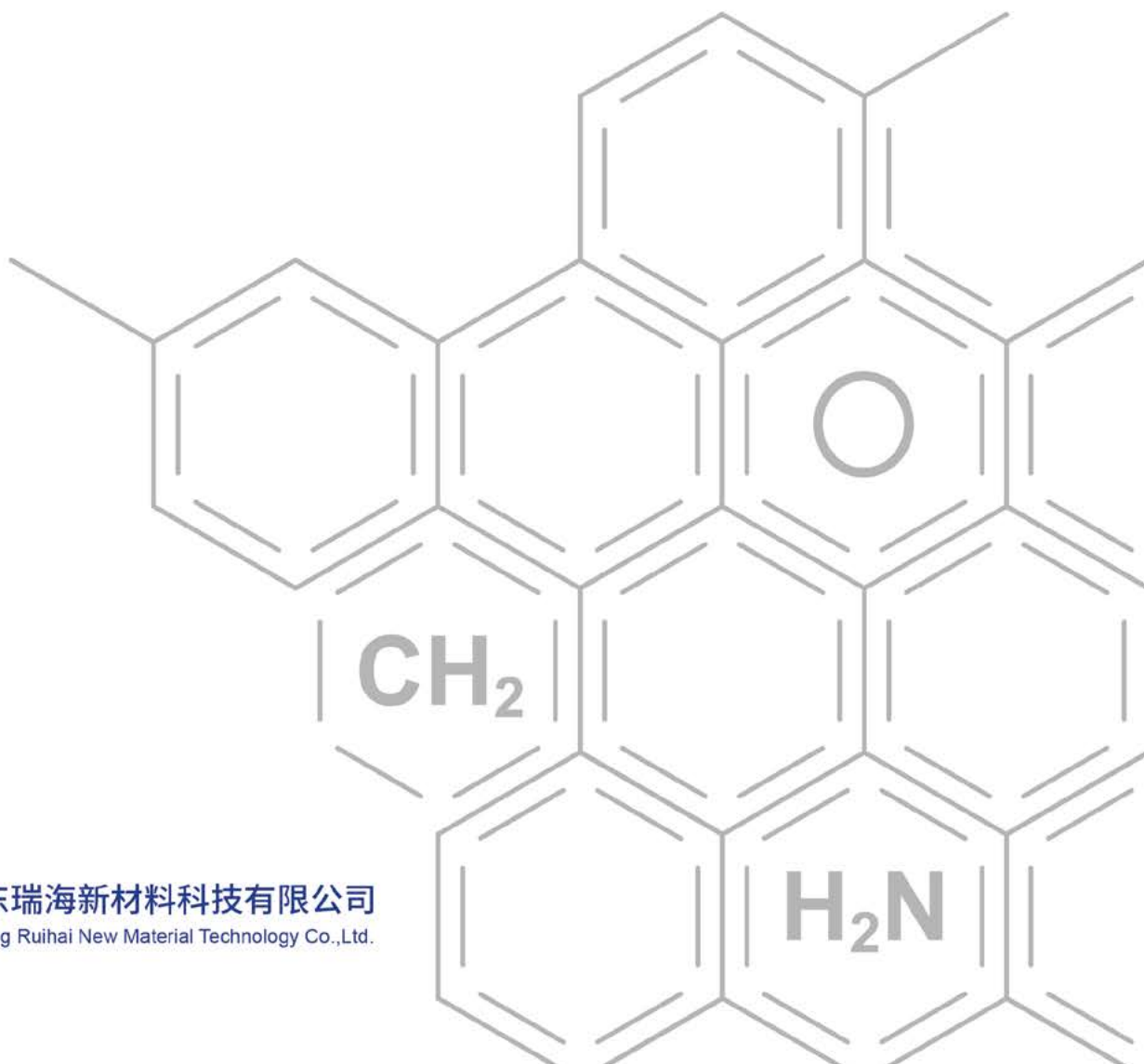




COMMITTED TO PROVIDING
SUPERIOR SERVICES AND
COMPREHENSIVE INTEGRATED
SOLUTIONS FOR CUSTOMER

致力于为客户提供优质的服务
