



**ALDON CORPORATION**

# MATERIAL SAFETY DATA SHEET

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MSDS No. PP 231  
Effective Date April 13, 1999

## SECTION V HEALTH HAZARD DATA

PP 231

**Threshold Limited Value** TLV/TWA: 1 ppm, 6.1 mg/m<sup>3</sup> (ACGIH 1992-93). STEL: 24 mg/m<sup>3</sup> 4 ppm.  
RTECS No. T13150000 Toxicity: Oral LD50 (Rat) is 4020 mg/kg.

**Effects of Overexposure** **TARGET ORGANS AFFECTED:** Respiratory system. **INGESTION:** Moderately toxic. **INHALATION:** Vapor, fume or dust is a primary irritant of mucous membranes and upper respiratory tract, resulting in coughing and sneezing with burning sensation in the nose and throat (> 4 ppm). Can cause sensitization. **SKIN OR EYES:** Contact with solid or vapors can cause severe irritation or burns.

**Emergency and First Aid Procedures** **INHALATION:** Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Spray or gargle with water to help relieve nasal or throat irritation. Get immediate medical attention. **INGESTION:** If swallowed, if conscious, give one or two glasses of water to drink. Call physician immediately. Never give anything by mouth to an unconscious person. **SKIN:** Remove contaminated clothing. Flush contact area with water, then wash with mild soap and water. If irritation persists, get medical attention. **EYES:** Flush thoroughly with water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get immediate medical attention.

## SECTION VI REACTIVITY DATA

**Stability** **Unstable** **Conditions to Avoid** Stable under ordinary conditions of use and storage. Moisture. Excessive heat and temperature.

**Incompatibility (Materials to Avoid)** Can react with oxidizing materials - Nitric acid. Reacts with moisture to give phthalic acid, which can corrode metals liberating hydrogen. Strong bases, strong acids, alkali metals.

**Hazardous Decomposition Products** Sublimation occurs at 295°C - carbon dioxide and/or carbon monoxide.

**Hazardous Polymerization** **Conditions to Avoid** Not applicable.

## SECTION VII SPILL OR LEAK PROCEDURES

**Steps to be taken in case material is released or spilled** Ventilate area of leak or spill. Clean-up personnel may require protective clothing and respiratory protection from dust. Eliminate all sources of ignition. Cover material with soda ash or sodium bicarbonate. Scoop up the mixture and place in a suitable container for proper disposal.

**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. Material may be packaged in paper and burned in an incinerator or dissolved in a more flammable solvent and injected at base of incinerator equipped with scrubber system and afterburner. If at-site treatment or disposal facilities are not available, contract with a licensed waste disposal service.

## SECTION VIII SPECIAL PROTECTION INFORMATION

**Respiration Protection (Specify Type)** In the laboratory, work in fume hood. If dusty conditions prevail, wear a NIOSH/MSHA-approved dust mask or respirator fixed with organic vapor cartridge and dust cover.

**Ventilation** **Local Exhaust** Yes (Recommended). **Special** No. **Mechanical (General)** Yes. **Other** Adequate to maintain below exposure limit.

**Protective Gloves** Rubber, Neoprene. **Eye Protection** Chemical safety glasses.

**Other Protective Equipment** Lab coat, goggles, proper gloves, eye wash station, ventilation hood, quick-drench facilities.

## SECTION IX SPECIAL PRECAUTIONS

**Precautions to be Taken in Handling & Storing** Keep container tightly closed when not in use. Store in a cool, dry, well-ventilated area away from fire hazards, heat and open flame. Treat as a combustible material. Wash thoroughly after handling.

**Other Precautions** Read label on container before using. Do not wear contact lenses when working with chemicals.

Use with adequate ventilation. Avoid breathing dust or vapors. Avoid contact with skin, eyes and clothing. Remove and wash contaminated clothing.

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

**Revision** No. 4 **Date** 4/13/99 **Approved** Michael Raszeja **Chemical Safety Coordinator** MR

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## SECTION I NAME 24 HOUR EMERGENCY ASSISTANCE

<b>Product</b>	PHTHALIC ANHYDRIDE	 <b>CHEMTREC</b> <b>800-424-9300</b> Day 716-226-6177 <b>NFPA HAZARD RATING</b> LEAST SLIGHT MODERATE HIGH EXTREME 0 1 2 3 4 <b>HMIS *</b> 0 1 2 3 4
<b>Chemical Synonyms</b>	1,2-Benzenediacarboxylic Acid Anhydride	
<b>Formula</b>	C <sub>6</sub> H <sub>4</sub> -1, 2-(CO) <sub>2</sub> O	
<b>Unit Size</b>	up to 500 grams	
<b>C.A.S. No.</b>	85-44-9	

## SECTION II INGREDIENTS OF MIXTURES

Principal Component(s)	%	TLV Units
Phthalic Anhydride	>99%	8-hr TWA/ppm
<b>WARNING! CORROSIVE! HARMFUL IF INHALED AS FUME</b>		
<b>OR DUST. HARMFUL IF SWALLOWED. MAY CAUSE</b>		
<b>ALLERGIC SKIN REACTION. CAUSES EYE BURNS.</b>		

## SECTION III PHYSICAL DATA

Melting Point (°F)	130°-132°C (266°-269°F)	Specific Gravity (H <sub>2</sub> O = 1)	1.527 at 4°C
Boiling Point (°F)	Sublimes 284.5°C (543°F)	Percent Volatile by Volume (%)	Not applicable.
Vapor Pressure (mm Hg)	N/A	Evaporation Rate (Butyl Acetate =1)	1
Vapor Density (Air=1)	5.10		
Solubility in Water	Slightly soluble in cold water and in hot water. Reacts with hot water.		
Appearance & Odor	White to off-white, lustrous crystals or flakes; irritating "choking" odor.		

## SECTION IV FIRE AND EXPLOSION HAZARD DATA

<b>Flash Point (Method Used)</b>	152°C (305°F) (O.C.)	<b>Flammable Limits in Air % by Volume</b>	Lower 1.7 @ 284°F	Upper 10.4 @ 544°F
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**Extinguisher Media** Water spray; dry chemical; carbon dioxide (CO<sub>2</sub>); foam.

### SPECIAL FIREFIGHTING PROCEDURES

In the event of a fire, wear full protective clothing and NIOSH/MSHA-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode. Wear goggles if eye protection is not provided. Foam or direct water spray on molten phthalic anhydride may cause foaming or splattering.

(1996 EMERGENCY RESPONSE GUIDEBOOK, DOT P 5800.7, GUIDE PAGE NO. 156)

### UNUSUAL FIRE AND EXPLOSION HAZARDS

**FIRE:** Combustible solid, which sublimes and gives off flammable vapors when heated. Dust can also form explosive mixtures with air. A severe dust explosion can occur at or above 0.015 oz./ft<sup>3</sup> of air-dispersed particulate. The ignition temperature for the dust cloud is 650°C. Inerting air with CO<sub>2</sub> to below 14% oxygen will prevent dust explosions.

Autoignition Temperature: 570°C (1058°F)

D.O.T. **PHTHALIC ANHYDRIDE, 8, UN 2214, PG III**

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