DIMETHYL CARBONATE

CAS Number: 616-38-6

Other Names: Methyl carbonate

Formula: C₃H₆O₃

PRODUCT INTRODUCTION

Dimethyl carbonate is a carbonate ester that is carbonic acid in which both hydrogens are replaced by methyl groups. A flammable, colourless liquid with a characteristic ester-like odour, it is used as a 'green' methylating agent and as a solvent.

PHYSICAL AND CHEMICAL PROPERTIES

| Appearance | Colorless Transparent Liquid |
|--------------------|------------------------------|
| Purity | 99.91 % |
| Water Moisture | 0.01 % |
| Density (20/20°C) | 1.072 |
| CH ₃ OH | 0.004 % |

APPLICATIONS

- Environmentally benign substitute for dimethyl sulfate and methyl halides in methylation reactions for phosgene
- DMC can be used in the synthesis of important pharmaceuticals, such as the antimicrobial ciprofloxacin (Cipro) where it is used in place of diethyl malonate, and in the preparation of guaifenesin, a precursor for the muscle relaxant, methocarbamol.
- Dimethyl carbonate is used as an electrolyte in lithium ion batteries (LIB), which are experiencing a rapid increase in demand for use in notebook PCs and cell phones.

PACKAGING OPTIONS

Drums

