

ACETONITRILE

CAS Number: 75-05-8

Other Names: Acetone, Cyanomethane, Ethyl nitrile,
Methanecarbonitrile, Methylcyanide.

Formula: C₂H₃N

PRODUCT INTRODUCTION

Acetonitrile is the chemical compound with the formula C₂H₃N. This colourless liquid is the simplest organic nitrile (hydrogen cyanide is a simpler nitrile, but the cyanide anion is not classed as organic). It is produced mainly as a byproduct of acrylonitrile manufacture. It is used as a polar aprotic solvent in organic synthesis and in the purification of butadiene.

PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Transparent liquid, no visible impurities
Chromaticity (in Hazen) (Pt-Co) ≤	<5
Moisture % (m/m) ≤	0.0049
Hydrocyanic Acid % (mg/kg) ≤	3.6
Acetone (mg/kg) ≤	< 5.0
Acrylonitrile % ≤	< 5.0
Heavy Component (including propanitrile) % ≤	136.0
Purity % ≥	99.98
Ammonia (mg/kg) ≤	3.22
Acidity (mg/kg) ≤	28.0
Density (at 20°C) g/cm ³	0.781
Copper (mg/kg) ≤	0.01
Iron (mg/kg) %≤	0.04
Boiling Range (Under 0.10133MPa) ° C	81.1~81.8

APPLICATIONS

- Acetonitrile is primarily used as an extraction solvent for butadiene.
- It is used as a chemical intermediate in pesticide manufacturing; and as a solvent for both inorganic and organic compounds.
- It is also included as a starting material for the production of acetophenone, alpha-naphthalenacetic acid, thiamine, and acetamidine; to remove tars, phenols, and coloring matter from petroleum hydrocarbons not soluble in Acetonitrile.
- In the laboratory, acetone is used as a polar aprotic solvent in a variety of organic reactions, such as SN2 reactions. The use of acetone solvent is also critical for the Jones oxidation. It is a common solvent for rinsing laboratory glassware because of its low cost and volatility; however, it does not form an azeotrope with water.
- It is used in the production of acrylic fibers; and in pharmaceuticals, perfumes, nitrile rubber, and ABS (Acrylonitrile-butadiene-styrene) resins.

PACKAGING OPTIONS

Drums