与全面的一体化解决方案

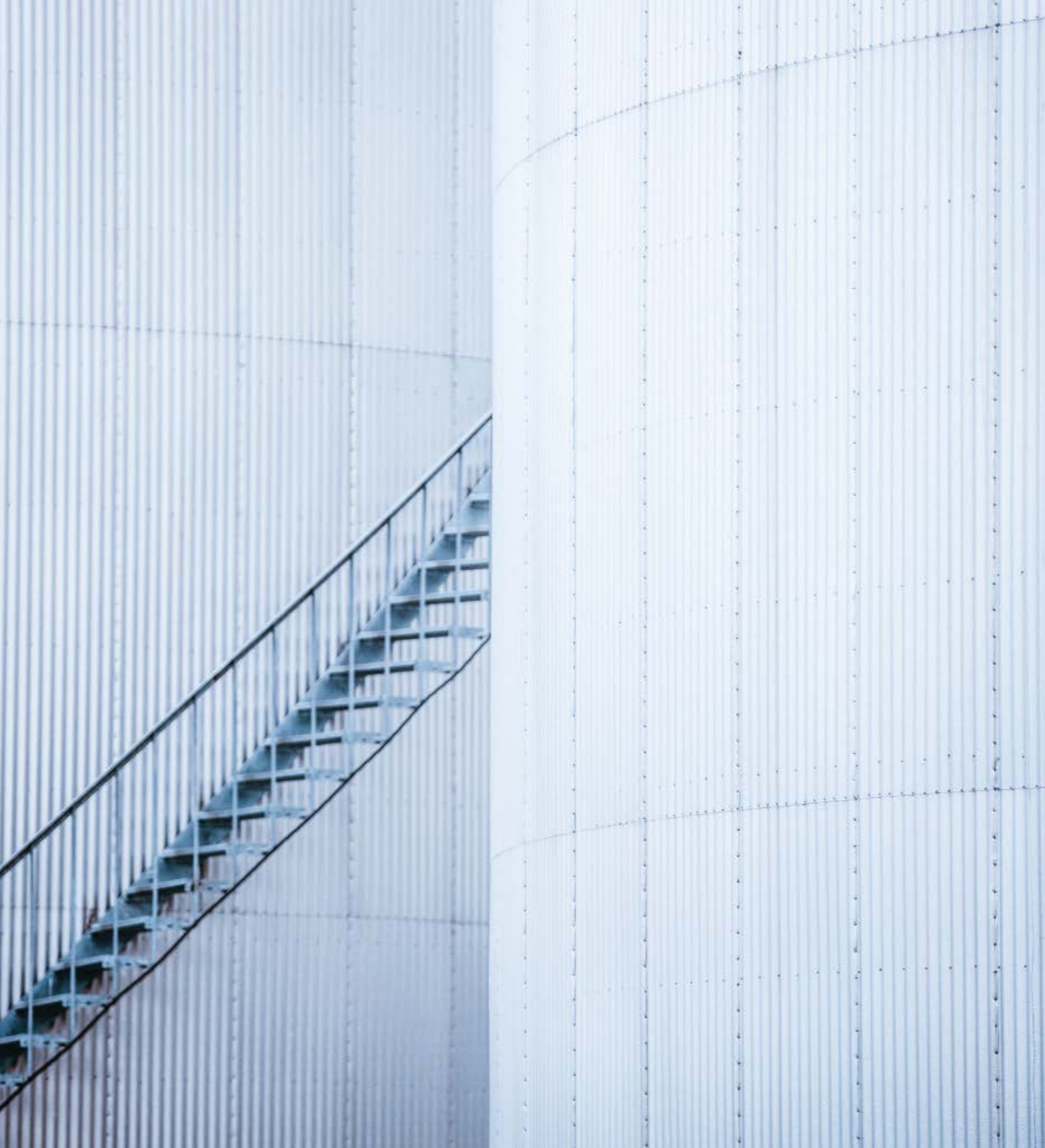


瑞海集团. 山东瑞海新材料科技有限公司
Ruihai Group. Shandong Ruihai New Material Technology Co.,Ltd.



