



**ALDON CORPORATION**

# MATERIAL SAFETY DATA SHEET

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MSDS No. DD 47  
Effective Date February 20, 1999

## SECTION I NAME 24 HOUR EMERGENCY ASSISTANCE

<b>Product</b>	DIPHENYLAMINE OXIDATION-REDUCTION IND. SOL'N.		
<b>Chemical Synonyms</b>	Diphenylamine Sulfuric Acid Solution		
<b>Formula</b>	Mixture. See Section II.		
<b>Unit Size</b>	up to 4 Lt.		
<b>C.A.S. No.</b>	Mixture. See Section II.		

0  
3 2  
W

**CHEMTREC**  
800-424-9300  
Day 716-226-6177

Health	3
Fire	0
Reactivity	4

**NFPA HAZARD RATING**

LEAST	SLIGHT	MODERATE	HIGH	EXTREME
0	1	2	3	4

**HMIS \***

HEALTH	FLAMMABILITY	REACTIVITY
3	0	4

## SECTION II INGREDIENTS OF MIXTURES

Principal Component(s)	%	TLV Units
Diphenylamine: (CAS No. 122-39-4)	0.73%	10 mg/m <sup>3</sup> (ACGIH).
Sulfuric Acid: (CAS No. 7664-93-9)	71%	1 mg/m <sup>3</sup> (ACGIH).
Water: (CAS No. 7732-18-5)	28.27%	

**DANGER! CORROSIVE! CAUSES SEVERE BURNS TO SKIN, EYES AND MUCOUS MEMBRANES.**

## SECTION III PHYSICAL DATA

Melting Point (°F)	Data not listed.	Specific Gravity (H <sub>2</sub> O = 1)	1.698 at 20°C
Boiling Point (°F)	>100°C (212°F) but <290°C (554°F)	Percent Volatile by Volume (%)	28.27%
Vapor Pressure (mm Hg)	Data not listed.	Evaporation Rate (=1)	Data not listed.
Vapor Density (Air=1)	Data not listed.		
Solubility in Water	Complete.		
Appearance & Odor	Dark blue, clear liquid; no odor.		

## SECTION IV FIRE AND EXPLOSION HAZARD DATA

<b>Flash Point (Method Used)</b>	Not flammable.	<b>Flammable Limits in Air % by Volume</b>	NA	Lower	Upper
<b>Extinguisher Media</b>	Water spray * ; foam; carbon dioxide (CO <sub>2</sub> ); dry chemical (ABC).				

### SPECIAL FIREFIGHTING PROCEDURES

Fires involving small amounts of combustibles may be smothered with suitable dry chemical. \* Use water on combustibles burning in vicinity of this material but use care as water applied directly to this acid results in evolution of heat and causes spattering. In fire conditions, wear a NIOSH/MSHA-approved self-contained breathing apparatus and full protective clothing to prevent contact with skin and eyes.

(1996 EMERGENCY RESPONSE GUIDEBOOK, DOT P 5800.7, GUIDE PAGE NO. 137)

### UNUSUAL FIRE AND EXPLOSION HAZARDS

Not flammable but highly reactive and capable of igniting finely divided combustible materials on contact. Reacts violently with water and organic materials with evolution of heat. Extremely hazardous in contact with many materials, particularly carbides, chlorates, fulminates, nitrates, picrates, powdered metals and other combustible materials. Attacks many metals, releasing hydrogen.

D.O.T. **Sulfuric acid, (Solution), 8, UN 1830, PG II**

Approved by U.S. Department of Labor "essentially similar" to form OSHA-20

## SECTION V HEALTH HAZARD DATA

DD 47

**Threshold Limited Value** None established for this mixture.

**Effects of Overexposure** **INHALATION:** Fumes can cause damage to nasal and respiratory passages. **EYES:** Causes severe damage and even blindness very rapidly. **SKIN:** Causes severe, deep wounds to tissue; very corrosive effect, possible deep ulcerations. **INGESTION:** Results in severe damage to mucous membranes and deep tissue.

**Emergency and First Aid Procedures** **SKIN:** Immediately flush exposed area with water for at least 15 minutes. If irritation develops or persists, get medical attention. **EYES:** Immediately flush with large amounts of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get immediate medical attention. **INHALATION:** Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call physician immediately. **INGESTION: DO NOT INDUCE VOMITING.** If conscious, drink large amounts of water. Follow with milk of magnesia, vegetable oil, or beaten eggs. Call physician immediately. Never give anything by mouth to an unconscious person.

## SECTION VI REACTIVITY DATA

<b>Stability</b>	<b>Unstable</b>		<b>Conditions to Avoid</b> Do not add water or other liquids to the acid solution.
	<b>Stable</b>	X	

**Incompatibility (Materials to Avoid)** Extremely hazardous in contact with many materials, particularly carbides, chlorates, fulminates, nitrates, picrates, powdered metals and other combustible materials. Attacks many metals, releasing hydrogen.

**Hazardous Decomposition Products** When heated to decomposition, may release sulfur dioxide, oxides of nitrogen and carbon.

<b>Hazardous Polymerization</b>	<b>Conditions to Avoid</b>
<b>May Occur</b>	<b>Will Not Occur</b>
	X

Not applicable.

## SECTION VII SPILL OR LEAK PROCEDURES

**Steps to be taken in case material is released or spilled** Prevent contact with this acid solution. Minor leaks or spills can be diluted with plenty of water and neutralized with soda ash or lime. If water is not available, cover contaminated area with sand, ashes, or gravel and neutralize with soda ash or lime.

**Waste Disposal Method** Discharge, treatment, or disposal may be subject to Federal, State or Local laws. These disposal guidelines are intended for the disposal of catalog-size quantities only. Using extreme care and wearing full safety equipment neutralize the acid solution using sodium bicarbonate, soda ash or lime and flush to sewer with copious amounts of water.

## SECTION VIII SPECIAL PROTECTION INFORMATION

**Respiration Protection (Specify Type)** None needed in normal laboratory handling. If misty conditions prevail, work in ventilation hood or wear a NIOSH/MSHA-approved full head covering respirator fixed with goggles.

<b>Ventilation</b>	<b>Local Exhaust</b>	If misty conditions.	<b>Special</b>	No.
	<b>Mechanical (General)</b>	If misty conditions.	<b>Other</b>	No.

<b>Protective Gloves</b>	Vinyl, Neoprene.	<b>Eye Protection</b>	Chemical safety glasses.
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**Other Protective Equipment** Goggles; lab coat and apron; proper gloves; ventilation hood; safety shower; eye wash station.

## SECTION IX SPECIAL PRECAUTIONS

**Precautions to be Taken in Handling & Storing** Keep container tightly closed when not in use. Absorbs moisture from the air. Store in a cool, dry, well-ventilated area away from the incompatible materials listed above. Keep container tightly closed when not in use.

**Other Precautions** Read label on container before using. Do not wear contact lenses when working with chemicals. Never add water to this acid solution. Always add this acid solution to water. Addition of water may release heat which could result in splattering. Always add slowly and in small amounts. Never use hot water. Remove and wash contaminated clothing.

For laboratory use only. Not for drug, food or household use. Keep out of reach of children.

<b>Revision</b> No. 4	<b>Date</b> 2/20/99	<b>Approved</b> Michael Raszeja	<b>Chemical Safety Coordinator</b> MR
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