Material Safety Data Sheet  
Diphenylamine, 1%

Section 1 - Chemical Product and Company Identification

MSDS Name:  
Diphenylamine, 1% W/V

Catalog Numbers:  
Q05631

Synonyms:  
Diphenylamine, 1% in sulfuric acid

Company Identification:  
Qorpak  
1195 Washington Pike  
Bridgeville, PA 15017

Company Phone Number:  
(412) 257-3100

Emergency Phone Number:  
(800) 424-9300

CHEMTREC Phone Number:  
(800) 424-9300

Section 2 - Composition, Information on Ingredients

<table>
<thead>
<tr>
<th>CAS#</th>
<th>Chemical Name</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>122-39-4</td>
<td>Diphenylamine</td>
<td>1</td>
</tr>
<tr>
<td>7664-93-9</td>
<td>Sulfuric acid, 96%</td>
<td>balance</td>
</tr>
</tbody>
</table>

Section 3 - Hazards Identification

Emergency Overview

Appearance: Clear colorless liquid

Caution! May cause eye and skin irritation. May cause digestive tract irritation.

Target Organs: none known.

Potential Health Effects

Eye:  
Causes eye irritation and burns.

Skin:  
Causes skin irritation and burns.

Ingestion:  
Causes irritation and burning of the digestive tract.

Inhalation:  
Causes respiratory tract irritation and burning.
Chronic:
Prolonged or repeated skin contact causes dermatitis and burning if skin and eyes. Sulfuric acid -
repeated exposure to mist may cause chronic tracheobronchitis, erosion and discoloration of teeth.
May cause conjunctivitis and lacrimation.

Section 4 - First Aid Measures

Eyes:
Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower lids
until no evidence of chemical remains. Get medical aid at once. Cover burns with loose sterile non-
medicated bandages.

Skin:
Get medical aid. Immediately flush skin with plenty of soap and water for at least 15 minutes.
Remove contaminated clothing and shoes. Cover burns with a dry sterile bandage (secure, not tight).

Ingestion:
Do NOT induce vomiting. Get medical aid at once. Give conscious victim large quantities of water
to dilute acid. Give oxygen if respiration is depressed.

Inhalation:
Give artificial respiration if necessary. Get medical aid. Keep victim warm, at rest. Move victim to
fresh air.

Notes to Physician:
Treat symptomatically and supportively.

Section 5 - Fire Fighting Measures

General Information:
Negligible fire and explosion hazard when exposed to heat or flame. Move container if possible,
cool with fog or spray. Do not scatter contents with excess water.

Extinguising Media:
For small fires, use dry chemical, carbon dioxide, water spray or alcohol-resistant foam.

Autoignition Temperature:
No information found.

Flash Point:
No information found.

NFPA Rating:
CAS# 122-39-4: H-2   F-1   R-0
CAS# 7664-93-9: H-3   F-0   R-2

Explosion Limits:
Lower: Upper:

Section 6 - Accidental Release Measures

General Information:
Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks:
Neutralize with sodium bicarbonate, soda ash and absorbent (vermiculite, sand, fuller's earth) and place in plastic bags for later disposal.

Section 7 - Handling and Storage

Handling:  
Wash thoroughly after handling. Avoid prolonged or repeated contact with skin.

Storage:  
Store capped at room temperature.

Section 8 - Exposure Controls, Personal Protection

Engineering Controls:  
Local exhaust ventilation may be necessary to control any air contaminants to within their TLVs during the use of this product.

Exposure Limits:

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>ACGIH</th>
<th>NIOSH</th>
<th>OSHA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diphenylamine</td>
<td>10mg/m3</td>
<td>10mg/m3</td>
<td></td>
</tr>
<tr>
<td>Sulfuric acid</td>
<td>1 mg/m3 TWA; 3 mg/m3</td>
<td>1 mg/m3 TWA</td>
<td>1 mg/m3 TWA</td>
</tr>
</tbody>
</table>

OSHA Vacated PELs:  
Sulfuric acid: 1 mg/m3 TWA

Personal Protective Equipment

Eyes:  
Do not wear contact lenses when working with chemicals. An eye wash fountain should be available in the immediate work area. Wear splash-proof safety goggles.

Skin:  
Wear acid protective clothing and gloves.

Clothing:  
Wear acid protective clothing and gloves.

Respirators:  
Sulfuric acid-- 50 mg/M3 - gas mask with acid gas canister and high efficiency particulate filter. Self contained breathing apparatus with full facepiece. 100 mg/M3 - Type C supplied-air respirator with full facepiece, helmet or hood operated in continuous-flow mode.