瑞意进取创一流
海纳百川汇精华

RUI IS PIONEERING AND CREATING SPIRIT
ACCOMMODATING DIVERSITIES AS SEA



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公司简介

Company introduction

瑞海集团是一家致力于生物精细化工和铸造功能材料的研发生产和技术服务的综合性化工企业，投资主体为山东瑞海投资有限公司。自1999年创立以来，一直秉承“汇聚科技精华，打造百年瑞海”的理念，在多个化工产业中不断开拓创新，成为中石油、中石化、哈萨克石油、美国石油公司等多个国际知名品牌的材料供应商，是世界最大油服公司斯伦贝谢、哈里伯顿的定点生产厂家；绿色铸造的先进技术也逐步从国内市场走向中亚和欧洲市场。

公司在山东省淄博市张店区和临淄区、山东省潍坊市海洋化工产业区、辽宁省葫芦岛高新技术开发区分别设立生产基地，并在哈萨克斯坦和乌兹别克斯坦设立境外分公司，以雄厚的实力为全球客户提供最优化的产品解决方案。现已形成年产近20万吨的丙烯酸酯和聚丙烯酰胺生产线，年产10万吨糠醇生产装置，拥有铸造用化学品及辅料等15万吨产能，部分投产并在建年产20万吨的环保溶剂及其他精细化学品的生产基地。产品广泛应用于水处理、油田开采、造纸、矿产、医药中间体、建筑新材料、新能源、新型环保材料及冶金铸造、防腐工程等多个行业和领域。

目前集团公司核心企业为山东瑞海新材料科技有限公司（淄博市经开区）、山东瑞海米山化工有限公司（淄博市齐鲁化学工业园区）、山东瑞海金山化学有限公司（淄博市临淄区金山片区）。在职员工近600人，其中各类专业技术人才150余人，公司的科研开发能力和技术装备水平已处于同行业领先地位。

公司将一直坚持环境保护与行业发展并行不悖的理念，通过化学的智慧和技术创新，引领和支持产品在绿色生产和绿色技术上创新，绿色化工，对瑞海来说是方向更是责任。实干成就伟业，梦想点燃激情。

Ruihai Group is a comprehensive chemical enterprise dedicated to the research and development, production and technical services of biological fine chemicals and functional casting materials. Whose investment entity is Shandong Ruihai Investment Co., Ltd. Since its foundation in 1999, adhering to the concept of converging technology to build centennial enterprise, our Group have been forging ahead in an innovative spirit in multiple chemical industries, now being an approved supplier for many top brands, Like PetroChina, Sinopec, Kazakh Oil, American Petroleum Company, etc. And also the appointed manufacturer for big oil service companies like Schlumberger, Halliburton. Green technology makes our company marching towards international markets in Middle Asia and Europe.

Our Group has set up plants successively in Zhangdian District and Linzi District of Zibo City, Marine Chemical Zone of Weifang City, Shandong Province, High-tech Industrial Zone of Huludao City in Liaoning Province. And also established overseas branches in Kazakhstan and Uzbekistan respectively. We are providing the best products and solutions to global customers with strong strength. Our Group has formed acrylamide and polyacrylamide production line with the annual output of nearly 200,000 tons, 100,000 tons of furfuryl alcohol production unit, and 150,000 tons of casting chemicals and casting auxiliary materials, 200,000 tons of Environmental friendly solvents and other fine chemicals manufacturing bases, some of which are still under construction. Our products are widely used in many industries and fields, such as water treatment, oil exploration, paper-making, mining, pharmaceutical intermediates, new building materials, new energy and environmental protection materials, metallurgy, casting, anticorrosion engineering, etc.

At present, the core enterprises of the group are Shandong Ruihai New Material Technology Co., Ltd. (Zibo Economic Development Zone), Shandong Ruihai Mishan Chemical Co., Ltd. (Qilu Chemical Industrial Park, Zibo), and Shandong Ruihai Jinshan Chemical Co., Ltd. (Jinshan area, Linzi district, Zibo). Nearly 600 employees, including more than 150 professional and technical personnel, the company's research and development capabilities and technical equipment level has been in the leading position in the industry.

Our company has been bearing the parallel concept of environmental protection and industry development. Leading and supporting innovation in green production and green technology through the wisdom and technological innovation of chemistry. Green chemical industry is both the direction and responsibility of Ruihai. Hard working makes great achievements, and igniting your passion with dreams.



