PHARMACEUTICALS INDIA
ACTIVE PHARMACEUTICAL INGREDIENTS
TAJ GROUP

PRODUCT CODE- PRAHY228

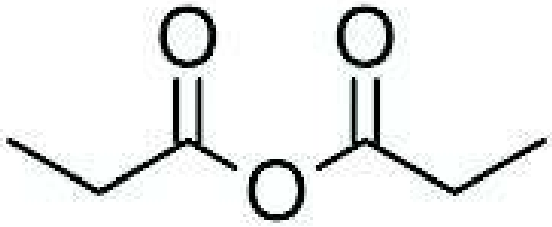
Taj Pharmaceuticals Ltd.

Propionic Anhydride

CAS No. 123-62-6

5412 61228 515 36974122

Propionic Anhydride



PRODUCT IDENTIFICATION
CAS NO. : 123-62-6
EINECS NO. : 204-638-2
FORMULA : C2H5COOCOC2H5
MOL WT. : 130.14
H.S. CODE : 2915.90

IUPAC Name: propanoyl propanoate

TOXICITY
Oral rat LD50 : 2360 mg/kg
SYNONYMS methylacetic anhydride; Propionyl oxide;Propionic Acid Anhydride; Propanoic Anhydride; Anhydrid Kyseliny Propionove;

CHEMICAL PROPERTIES
PHYSICAL STATE : clear liquid
MELTING POINT : -45 C
BOILING POINT : 167 C
SPECIFIC GRAVITY : 1.01
SOLUBILITY IN WATER Insoluble (decomposes slowly) pH
VAPOR DENSITY : 4.5
AUTOIGNITION : 285 C
NFPA RATINGS Health: 3 Flammability: 2 Reactivity: 1

REFRACTIVE INDEX : 1.403 - 1.405
FLASH POINT : 63 C
STABILITY : Stable under ordinary conditions

Synonyms: propionove;anhydridkyselinypropionove;C2H5C(O)OC(O)C2H5;Methylacetic anhydride;methylaceticanhydride;Propanoicacid,anhydride;Propinoicanhydride;propionic;Propionic acid anhydride;propionicacidanhydride;Propionyl oxide;propionyloxide;PROPANOIC ANHYDRIDE;PROPIONIC ANHYDRIDE;Propionic Anhydried;Propanic Anhydride;PROPIONIC ANHYDRIDE, 99+%;PropionicAnhydrideForSynthesis;Propionic anhydride 97%;PROPIONSAEUREANHYDRID

DESCRIPTION AND APPLICATIONS

Propionic anhydride is a clear liquid with an unpleasant odour. It hydrates with water producing corrosive propionic acid. It is miscible in most organic solvents and decomposes with alcohol. Propionic anhydride used as an intermediate to produce dyes, pharmaceuticals, agrochemicals and other organic compounds.

SPECIFICATION

APPEARANCE : clear liquid
CONTENT : 98.0% min

PROPIONIC ACID : 2.0% max

OTHER INDIVIDUAL IMPURITY : 0.5% max
COLOR : 20 max (Pt/Co scale)
PACKING : 200lgs in drum
HAZARD : CLASS 8 (Packing group : III)

GENERAL DESCRIPTION OF ANHYDRIDE

Anhydride is a compound formed by the abstraction of a molecule of water, H2O, from a substance. The term acid anhydride is restricted sometime to the anhydride formed especially from an acid by dehydration or one that revert to the original substance upon hydration. In case of bimolecular, it can be composed of two molecules of the corresponding acid. The term mixed anhydride is an acid anhydride composed of two different acids. Examples are adenosine triphosphate or an aminoacyl adenylate. The anhydrides of bases are oxides.

Anhydrides of inorganic acids are usually oxides of nonmetallic elements. Carbon dioxide (CO2) is the anhydride of carbonic acid, dinitrogen pentoxide (N2O5) is the anhydride of nitric acid, sodium oxide is an anhydride of sodium hydroxide, phosphorus pentoxide (P2O5) is the anhydride of phosphoric acid, and sulfur trioxide (SO3) is the anhydride of sulfuric acid. An acid anhydride forms an acid; a base anhydride forms a base. Sulfur trioxide (acid anhydride) reacts with water to form sulfuric acid (an acid product). Calcium oxide (an base anhydride) reacts with water to form calcium hydroxide (a base product).

rganic anhydrides contain the carbonyl group (CO). Organic anhydrides are formed by the condensation of original acids. Lactone, an internal cyclic monoester, is an anhydride derived from the hydroxyl and carboxyl radicals. In organic chemistry, most anhydride compounds are derived from corresponding carboxylic acids. Carboxylic anhydrides, general formula (RCO)2O, are the dehydration product of two carboxylic acid molecules. The name of carboxylic anhydride is given first from the original acid, followed by the separate word "anhydride". [CH3(CH2)2CO]2O is butanoic anhydride, CH3COOCOCH2CH3 is ethanoic propanoic anhydride (or acetic propionic anhydride). Anhydrides are more reactive than the parent acids.

Anhydrides are typically not target molecules, but rather they are used as intermediates for the synthesis of other organic members such as esters and amides for the industrial applications include dyes, pharmaceuticals, pesticides, plastics, fibers, curing agents, plasticizers and many others. The reactivity of carboxylic acid derivatives are in order of acyl halides > anhydrides >> esters ¡Ö acids >> amides. Anhydrides react with alcohols to form esters; acetic anhydride [(CH3CO)2O] reacts with ethanol (C2H5OH) to form ethyl acetate (CH3COOC2H5) used as a common solvent. Anhydrides also react with ammonia and primary or secondary amines to form amides. Anhydrides react with water to form their corresponding acids.

Uses
Propionic anhydride is chiefly used as a raw material for cellulose acetate propionate, a plaxtic found in face shields, sunglasses, brush handles, toys, cosmetics containers and blister packages. Propionic anhydride is also a raw material for dyes, pharmaceuticals, agrochemicals and fragrance chemicals

Propionic anhydride is an organic compound with the formula (CH3CH2CO)2O. This simple acid anhydride is a colourless liquid.. It is a widely used reagent in organic synthesis.

Synthesis
Propionic anhydride has been prepared by dehydration of propionic acid using ketene

Safety
Propanoic anhydride is strong smelling and corrosive, and will cause burns on contact with skin. Vapour can burn eyes and lungs.

STORAGE
Separated from acids, bases, oxidants, food and feedstuffs. Dry. Ventilation along the floor.

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http://www.tajapi.com
or by contacting the sponsor, Taj Pharmaceuticals Limited., at:
91 022 30601000.
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