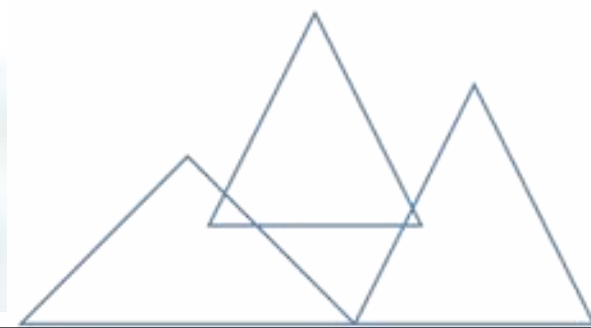


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欢迎各位加入鸣川新材料





江苏鸣川新材料有限公司  
*Jiangsu Mingchuan Chemical Co., Ltd.*



# 企业介绍

江苏鸣川新材料有限公司成立于2019年10月，位于江苏省泰兴经济开发区润江路16号；是由泰兴市泰鹏医药化工有限公司与ASIA CHEMICAL INDUSTRIAL LIMITED（亚洲化学工业有限公司）共同投资；是碳酸酯的专业生产公司；投资10.8亿元建设成年产10万吨碳酸酯、100吨聚碳酸酯二元醇、100吨乙二醇的生产公司。公司占地面积59863平方米，发展空间大，还预留两套各3000平方米的甲类装置区域。现有员工近60人，其中化工专业技术人员10名。公司坚持“以人为本、科技为先、创新管理、和谐发展”的企业理念，将全力打造成国际国内知名品牌。

公司引用国内先进技术，并与中科院兰州化工研究所共同开发了离子液催化技术，其技术特点，反应条件更温和，产品清洁度更高，安全可靠更有保障。碳酸酯项目（碳酸乙烯酯、碳酸丙烯酯）生产采用加压合成工艺，该工艺采用催化剂可循环利用，更加环保。泰兴市泰鹏医药化工有限公司运行十多年来使用该催化剂技术从未发生过工艺技术上的事故，产品品质赢得了国内如新宙邦、国泰化荣、华盛、比亚迪、广州天赐、珠海赛纬等知名电液公司的良好赞誉。

公司所在的江苏省泰兴经济开发区基础设施好，规模大，位居国内前四。并享有得天独厚的二氧化碳资源，江苏泰兴黄桥二氧化碳气田是全国最大的二氧化碳气田。开发区内的上下游产业链配套方便，其中的金燕化学（环氧乙烷）、怡达化工（环氧丙烷）原料资源，能够满足公司原料需求，公司产品亦满足华盛公司需求。公司客户覆盖了全球范围内电解液龙头厂商，且与众多电解液客户的供应商建立了长期稳定的战略合作关系。

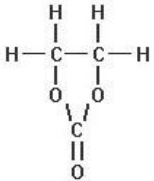
Jiangsu Mingchuan New Material Co., Ltd. was established in October 2019 and is located at No. 16 Runjiang Road, Taixing Economic Development Zone, Jiangsu Province; It is jointly invested by Taixing Taipeng Pharmaceutical Chemical Co., Ltd. and ASIA CHEMICAL INDUSTRIAL LIMITED; Is a professional production company of carbonates; Invest 1.08 billion yuan to build a production company with an annual output of 100000 tons of carbonate, 100 tons of polycarbonate diol, and 100 tons of ethylene glycol. The company covers an area of 59863 square meters, with a large development space. It also reserves two sets of Class A device areas of 3000 square meters each. Currently, there are nearly 60 employees, including 10 chemical engineering professionals. The company adheres to the corporate philosophy of "people-oriented, technology first, innovative management, and harmonious development", and will strive to build itself into a well-known international and domestic brand.

The company cites advanced domestic technology and has jointly developed ionic liquid catalytic technology with Lanzhou Institute of Chemical Industry, Chinese Academy of Sciences. Its technical characteristics include milder reaction conditions, higher product cleanliness, and more guaranteed safety and reliability. Carbonate projects (vinyl carbonate, propylene carbonate) are produced using a pressurized synthesis process that uses catalysts that can be recycled, making it more environmentally friendly. Taixing Taipeng Pharmaceutical Chemical Co., Ltd. has been operating for more than ten years without any technological accidents using this catalyst technology, and its product quality has won good praise from well-known electrohydraulic companies in China such as Nuxin Zebang, Guotai Huarong, Huasheng, BYD, Guangzhou Tianci, Zhuhai Saiwei, etc.