左上：山东瑞海新材料科技有限公司概貌
右下：山东瑞海米山化工有限公司概貌

22年 见证瑞海发展历程

22 years witness of the development of Ruihai

1999

瑞海集团前身淄博明新化工有限公司，位于张店区沅水镇张一工业园。

Zibo Mingxin Chemical Co., Ltd., (predecessor of Ruihai Group) Established in Zhangyi Industrial Park of Fengshui Town.

2004

淄博民大化学有限公司成立，位于临淄区南王精细化工园。

Zibo Minda Chemical Co., Ltd. Established in Nanwang Fine Chemical Industry Park, Linzi District.

2006

葫芦岛京东味喃化学有限公司成立，位于葫芦岛高新技术开发区。

Huludao Jingdong Furan Chemical Co., Ltd. Established in High-tech Industrial Zone of Huludao City.

2007

淄博明新化工有限公司搬迁扩建，位于张店区沅水镇南沅村（张店区南部工业区），因行政区域调整为经开区，2021年3月在原址新成立山东瑞海新材料科技有限公司

2007 Zibo Mingxin Chemical Co., Ltd. was relocated and expanded in Nanfeng, Fengshui town, Zhangdian District (southern industrial zone of Zhangdian District). Shandong Ruihai New Material Technology Co., Ltd. was newly established in the original site in March 2021 due to the change of administrative area



2013

山东大地翰翔化工有限公司成立，位于潍坊市海洋化工产业园。

Shandong Dadihanxiang Chemical Co., Ltd. Established in Marine Chemical Zone of Weifang City.



2016

山东瑞海米山化工有限公司成立，位于张店区东部化工区，现规划至齐鲁化学工业园区

Shandong Ruihai Mishan Chemical Co., Ltd. Established in Qilu Chemical Industrial Zone.



2018

先后在哈萨克斯坦和乌兹别克斯坦成立境外分公司。

Kazakhstan and Uzbekistan overseas branches.



2020

山东瑞海化工产业技术研究院成立，位于齐鲁化学工业园区。

Shandong Ruihai Chemical Industry Technology Research Institute, Established in Qilu Chemical Industrial Zone

2020年底收购位于临淄区金山镇的山东鑫脉石化科技有限公司，2021年8月底后变更为山东瑞海金山化学有限公司

At the end of 2020, Our Group acquired Shandong Xinmai Petrochemical Technology Co., Ltd. Which located in Jinshan town, Linzi district, and renamed to Shandong Ruihai Jinshan Chemical Co., Ltd. in August 2021.

Development History 发展历程

Company Quintessence

公司精髓

科技

TECHNOLOGY



公司拥有先进的自动化生产线以及国内一流的实验和检测设备，专业的研发技术团队，为不断优化产品及提升产品质量提供技术保障。公司先后与国内外各大院校和科研院所建立长期合作关系，在节能减排、流程应用、环境治理等领域取得了丰硕的成果。

The company possesses advanced automatic production line and domestic first-class experimental and analysing equipment, professional technological R&D teams to provide technical support to optimize the products and improve the quality. Our company has established long-term cooperative relation with major universities and scientific research institutes at home and abroad. Great achievements have been made in energy conservation and emission reduction, process application, environmental governance and other fields.

绿色

GREEN

公司设立了完善的污水、废气处理系统及能源可回收系统。严格执行 ISO9001 质量管理体系及 ISO14000 环境管理体系的相关标准，绿色环保的企业理念成为瑞海跨越式发展的催化剂。

The company has set up a complete sewage and waste gas and water treatment system and energy recovery system. Strictly implement the relevant standards of ISO90001 quality management system and ISO14000 environmental management system. The enterprise concept of green environmental protection becomes the catalyst for the leapfrog development of Ruihai.



担当

RESPONSIBILITY

高素质人才是瑞海发展的源动力，公司倡导终身学习的机会，积极开展职能培训和企业文化活动，以培养具有创新意识、严谨敬业、综合素质高的应用型人才为根本，为生产具有一流品质的优秀产品奠定了人才的基础。山东瑞海，因你而精彩！

High quality talents are the driving force for the development of Ruihai. The company advocates the spirit of lifelong learning, carrying out vocational skill training projects and corporate culture activities actively.

