



Registered Off. : 101-A, Deep Enclave, Pocket 'D', Ashok Vihar, Phase-III, Delhi-110 052 (India)
Corporate Off. : 152, Vardhman City Centre, Near Shakti Nagar Underbridge, Delhi-110052 (India)
Works : Plot No.1022, Modern Industrial Estate, Bahadurgarh-124507, Haryana (India)
Telephone : 0091 - 11 - 23646422 E-mail : tecpharm@gmail.com
Website : www.technopharmchem.com

PHTHALIC ANHYDRIDE

1. Product Identification

Synonyms: 1,3 Isobenzofurandione; 1,3 Dixophthalan; 1,2 Benzenedicarboxylic acid anhydride; Phthalic acid anhydride

CAS No.: 85-44-9

Molecular Weight: 148.12

Chemical Formula: C₈H₄O₃

Product Codes: 32540

2. Composition/Information on Ingredients

Ingredient	CAS No	Percent
Phthalic Anhydride	85-44-9	98 - 100%

3. Hazards Identification

Potential Health Effects

Inhalation: Inhalation of vapor, fume or dust is a primary irritant. Coughing, choking, as well as headache and dizziness can occur. May cause allergic respiratory reaction.

Ingestion: Corrosive. Swallowing can cause severe burns of the mouth, throat, and stomach. Can cause sore throat, vomiting, diarrhea.

Skin Contact: Corrosive. Symptoms of redness, pain, and severe burn can occur. May cause allergic skin reactions.

Eye Contact: Conjunctival edema and corneal destruction can occur. Symptoms include pain, tearing, and photophobia.

Chronic Exposure: Chronic exposure by inhalation or skin contact can cause allergic sensitization. Causes liver and kidney effects in laboratory animals.

Aggravation of Pre-existing Conditions: Persons with pre-existing skin disorders or impaired respiratory function may be more susceptible to the effects of the substance.

4. First Aid Measures

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

Ingestion: If swallowed, DO NOT INDUCE VOMITING. Give large quantities of water. Never give anything by mouth to an unconscious person. Get medical attention immediately.

Skin Contact: Wipe off excess material from skin then immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention immediately.

Wash clothing before reuse. Thoroughly clean shoes before reuse.

Eye Contact: Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.



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5. Fire Fighting Measures

Fire: Flash point: 152C (306F) Autoignition temperature: 570C (1058F) Flammable limits in air % by volume: lel: 1.7; uel: 10.5 Combustible solid. Slight fire hazard when exposed to heat or flame.

Explosion: Fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard.

Fire Extinguishing Media: Water spray, dry chemical, alcohol foam, or carbon dioxide. Water or foam may cause frothing.

Special Information: In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode.

6. Accidental Release Measures

Remove all sources of ignition. Ventilate area of leak or spill. Wear appropriate personal protective equipment as specified in Section 8. Spills: Clean up spills in a manner that does not disperse dust into the air. Use non-sparking tools and equipment. Reduce airborne dust and prevent scattering by moistening with water. Pick up spill for recovery or disposal and place in a closed container

7. Handling and Storage

Keep in a tightly closed container, stored in a cool, dry, ventilated area. Protect against physical damage. Isolate from any source of heat or ignition. Reacts with moisture to give phthalic acid, which can corrode metals liberating hydrogen. Avoid dust formation and control ignition sources. Employ grounding, venting and explosion relief provisions in accord with accepted engineering practices in any process capable of generating dust and/or static electricity.

8. Exposure Controls/Personal Protection

Airborne Exposure Limits:

Phthalic anhydride: -OSHA Permissible Exposure Limit (PEL): 2 ppm (12 mg/m³) (TWA) -ACGIH Threshold Limit Value (TLV): 1 ppm (6.1 mg/m³) (TWA)

Ventilation System: A system of local and/or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limits. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area.