The Taixing Economic Development Zone in Jiangsu Province where the company is located has good infrastructure and a large scale, ranking among the top four in China. And enjoys unique carbon dioxide resources. Jiangsu Taixing Huangqiao Carbon Dioxide Gas Field is the largest carbon dioxide gas field in China. The upstream and downstream industrial chains in the development zone are convenient to support. Among them, Jinyan Chemical (ethylene oxide) and Yida Chemical (propylene oxide) raw material resources can meet the company's raw material needs, and the company's products can also meet the needs of Huasheng Company. The company's customers cover the world's leading electrolyte manufacturers, and has established long-term and stable strategic cooperative relationships with suppliers of many electrolyte customers.

# 碳酸乙烯酯

## 结构式：



## 包装、储运：

镀锌铁桶或不锈钢桶包装，每桶净重250千克，亦可采用ISO TANK或按照客户的要求进行包装。

本品应储存于阴凉、通风、干燥处，按一般化学品规定储运。

## 性质与用途：

分子式：C<sub>3</sub>H<sub>4</sub>O<sub>3</sub> 分子量：88 沸点：248℃/760mmHg，243-244℃/740mmHg  
闪点：160℃ 密度：1.3218  
折光率：1.4158(50℃) 熔点：35-38℃  
CAS：96-49-1 EINECS：201-510-0

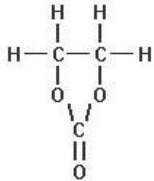
外观：透明无色液体(>35℃),室温时为结晶固体。

本品是聚丙烯腈、聚氯乙烯的良好溶剂。可用作纺织上的抽丝液；也可直接作为脱除酸性气体的溶剂及混凝土的添加剂；在医药上可用作制药的组分和原料；还可用作塑料发泡剂及合成润滑油的稳定剂；在电池工业上，可作为锂电池电解液的优良溶剂。

## 质量指标（质量体系符合ISO9001：2000标准）：

指标	工业级	工业优级	电池级	电池优级
碳酸乙烯酯纯度含量≥(%)	99.50	99.90	99.99	99.995
环氧乙烷≤(%)	0.0200	0.0150	0.0050	0.0010
乙二醇≤(%)	0.3000	0.0400	0.0020	0.0010
聚乙二醇≤(%)	0.0800	0.0400	0.0020	0.0010
水份≤PPM	300	200	10	8
色度(铂-钴对比)≤APHA	20	15	10	5

## Structural formula:



## Packing and storage:

Packed in clean and dry galvanized iron drum, NW: 250kg. Packed in ISO TANK or on the clients' requirements. Stored in cool, dry and draughty place.

## Properties and application:

Formula: C<sub>3</sub>H<sub>4</sub>O<sub>3</sub> Molecular weight: 88 Boiling point: 248℃/760mmHg，243-244℃/740mmHg  
Flash point: 160℃ Density: 1.3218  
Refraction: 1.4158(50℃) Melting point: 35-38℃  
CAS: 96-49-1 EINECS: 201-510-0

Appearance: Transparent colorless liquid(>35℃), or Crystal solid at room temperature.

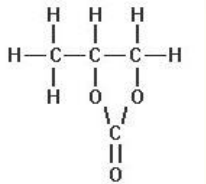
Uses: It can be used as a medium of lithium cell in battery industry. It is a perfect solvent of polyacrylonitrile, poly(vinyl fluoride). It can be used as fiber spinning liquid in spin industry; also can be used as solvent for tacking off acid gas, as a additive for concrete, and as a raw material of furazolidone in medicine; additionally it also can be used as foamer of plastics, stabilizer of synthetic lubricating-oil.