Based on the cultivation of practical talents with innovative consciousness, rigorous dedication and high comprehensive quality, Laid our company a firm talent foundation for the production of excellent products with first-class quality. Shandong Ruihai is wonderful because of you!



Product chain

产品链



07



08

Acrylamide Polyacrylamide

丙烯酰胺及聚丙烯酰胺系列

公司采用生物酶催化法生产丙烯酰胺和低温聚合生产聚丙烯酰胺技术，能耗排放降低20%，生产效率和产品质量均处于行业领先水平。

丙烯酰胺采用清华大学独创的无载体微生物法催化技术生产。具有纯度高、活性强、杂质含量低和无铜铁离子的优点，对生产分子量比较均匀的高分子量聚丙烯酰胺比较适用，特别适用于制造高聚合度、分子量分布比较整齐的聚合物。主要用于生产各种均聚、共聚及改性的聚合物，可用做絮凝剂，广泛应用于油田钻井开采，医药，冶金，造纸，涂料，纺织，污水处理和土壤改性。

聚丙烯酰胺是一种线型水溶性高分子聚合物。按其结构可分为：非离子、阴离子、阳离子型。按其分子量大小可分为：超低分子量、低分子量、中分子量、高分子量和超高分子量聚丙烯酰胺。本公司微生物法生产的高浓度丙烯酰胺，经过与清华大学、中科院、中国石油勘探院、中石油钻井院等科研院的合作，开发出全系列的聚丙烯酰胺产品。其产品包含：非离子系列：5xxx；阴离子系列：7xxx；阳离子系列：9xxx 采油系列：6xxx 4xxx；分子量范围：50万——3000万。

聚丙烯酰胺（PAM）是丙烯酰胺均聚物或共聚物及改性物的总称，是水溶性高分子应用最广泛的品种。有“百业助剂”的美称，广泛应用于：水处理，石油开采，造纸，纺织，选矿，洗煤，洗沙，医疗，食品等各个领域。

Biological enzyme catalysts are adopted to produce Acrylamide, and polymerization reaction conducted at low temperature to produce Polyacrylamide, reducing energy consumption by 20%, leading the production efficiency and product quality in the industry.

Acrylamide is manufactured with the original carrier-free biological enzyme catalytic technology by Tsinghua University. With the characteristics of higher purity and reactivity, no copper and iron content, it is especially suitable for high molecular weight polymer production. Acrylamide is mainly used for the production of homopolymers, copolymers and modified polymers that are widely used in oil field drilling, Pharmaceutical, metallurgy, paper-making, paint, textile, water treatment and soil improvement, etc.

Polyacrylamide is a linear water-soluble polymer, based on its structure, which can be divided into non-ionic, anionic and cationic polyacrylamide. According to its molecular weight, it can be divided into: ultra low molecular weight, low molecular weight, medium molecular weight, high molecular weight and ultra high molecular weight. Our company has developed a full range of polyacrylamide products through cooperation with scientific research institutes such as Tsinghua University, Chinese Academy of Sciences, China Petroleum Exploration Institute, and PetroChina Drilling Institute, using high-concentration acrylamide produced by our company's microbiological method. Our products includes: Non-ionic series PAM : 5xxx; Anion series PAM : 7xxx; Cationic series PAM : 9xxx; Oil extraction series PAM : 6xxx, 4xxx; Molecular weight range : 500 thousand —30 million.

Polyacrylamide (PAM) is the general term for acrylamide homopolymer or copolymer and modified products, and is the most widely used variety of water-soluble polymers. Known as "Auxiliary Agent for all industries", it is widely used in various fields such as water treatment, oil field, mining, papermaking, textile, mineral processing, coal washing, sand washing, medical treatment, food, etc.

