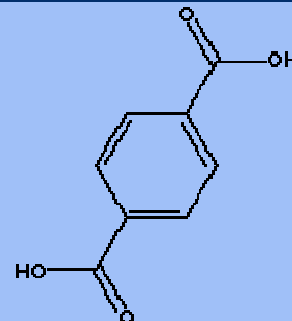


PHTHALIC ACID, PURIFIED

PRODUCT IDENTIFICATION

CAS NO.	100-21-0; 211863-90-0
EINECS NO.	202-830-0
FORMULA	$C_6H_4(COOH)_2$
MOL WT.	166.13
H.S. CODE	
TOXICITY	
DERIVATION	
SYNONYMS	p-Dicarboxybenzene; p-Phthalic acid;



1,4-Benzenedicarboxylic acid; Acide terephthalique; Kyselina tereftalova; Tephthol; p-Benzenedicarboxylic acid; p-Carboxybenzoic acid; para-Phthalic acid;

CLASSIFICATION [CARBOCYCLIC CARBOXYLIC ACIDS](#) /

PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE	white crystalline powder
MELTING POINT	300 C
BOILING POINT	402 C (sublimes)
SPECIFIC GRAVITY	1.58
SOLUBILITY IN WATER	Insoluble (soluble in alkalis slightly soluble in alcohol insoluble in chloroform, ether and acetic acid)
pH	
VAPOR DENSITY	
AUTOIGNITION	
NFPA RATINGS	
REFRACTIVE INDEX	
FLASH POINT	
STABILITY	Stable under ordinary conditions.

GENERAL DESCRIPTION & APPLICATIONS

Phthalic Acid, also called Benzenedicarboxylic Acid with formula $C_6H_4(COOH)_2$, is the name of any of three isomers. The ortho form (1,2-benzenedicarboxylic acid) is called simply phthalic acid. It is a white crystals decomposing at 191°C and slightly soluble in water and ether. This compound is mainly produced and marketed in the form of its anhydride produced by the oxidation of orthoxylenes and naphthalene. Its wide application is based on the ortho related carboxylic acid groups as their dehydration is highly reactive with broad processing conditions to produce various downstream products. It is used to make simple esters widely used as plasticizers. It is used as in making unsaturated polyester resins, alkyd resins, polyester polyols, dyes and pigments, halogenated anhydrides, polyetherimide resins, isatoic anhydride and insect repellents. The meta form is isophthalic acid (1,3-benzenedicarboxylic acid). It is a white crystals subliming at 345°C slightly soluble in water, alcohol and acetic acid (insoluble in benzene). It is obtained by oxidizing meta-xylene with chromic acid, or by fusing potassium meta-sulphobenzoate, or meta-bromobenzoate with potassium formate. IPA has excellent performance characteristics in coatings including excellent hardness, corrosion and stain resistance, hydrolytic stability of coatings and gel coats, excellent thermal stability and low resin color. It is a key ingredient in FRP markets for such products as marine, automotive, and corrosion resistant pipes and tanks. Polyesters containing isophthalic acid are also used extensively in industrial coatings applications for home appliances, automobiles, aluminum siding, and metal office furniture. It is used as an intermediate for polyesters, polyurethane resins, plasticizers. The para form, known as terephthalic acid (1,4-benzenedicarboxylic acid) is a

combustible white powder insoluble in water, alcohol and ether; (soluble in alkalies), sublimes at 300°C. It can be produced by oxidizing caraway oil, a mixture of cymene and cuminol or by oxidizing para-derivatives of benzene with chromic acid. TPA has been used mainly as a raw material of polyester fiber but lately it has been exploited for various uses such as non-fiber field, PET-bottle, PET-film and engineering plastics and as poultry feed additives. Phthalic acid derivatives are also widely used to make dyes, medicine, and synthetic perfumes, pesticides, and other chemical compounds.

SALES SPECIFICATION

4-CPA	170 ± 60 ppm
COLOR	Col-L: 97.5 ± 1, Col-b: 2.7 ± 1
Co	5.0ppm max
Mn	4.0ppm max
Fe	4.0ppm max

TRANSPORTATION

PACKING

HAZARD CLASS

UN NO.

OTHER INFORMATION

Hazard Symbols: XI, Risk Phrases: 36/37/38, Safety Phrases: 26-36