



Acetic Anhydride

KEY FEATURES:

- Clear, colorless liquid
- Pungent, vinegar-like odor
- Key raw material in pharmaceuticals, detergents and food ingredients





Acetic Anhydride

PRODUCT DESCRIPTION

Acetic anhydride is a clear, colorless liquid with a very pungent, penetrating, vinegar-like odor. It is completely miscible with diethyl ether and can be easily dissolved in the usual organic solvents; it reacts with alcohols. **Acetic anhydride** is an excellent solvent for numerous organic and inorganic products.

In the presence of water, **acetic anhydride** reacts slowly at room temperature to form acetic acid. At moderate and elevated temperatures, however, this reaction can be extremely exothermic and violent. It is accelerated by catalytic quantities of sulfuric acid or other mineral acids and may even be explosive.

APPLICATIONS

In the chemical industry, the reactivity of the acetyl group of **acetic anhydride** is used to synthesize end products and intermediates.

Acetic anhydride is widely employed industrially for its acetylating and dehydrating properties.

A major use for it is the acetylation of cellulose to produce acetate fibers, plastics, coatings and films. It is especially valuable for the direct esterification of alcohols where acetic acid cannot be used.

Another large use for **acetic anhydride** is in the manufacture of acetylsalicylic acid (aspirin), acetylcholine hydrochloride, acetophenacetin, sulfonamides, acetyl-p-aminophenol, cortisone, acetanilide, theophylline, sulfa drugs, certain vitamins and hormones, and many other pharmaceuticals and pharmaceutical intermediates.

Acetic anhydride is also used to produce acetyl ricinoleates, triacetin, acetyl tributyl citrate and other plasticizers. Triacetic glycerol esters are used as plasticizers in the plastics and paint industry, as fixatives in perfumery and as solvents for fungicides and basic dyes. Acetylated fatty acid monoglycerides and acetylated animal and vegetable fats are used as additives and auxiliaries in the food industry.

TYPICAL PROPERTIES

	Unit	
Molar mass	g/mol	126.09
Boiling temperature at 1013 hPa	°C	140
Melting temperature	°C	-73
Vapor pressure at 20°C	hPa	5
at 50°C	hPa	29
Vapor density (air = 1)		3.5
Density at 20°C	g/ml	1.08
Solubility in water at 20°C	g/L	20
Evaporation number (n-butyl acetate = 1)		0.46