丙烯酰胺水溶液 (生物法) Acrylamide Solution (Microbiological Grade)

特性 / Properties

无色透明液体, 分子式 $\text{CH}_2\text{CHCONH}_2$, 结晶点 $8-13^\circ\text{C}$, 分子具有二个活性中心, 兼具弱酸性和弱碱性反应, 有毒, 易自聚。主要用于生产各种均聚、共聚及改性的聚合物, 可用做絮凝剂, 造纸助剂, 印染助剂, 纺织助剂, 涂料助剂, 油田助剂和农药等。

Colorless transparent liquid. Molecular formula: $\text{CH}_2\text{CHCONH}_2$, crystalizing point $8-13^\circ\text{C}$, the molecular has two active centers, both weak acid and weak base reaction, toxic, easy to self-polymerization. Mainly used to produce a variety of copolymers, homopolymers and modified polymers which are widely used in oil exploration, medicine, metallurgy, paper-making, paint, textile, water treatment and pesticide, etc.

技术指标 / Technical Index

项目 Item	指标 Index		
外观 Appearance	无色透明液体 Colorless transparent liquid		
丙烯酰胺 (%) Acrylamid (%)	30% 水溶液 30% aqueous solution	40% 水溶液 40% aqueous solution	50% 水溶液 50% aqueous solution
丙烯腈 (\leq %) Acrylonitrile (\leq %)	≤ 0.001		
丙烯酸 (\leq %) Acrylic acid (\leq %)	≤ 0.001		
阻聚剂 (PPM) Acrylic acid (\leq %)	根据客户要求 As per request of clients		
电导 ($\mu\text{s}/\text{cm}$) Conductivity ($\mu\text{s}/\text{cm}$)	≤ 5	≤ 15	≤ 15
PH	6-8		
色度 (Hazen) Chroma (Hazen)	≤ 20		

生产方法 / Production Process

采用清华大学独创的无载体微生物催化技术生产。具有纯度高、活性强、杂质含量低和无铜铁离子的优点, 对生产分子量比较均匀的高分子量聚丙烯酰胺比较适用, 也适用于制造各种均聚、共聚及改性的聚丙烯酰胺。

Adopts the original carrier-free technology by Tsinghua University. With the characteristics of higher purity and reactivity, no copper and iron content, it is especially suitable for polymer production.

产品包装 / Packaging

200KG 塑料桶或者 1000KG 吨桶包装, 也可根据客户要求采用罐装。

200KG plastic drum, 1000KG IBC tank or ISO tank.

注意事项 / Cautions

(1) 丙烯酰胺水溶液应避免高温和暴晒, 防止发生自聚反应。

(2) 有毒! 使用时要避免人体直接接触。

(1) Keep away from high temperature and sun exposure to avoid self-polymerization reaction.

(2) Toxic! Avoid direct physical contact with the product.

丙烯酰胺晶体 98% (生物法) Acrylamide Crystal 98% (Microbiological Grade)

特性 / Properties

分子式 $\text{CH}_2\text{CHCONH}_2$, 纯品为白色片状晶体, 有毒! 易溶于水、甲醇、乙醇、丙醇, 稍溶于乙酸乙酯、氯仿, 微溶于苯, 丙烯酰胺分子具有二个活性中心, 兼具弱碱性、弱酸性反应。主要用于生产各种均聚、共聚及改性的聚合物, 可用做絮凝剂, 造纸助剂, 印染助剂, 纺织助剂, 涂料助剂, 油田助剂和农药等。

Molecular formula $\text{CH}_2\text{CHCONH}_2$, white flake crystal, toxic! Soluble in water, methanol, ethanol, propanol, slightly soluble in ethyl acetate, chloroform, slightly soluble in benzene, the molecule has two active centers, both weak alkali, weak acid reaction. Mainly used to produce a variety of copolymers, homopolymers and modified polymers which are widely used in oil exploration, medicine, metallurgy, paper-making, paint, textile, water treatment and pesticide, etc.

技术指标 / Technical Index

项目 Item	指标 Index
外观 Appearance	白色片状晶体 White crystal powder (flake)
含量 (%) Content (%)	≥ 98
水分 (%) Moisture (%)	≤ 0.7
铁 (PPM) Fe (PPM)	0
铜 (PPM) Cu (PPM)	0
色度 (Hazen) Chroma (30% Solution in Hazen)	≤ 20
不溶物 (%) Insoluble (%)	0
阻聚剂 (PPM) Inhibitor (PPM)	≤ 10
电导率 (50% 水溶液) ($\mu\text{s}/\text{cm}$) Conductivity (50% solution in $\mu\text{s}/\text{cm}$)	≤ 20
PH	6-8

生产方法 / Production Process

丙烯腈微生物催化技术生产。微生物催化技术生产的丙烯酰胺单体, 具有高纯度、活性强、杂质含量低、不含铜铁离子的特点, 特别适用于制造高聚合度、分子量分布比较整齐的聚合物。

Adopts the original carrier-free technology by Tsinghua University. With the characteristics of higher purity and reactivity, no copper and iron content, it is especially suitable for polymer production.