Personal Respirators (NIOSH Approved): If the exposure limit is exceeded, a full face piece respirator with organic vapor cartridge and dust/mist filter may be worn up to 50 times the exposure limit or the maximum use concentration specified by the appropriate regulatory agency or respirator supplier, whichever is lowest. For emergencies or instances where the exposure levels are not known, use a full-facepiece positive-pressure, air-supplied respirator.

Skin Protection: Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact. Rubber and neoprene are recommended materials for personal protective equipment.

Eye Protection: Use chemical safety goggles and/or full face shield where dusting or splashing of solutions is possible. Maintain eye wash fountain and quick-drench facilities in work area.

9. Physical and Chemical Properties

Appearance: Thin white flakes.

Odor: Characteristic choking odor.

Solubility: 0.62 g/100 g water @ 20C (68F) reacts slowly.

The information contained herein is in good faith but makes no representations as to its comprehensiveness or accuracy. This document is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person using this product. The conditions or methods of handling, storage, use or disposal of the product are beyond our control and may be beyond our knowledge. We do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product. Individuals receiving the information must exercise their independent judgment in determining its appropriateness for a particular purpose.



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Specific Gravity: 1.53 @ 20C
pH: No information found.
% Volatiles by volume @ 21C (70F): 0
Boiling Point: 295C (563F)
Melting Point: 132C (270F)
Vapor Density (Air=1): 6.6
Vapor Pressure (mm Hg): 0.0002 @ 20C (68F)
Evaporation Rate (BuAc=1): No information found.

10. Stability and Reactivity

Stability: Stable under ordinary conditions of use and storage. Heat will contribute to instability.
When molten it should be covered with inert gas.
Hazardous Decomposition Products: Carbon dioxide and carbon monoxide may form when heated to decomposition. Slowly reacts with water to form phthalic acid.
Hazardous Polymerization: Will plasticize some organics and form resins. Will not occur.
Incompatibilities: Strong oxidizers. Nitric acid, sodium nitrite, copper oxide.
Conditions to Avoid: Heat, flame, ignition sources, dusting, moisture and incompatibles.

11. Toxicological Information

Toxicological Data:
Phthalic anhydride: Oral rat LD50: 4020 mg/kg; inhalation rat LC50: > 210 mg/m³/1-hour; skin rabbit LD50: > 10 gm/kg. Irritation data: Skin rabbit, Standard Draize, 500 mg/24H mild; Eye rabbit, Standard Draize, 100 mg severe. Investigated as a tumorigen, mutagen, reproductive effector.
Reproductive Toxicity: Has shown teratogenic effects in laboratory animals.

-----\Cancer Lists\-----

---NTP Carcinogen---

Ingredient	Known	Anticipated	IARC Category
Phthalic Anhydride (85-44-9)	No	No	None

12. Ecological Information

Environmental Fate:
When released to moist soil or water, this material is expected to hydrolyze. When released into water, this material is not expected to evaporate significantly. When released into the water, this material is expected to have a half-life of less than 1 day. This material has an estimated bioconcentration factor (BCF) of less than 100. This material is not expected to significantly bioaccumulate. When released into the air, this material is expected to have a half-life of greater than 30 days.
Environmental Toxicity: No information found.

13. Disposal Considerations

Dispose of container and unused contents in accordance with federal, state and local requirements.



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14. Transport Information

Land

Proper Shipping Name: PHTHALIC ANHYDRIDE

Hazard Class: 8

UN/NA: UN2214

Packing Group: III

Information reported for product/size: 200LB

Water, I.M.O

Proper Shipping Name: PHTHALIC ANHYDRIDE

Hazard Class: 8

UN/NA: UN2214

Packing Group: III

Information reported for product/size: 200LB

Air (I.C.A.O.)

Proper Shipping Name: PHTHALIC ANHYDRIDE

Hazard Class: 8

UN/NA: UN2214

Packing Group: III

Information reported for product/size: 200LB

15. Regulatory Information

SARA 311/312: Acute: Yes Chronic: Yes Fire: Yes Pressure: No

Reactivity: No (Pure / Solid)

16. Other Information

Product Use:

Laboratory Reagent.