## Quality index (Quality system: in accordance with ISO9001：2000 standard)

Specification	Industry Grade	High Grade	Battery Grade	Battery Class
Ethylene Carbonate ≥ (%)	99.50	99.90	99.99	99.995
Ethylene Oxide ≤ (%)	0.0200	0.0150	0.0050	0.0010
Ethylene glycol ≤ (%)	0.3000	0.0400	0.0020	0.0010
Polyethyleneglycol ≤ (%)	0.0800	0.0400	0.0020	0.0010
Moisture ≤ PPM	300	200	10	8
Colourity (Platium-Cobalt) ≤ APHA	20	15	10	5

# 碳酸丙烯酯

结构式：



包装、储运：

镀锌铁桶或烤漆桶包装，每桶净重250千克，亦可采用ISO TANK或按照客户的要求进行包装。  
本品应储存于阴凉、通风、干燥处，按一般化学品规定储运。

性质与用途：

分子式：C<sub>4</sub>H<sub>6</sub>O<sub>3</sub>      分子量：88      沸点：241-242℃  
闪点：132℃      密度：1.2057  
折光率：1.4210      熔点：>-55℃  
CAS：08-32-7      EINECS：03-572-1

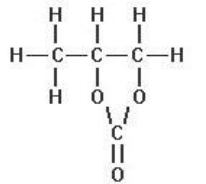
外观：无色或淡黄色透明液体。

本品溶于水和四氯化碳，与乙醚，丙酮，苯等混溶。是一种优良的极性溶剂。在电池工业上，可作为锂电池的优良介质。可作为一种高效溶剂，用来脱除石油气、石油裂解气、油田气及合成氨原料气中的二氧化碳；在纺织工业中可用作合成纤维的助剂和固色剂；在 高分子工业中可作为聚合物的溶剂。

质量指标（质量体系符合ISO9001：2000标准）：

指标	工业级	工业优级	电池级	电池优级
碳酸丙烯酯纯度含量≥(%)	99.50	99.90	99.99	99.995
环氧丙烷≤(%)	0.0200	0.0150	0.0050	0.0010
丙二醇≤(%)	0.3000	0.0400	0.0020	0.0010
水份≤PPM	300	200	10	8
色度(铂-钴对比)≤APHA	20	15	10	5

Structural formula:



Packing and storage:

Packed in galvanized iron drum or varnish baked drum, NW: 250kg.  
Packed in ISO TANK or on the clients' requirements. Stored in cool, dry and draughty place.

Properties and application:

Formula: C<sub>4</sub>H<sub>6</sub>O<sub>3</sub>      Molecular weight: 102.09      Boiling point: 241-242℃  
Flash point: 132℃      Density: 1.2057  
Refraction: 1.4210      Melting point: >-55℃  
CAS: 08-35-7      EINECS: 03-575-1

Appearance: Colorless or light yellow transparent liquid.

Uses: It can be used as a medium of lithium cell in battery industry. It can be widely used as a solvent for taking off decarbonation in petrogas, oil filed gas, petroleum pyrolysis gas as well as feed gas of synthetic ammonia; it also can be used as a fixation and aids of synthetic fiber; and as a solvent of polymer in macromolecule industry.

Quality index（Quality system: in accordance with ISO9001：2000 standard）

Specification	Industry Grade	High Grade	Battery Grade	Battery Class
Propylene Carbonate ≥ (%)	99.50	99.90	99.99	99.995
Propylene Oxide ≤ (%)	0.0200	0.0150	0.0050	0.0010
Propylene glycol ≤ (%)	0.3000	0.0400	0.0020	0.0010
Moisture ≤ PPM	300	200	10	8
Colourity (Platium-Cobalt) ≤ APHA	20	15	10	5

# 工艺原理

碳酸乙烯酯（以下简称EC）/碳酸丙烯酯（以下简称PC）的反应是一个高温高压的催化合成反应，其主要原料环氧乙烷（以下简称EO）/环氧丙烷（以下简称PO）与二氧化碳（以下简称CO<sub>2</sub>），催化剂（以下简称cat）。

在温度180-215℃、压力7.0-7.8MPa的条件下，（EO）/（PO）与CO<sub>2</sub>在cat的作用下反应生成（EC）/（PC），其反应方程式为：





# 工艺流程

