



# Phthalic Anhydride (PA)

## Material Safety Data Sheet (MSDS)

**PRODUCT NAME**

Case#85-44-9

PHTHALIC ANHYDRIDE (PA)

**APPEARANCE**

White Solid (Flakes) or colorless molten liquid, Mild odor &amp; Irritating.

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**Factory**

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**PHYSICAL PROPERTIES**

Chemical Name : 1, 2 Benzene Di Carboxylic Acid Anhydride

Molecular Formula : C<sub>8</sub>H<sub>4</sub>O<sub>3</sub>

Molecular Weight : 148

Melting Point : 131.9 °C

Boiling Point : 284.5 °C

**HAZARD IDENTIFICATION****Main Hazards**

Irritating to eyes, respiratory system &amp; skin. Dust explosion.

**Health Hazards****Eyes:** Dust or vapors will cause conjunctival irritation & possibly corneal damage.**Skin:** Contact with dust or vapour causes slight irritation and may cause allergic sensitivity. With repeated or prolonged exposure contact dermatitis may occur.**Ingestion:** A large dose may cause the irritation of mouth, throat & digestive tract.**Inhalation:** Exposure to dust and vapor may cause irritation of nose, throat & respiratory tract, coughing, sneezing and nose bleeds. Inhalation may cause pulmonary sensitivity and may cause bronchial (lungs & throat) spasms (muscular contraction) in asthma. Allergic sensitivity may lead to bronchial asthma (respiratory disease).**Fire Hazards**

Flash Point : 152 °C

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Dy. Director  
Technical

Manager HSE

Director

Stakeholder

**MSDS PA****JOB DESCRIPTION & INSTRUCTIONS**

Doc. Level: II

Doc. Version: II

Doc. No: NCPL- HSE-F-20

w.e.f: 8<sup>th</sup> Aug. 2014

Auto Ignition Temperature	:	570 °C		
Explosion Limits	:	1.7 %	(Volume)	Lower
		10.4 %	(Volume)	Upper

***Dust Explosion***

Dust from this product may be capable of ignition and propagating a flame. Minimum exposable concentration is 30 grams / m<sup>3</sup>. Minimum ignition energy 11 mJ. Minimum ignition temperature 650 °C. Minimum explosion pressure 6.6 bar. Minimum rate of pressure rise is 613 bar / second.

***Conditions to Avoid***

Exposure to water, moisture, concentrated mineral acids and strong oxidizing agents. Static Discharge.

**PACKING**

It is available in polypropylene bags of 25 Kg. net with inner liner of polyethylene.

**FIRST AID*****Exposure***

In case of exposure remove contaminated clothing and shoes. Flush effected area with plenty of water. Get immediate medical attention.

***Eyes***

Immediately wash eyes with plenty of water for 15 minutes, holding the eyes open. Get immediate medical attention.

***Skin***

Wash affected skin immediately with soap and plenty of water. Remove contaminated clothing including shoes. If blistering appears or redness / irritation persists, get medical attention. Do not re-use contaminated clothing without washing.

***Ingestion***

If conscious, wash out mouth with water. Do not give anything for eating or drinking to an unconscious person. Get immediate medical attention.

***Inhalation***

Remove to fresh air. Get immediate medical attention.

***Advice to Physicians***

Treat symptomatically for burns conventionally. Treatment may be required for shock.

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**ACCIDENTAL RELEASE MEASURES*****Personal Protectives***

Wear appropriate protective clothing and respiratory protection.

***Environmental Precautions***

Try to prevent the material from entering drains or water reservoirs.

***Spillage***

**Solids:** Sweep up spilled material into suitable containers for recovery or disposal. Avoid making dust.

**Molten Liquids:** Contain leaking liquid with sand. Remove it after solidification. Finally flush the affected area with water or condensate.

***Disposal***

Incineration. Dispose off in accordance with all applicable local and national regulations. The incineration of product will give carbon dioxide and water.

**HANDLING AND STORAGE*****Handling***

Use in well ventilated area. Avoid inhaling dust, vapors, and contact with eyes, skin and clothing. Avoid to create dust. Keep electrical apparatus, in particular, free of dust. When handling in bulk possibility of dust explosion should be considered. If the risk is significant, mechanical handling equipment must be earthed & provided with explosion venting.

***Storage***

Store in a dry, well ventilated area, away from incompatible material, source of heat & ignition. Storage & transfer equipment should be properly earthed and bonded to prevent the accumulation of static charges. Dust separators are required in the exhaust ventilation. Electrical equipment should be flameproof or dust tight according to the specific requirements of particular area. Avoid accumulation of dust on equipment and floors. Do not store in Copper & its alloys, Iron and Rubber.

**Suitable Storage Materials are:** Glass & Stainless steel.

**Do Not Store in:** Copper & its alloys, Iron and Rubber.

**EXPOSURE CONTROL / PERSONAL PROTECTION*****Threshold Limit Value***

TWA (8 hrs.) : 1.00 ppm – 06.0 mg / m<sup>3</sup>

TWA (10 ~ 15 min.) : 4.00 ppm – 24.0 mg / m<sup>3</sup>

***Respiratory Protection***

Use a mask with having appropriate filter cartridge. In case of extraordinary exposure risk, air supplied breathing apparatus is required.

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**Hand Protection**

Protective gloves (PVC with washable inner lining).

**Eye Protection**

Chemical goggles or face shield. Use of contact lenses to be avoided for handling (preferably).

**Body Protection**

Dust proof overall and safety / rubber shoes.

**Ventilation**

General room ventilation

**ECOLOGICAL EFFECTS**

This product is classified as slightly toxic to aquatic species.

Toxicity to fish, LC 50 (96 h) : 56 mg liter (Literature value)

**TRANSPORTATION**

This product is not classified for the purpose of transportation because the Maleic Anhydride content of this material is 0.05 % or less.

**UN Number** : 2214

**Road Transport ADR / RID**

Class : Not classified

**Maritime Transport IMDG**

Class : Not classified

**Air Transport IATA**

Class : Not classified

**TOXICOLOGICAL INFORMATION**

LD50 Oral – Rat : 2020 mg / Kg.

LD50 Skin – Rabbit : 10,000 mg / Kg.

LC50 Inhalation Rat : 0.21 mg / liter for 4 hrs.

**FIRE FIGHTING MEASURES****Suitable Extinguishing Agents**

CO<sub>2</sub>, Water Spray or Foam. Small fires can be extinguished by using Dry Chemical Powder.

**Unsuitable Extinguishing Agents**

Water Jet.

**Protective Equipment for Fire Fighting**

Full protective clothing and self contained breathing apparatus.

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**REGULATORY ANED LABELING INFORMATION**

Phthalic Anhydride (EEC No. 607 – 009 – 00 – 4)) is labeled according to following information: -

<b>Hazard Label</b>	:	<b>Xi Irritating</b>
<b>Risk Phrases</b>	:	<b>(R36) Irritating to eyes (R37) Irritating to respiratory system (R38) Irritating to skin</b>
<b>Safety Phrases</b>	:	<b>(S02) Keep out of reach of children.</b>

**OTHER INFORMATION**

This information is based on our present state of knowledge, being given in good faith and is intended to describe the product for the purpose of Health, Safety and Environment only. No warranty either expressed or implied is given which regard to the outcome of the use of such information.

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