

MATERIAL SAFETY DATA SHEET

Phthalic Anhydride

Section 1 - Chemical Product and Company Identification

MSDS Name:	Phthalic anhydride, 99%
Synonyms:	1,3-Isobenzofuranidone
Company Identification: (INDIA)	Veritas House, 70 Mint Road, Fort, Mumbai - 400 001. INDIA
For information in the INDIA, call:	Tel: +91 - 22 - 2275 5555 / 6184 0000, Fax: +91 - 22 - 2275 5556 / 6184 0001

Section 2 - Composition, Information on Ingredients

CAS#	Chemical Name:	%	EINECS#
85-44-9	Phthalic anhydride	99%	201-607-5

Hazard Symbols:	XN
	
Risk Phrases:	22 37/38 41 42/43

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Harmful if swallowed. Irritating to respiratory system and skin. Risk of serious damage to eyes. May cause sensitization by inhalation and skin contact. Moisture sensitive.

Potential Health Effects

Eye:	May cause eye irritation and possible damage.
Skin:	Causes skin irritation. May cause skin sensitization, an allergic reaction, which becomes evident upon re-exposure to this material.
Ingestion:	Harmful if swallowed. May cause irritation of the digestive tract.
Inhalation:	Causes respiratory tract irritation.
Chronic:	May cause liver and kidney damage. Repeated exposure may cause sensitization dermatitis. Repeated exposure may cause allergic respiratory reaction (asthma).

Section 4 - First Aid Measures

Eyes:	Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. If irritation develops, get medical aid.
Skin:	Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.
Ingestion:	Get medical aid. Wash mouth out with water.
Inhalation:	Get medical aid immediately. Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.
Notes to Physician:	

Section 5 - Fire Fighting Measures

General Information:	As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. This material in sufficient quantity and reduced particle size is capable of creating a dust explosion.
Extinguishing Media:	Use water spray, dry chemical, carbon dioxide, or chemical foam.

Section 6 - Accidental Release Measures

General Information:	Use proper personal protective equipment as indicated in Section 8.
Spills/Leaks:	Vacuum or sweep up material and place into a suitable disposal container.

Section 7 - Handling and Storage

Handling:	Avoid breathing dust, vapor, mist, or gas. Avoid contact with skin and eyes.
Storage:	Store in a cool, dry place. Store in a tightly closed container.

Section 8 - Exposure Controls, Personal Protection

Engineering Controls:	
	Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.
Exposure Limits	
	CAS# 85-44-9:
	United Kingdom, WEL - TWA: 4 mg/m ³ TWA United Kingdom, WEL - STEL: 12 mg/m ³ STEL
	United States OSHA: 2 ppm TWA; 12 mg/m ³ TWA
	Belgium - TWA: 1 ppm VLE; 6.2 mg/m ³ VLE
	France - VLE: 6 mg/m ³ VLE
	Germany: 1 mg/m ³ TWA (inhalable fraction)
	Japan: 0.33 ppm Ceiling; 0.2 mg/m ³ Ceiling
	Malaysia: 1 ppm TWA; 6.1 mg/m ³ TWA
	Netherlands: 2 mg/m ³ STEL Netherlands: 1 mg/m ³ MAC
	Spain: 1 ppm VLA-ED; 6 mg/m ³ VLA-ED
Personal Protective Equipment	
Eyes:	Wear chemical splash goggles.
Skin:	Wear appropriate protective gloves to prevent skin exposure.
Clothing:	Wear a chemical apron.
Respirators:	A NIOSH/MSHA approved air purifying dust or mist respirator or European Standard EN 149.

Section 9 - Physical and Chemical Properties

Physical State:	Flakes
Color:	white
Odor:	Not available
pH:	Not available
Vapor Pressure:	0.01 mbar @ 20 deg C
Viscosity:	6.4 MP 97 deg C
Boiling Point:	284 deg C @ 760.00mm Hg (543.20°F)

Freezing/Melting Point:	130.80 - 131.50 deg C
Autoignition Temperature:	580 deg C (1,076.00 deg F)
Flash Point:	152 deg C (305.60 deg F)
Explosion Limits: Lower:	1.70 vol %
Explosion Limits: Upper:	10.50 vol %
Decomposition Temperature:	Not available
Solubility in water:	soluble in alcohol and carbon disulfide
Specific Gravity/Density:	
Molecular Formula:	C8H4O3
Molecular Weight:	148.12

Section 10 - Stability and Reactivity

Chemical Stability:	Stable under normal temperatures and pressures.
Conditions to Avoid:	Incompatible materials, exposure to moist air or water.
Incompatibilities with Other Materials	Strong oxidizing agents, strong reducing agents, strong acids, strong bases, nitric acid, sodium nitrate.
Hazardous Decomposition Products	Carbon monoxide, carbon dioxide.
Hazardous Polymerization	Will not occur.

Section 11 - Toxicological Information

RTECS#:	CAS# 85-44-9: TI3150000
LD50/LC50:	RTECS: CAS# 85-44-9: Draize test, rabbit, eye: 50 mg/24H Moderate; Draize test, rabbit, skin: 500 mg/24H Mild; Inhalation, rat: LC50 = >210 mg/m ³ /1H; Oral, mouse: LD50 = 1500 mg/kg; Oral, rat: LD50 = 1530 mg/kg; Skin, rabbit: LD50 = >10 gm/kg; Other:
Carcinogenicity:	Phthalic anhydride - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.
Other:	See actual entry in RTECS for complete information. The toxicological properties have not been fully investigated.

Section 12 - Ecological Information

Ecotoxicity:	Not available
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Section 13 - Disposal Considerations

Dispose of in a manner consistent with federal, state, and local regulations.	
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Section 14 - Transport Information

	IATA	IMO	RID/ADR
Shipping Name:	PHTHALIC ANHYDRIDE	PHTHALIC ANHYDRIDE	PHTHALIC ANHYDRIDE
Hazard Class:	8	8	8
UN Number:	2214	2214	2214
Packing Group:	III	III	III

USA RQ: CAS# 85-44-9: 5000 lb final RQ; 2270 kg final RQ

Section 15 - Regulatory Information

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols: XN

Risk Phrases:

- R 22 Harmful if swallowed.
- R 37/38 Irritating to respiratory system and skin.
- R 41 Risk of serious damage to eyes.
- R 42/43 May cause sensitization by inhalation and skin contact.

Safety Phrases:

- S 23 Do not inhale gas/fumes/vapour/spray.
- S 24/25 Avoid contact with skin and eyes.
- S 26 In case of contact with eyes rinse immediately with plenty of water and seek medical advice.
- S 37/39 Wear suitable gloves and eye/face protection.
- S 46 If swallowed, seek medical advice immediately and show this container or label.

WGK (Water Danger/Protection)

- CAS# 85-44-9: 0

Canada

- CAS# 85-44-9 is listed on Canada's DSL List

US Federal

- TSCA
- CAS# 85-44-9 is listed on the TSCA Inventory.

Section 16 - Other Information

MSDS Creation Date:	July 25, 2015
Revision #0 Date	

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