompatible materials, light, air.

Incompatibility with various substances: Reactive with oxidizing agents.

Corrosivity: Non-corrosive in presence of glass.

Special Remarks on Reactivity:
Incompatible with hexachloromelamine, and trichloromelamine. Air and light sensitive. Discolors in light. Crystals turn blue in air. Protect from light.

Special Remarks on Corrosivity: Not available.

Polymerization: Will not occur.

Section 11: Toxicological Information

Routes of Entry: Absorbed through skin. Dermal contact. Inhalation. Ingestion.

Toxicity to Animals: Acute oral toxicity (LD50): 300 mg/kg [Guinea pig].

Chronic Effects on Humans: May cause damage to the following organs: blood, kidneys, liver, bladder.

Other Toxic Effects on Humans: Hazardous in case of skin contact (irritant, permeator), of ingestion, of inhalation.

Special Remarks on Toxicity to Animals: Not available.

Special Remarks on Chronic Effects on Humans: May cause birth defects (teratogenic) based on animal test data

Special Remarks on other Toxic Effects on Humans:
Acute Potential Health Effects: Skin: Causes skin irritation. It is absorbed through intact skin. Eyes: Causes eye irritation. Inhalation: May cause respiratory tract irritation with coughing and sneezing. It is absorbed through the respiratory tract and may cause effects similar to those of acute ingestion. Ingestion: May cause digestive tract irritation. It is readily abosorbed orally. It may affect behavior/central nervous system (somnolence), respiration (respiratory depression, dyspnea, cyanosis), blood (methemoglobinemia, anemia). Chronic Potential Health Effects: Ingestion: Prolonged or repeated ingestion may affect urinary system (bladder, kidneys - renal failure, acute tubular necrosis, Hematuria, Proteinuria), metabolism (weight loss, anorexia), liver, cardiovascular system (tachycardia, hypertension), spleen. Skin: Prolonged or repeated skin contact may cause dermatitis, an allergic skin reaction

Section 12: Ecological Information

Ecotoxicity: Not available.

BOD5 and COD: Not available.

Products of Biodegradation:
Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

Toxicity of the Products of Biodegradation: The products of degradation are less toxic than the product itself.

Special Remarks on the Products of Biodegradation: Not available.

Section 13: Disposal Considerations

Waste Disposal:
Waste must be disposed of in accordance with federal, state and local environmental control regulations.

Section 14: Transport Information

DOT Classification: Not a DOT controlled material (United States).

Identification: Not applicable.

Special Provisions for Transport: Not applicable.

Section 15: Other Regulatory Information

Federal and State Regulations:
Illinois toxic substances disclosure to employee act: Diphenylamine Rhode Island RTK hazardous substances: Diphenylamine Pennsylvania RTK: Diphenylamine Minnesota: Diphenylamine Massachusetts RTK: Diphenylamine Massachusetts spill list: Diphenylamine New Jersey: Diphenylamine New Jersey spill list: Diphenylamine California Director's list of Hazardous Substances: Diphenylamine TSCA 8(b) inventory: Diphenylamine TSCA 4(a) proposed test rules: Diphenylamine TSCA 8(a) PAIR: Diphenylamine TSCA 8(d) H and S data reporting: Diphenylamine: Effective date: 3/11/94; Sunset date: 6/30/98 SARA 313 toxic chemical notification and release reporting: Diphenylamine CERCLA: Hazardous substances.: Diphenylamine

Other Regulations:
OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200). EINECS: This product is on the European Inventory of Existing Commercial Chemical Substances.

Other Classifications:

WHMIS (Canada): Not controlled under WHMIS (Canada).

DSCL (EEC):
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. S28- After contact with skin, wash immediately with plenty of [***] 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.

HMIS (U.S.A.):

Health Hazard: 2

Fire Hazard: 1

Reactivity: 0

Personal Protection: E

National Fire Protection Association (U.S.A.):

Health: 3

Flammability: 1

Reactivity: 0

Specific hazard:

Protective Equipment:
Gloves. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Splash goggles.

Section 16: Other Information

References: Not available.

Other Special Considerations: Not available.

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