Section 9 - Physical and Chemical Properties

Physical State:  Clear liquid  
Color:  Clear colorless  
Odor:  odorless  
\( \text{pH} \):  acidic  
Vapor Pressure:  No information found.
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Vapor Density: No information found.
Evaporation Rate: >1 (ether=1)
Viscosity: No information found.
Boiling Point: 340°C
Freezing/Melting Point: 10.4°C
Decomposition Temperature: No information found.
Solubility in water: Soluble.
Specific Gravity/Density: 1.84
Molecular Formula: No information found.
Molecular Weight: No information found.

Section 10 - Stability and Reactivity

Chemical Stability:
Stable under normal temperatures and pressures.

Conditions to Avoid:
Sulfuric acid reacts violently with water.

Incompatibilities with Other Materials:
Water, metals, strong oxidizing agents, alkalies.

Hazardous Decomposition Products:
Oxides of nitrogen, oxides of sulfur, oxides of carbon.

Hazardous Polymerization:
Has not been reported

Section 11 - Toxicological Information

RTECS:
CAS# 122-39-4: JJ7800000
CAS# 7664-93-9: WS5600000.

LD50/LC50:
CAS# 122-39-4:
Oral, mouse: LD50 = 1750 mg/kg
Oral, rat: LD50 = 2 g/kg
CAS# 7664-93-9:
Inhalation, mouse: LC50 = 320 mg/m3/2H
Inhalation, rat: LC50 = 510 mg/m3/2H
Oral, rat: LD50 = 2140 mg/kg.

Carcinogenicity:
CAS# 122-39-4
ACGIH: A4 Not classifiable as a human carcinogen.
CAS# 7664-93-9
ACGIH: A2 - Suspected Human Carcinogen (contained in strong inorganic acid mists)
California: Not listed.
NIOSH: Not listed.
NTP: Not listed.
OSHA: Select carcinogen
IARC: Group 1 carcinogen

Epidemiology:
No data available
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**Teratogenicity:**
Specific developmental abnormalities: inhalation, rabbit: TCL0 = 20mg/m3/7hr (female 6-18 days after conception)

**Reproductive:**
No data available.

**Mutagenicity:**
No data available.

**Neurotoxicity:**
No data available.

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**Section 12 - Ecological Information**

CAS # 122-39-4
Bacteria: phytobacterium phosphoreum: EC50 = 4.77 mg/L; 5,15,30 minutes: microtox test.
CAS # 7664-93-9
Fish: bluegill/sunfish: 49 mg/L; 48 hr; TLm (tap water @ 20C) fish: bluegill/sunfish: 24.5 ppm: 48hr; TLm (fresh water)

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**Section 13 - Disposal Considerations**

Dispose of in accordance with Federal, State, and local regulations.

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**Section 14 - Transport Information**

**US DOT**

Shipping Name: Corrosive liquid, acidic, inorganic, n.o.s. (Sulfuric acid)
Hazard Class: 8
UN Number: UN3264
Packing Group: PG II

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**Section 15 - Regulatory Information**

**US Federal**

**TSCA:**
CAS# 122-39-4 is listed on the TSCA Inventory
CAS# 7664-93-9 is listed on the TSCA Inventory.

**SARA Reportable Quantities (RQ):**
CAS# 122-39-4: listed in Appendix A, but not in Section 302 (TPQ).
CAS# 7664-93-9: final RQ = 1000 pounds (454 kg)

**CERCLA/SARA Section 313:**
This material contains Sulfuric acid (CAS# 7664-93-9, 1.5%), which is subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR Part 373.

**OSHA - Highly Hazardous:**
None of the components are on this list.
US State

State Right to Know:
Diphenylamine and sulfuric acid can be found on the following state Right-to-Know lists:
California, New Jersey, Florida, Pennsylvania, Minnesota, Massachusetts.

California Regulations:

European/International Regulations

Canadian DSL/NDSL:
CAS # 122-39-4 is listed on Canada’s DSL List.
CAS # 7664-93-9 is listed on Canada's DSL List.

Canada Ingredient Disclosure List:
CAS# 122-39-4 is not listed on Canada's Ingredient Disclosure List.
CAS# 7664-93-9 is listed on Canada's Ingredient Disclosure List.

Section 16 - Other Information

MSDS Creation Date: June 19, 2006
Revision Date: June 19, 2006

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