产品包装 / Packaging

25KG 三合一复合纸袋。

25KG 3-in-1 composite bag with PE liner.

注意事项 / Cautions

(1) 有毒! 使用时要避免人体直接接触。

(2) 本品易升华, 应注意密封, 并放置阴凉通风处保存, 保质期 12 个月。

(1) Toxic! Avoid direct physical contact with the product.

(2) The material is easy to sublimate, please keep the package sealed, and stored in dry and ventilated place. Shelf time: 12 months



WATER TREATMENT

水处理领域

阴离子聚丙烯酰胺 (非离子聚丙烯酰胺) Anionic Polyacrylamide (Nonionic Polyacrylamide)

产品用途 / Application

阴离子和非离子聚丙烯酰胺广泛应用于石油, 冶金, 电力, 化工, 煤炭, 造纸, 印染, 制革, 制药食品, 建材等行业中絮凝及固液分离, 在工业废水治理领域应用十分广泛。

Anionic polyacrylamide and Nonionic polyacrylamide widely used in oil, metallurgy, electricity chemical, Coal, paper, printing, leather, pharmaceutical food, building materials and so on for flocculating and solid-liquid separation process, meanwhile widely used in industrial wastewater treatment.

技术指标 / Technical Index

型号 Product Name	电荷密度 Electric Density	分子量 Molecular Weight
5500	极低 Extreme-Low	中低 Middle-low
5801	很低 Very low	中低 Middle-low
7102	低 Low	中 Middle
7103	低 Low	中 Middle
7136	中 Middle	高 High
7186	中 Middle	高 High
L169	高 High	中高 Middle-High

阳离子聚丙烯酰胺 Cationic Polyacrylamide

产品用途 / Application

阳离子聚丙烯酰胺广泛应用于工业废水, 市政污水领域的污泥脱水, 在工业废水中用于絮凝沉降. 可根据不同的污泥及污水性质选用不同离子度的阳离子聚丙烯酰胺。

Cationic Polyacrylamide widely used in industrial wastewater ,sludge dewatering for municipal and flocculating setting. Cationic polyacrylamide with different ionic degree can be selected according to different sludge and sewage properties.

技术指标 / Technical Index

型号 Product Name	电荷密度 Electric Density	分子量 Molecular Weight
9101	低 Low	低 Low
9102	低 Low	低 Low
9103	低 Low	低 Low
9104	中低 Middle-low	中低 Middle-low
9106	中 Middle	中 Middle
9108	中高 Middle-high	中高 Middle-high
9110	高 High	高 High
9112	高 High	高 High



OIL EXPLOITATION

石油开采领域

三次采油 (EOR) 用聚合物 Polymer for tertiary oil recovery (EOR)

本公司可根据油田各区块不同的地址条件 (地温、矿化度、渗透率、油粘度) 等指标, 专门设计不同型号聚合物与之匹配, 从而有效提高采收率、降低含水量。常用型号如下:

The company can customize different types of polymers according to different location conditions (ground temperature, salinity, permeability, oil viscosity) and other indicators of each block of the oilfield, so as to effectively improve oil recovery rate and reduce water content. Common models are as follows:

产品型号 Product name	电荷密度 Electric density	分子量 Molecular weight	适应范围 Application
7226	中 Middle	高 High	中低矿化度、中低等地温 Medium low salinity, medium low geotemperature
60415	低 Low	高 High	中等矿化度、中等地温 Medium salinity, medium geotemperature
61305	很低 Very low	高 High	高矿化度、高地温 High salinity, high geotemperature

调剖堵水剂 Profile Control and Water Plugging Agent

调剖堵水剂根据不同的地质状况及孔隙大小分子量可在 50~2000 万之间进行选择, 可实现延缓交联、预交联、二次交联三种不同方式调剖堵水功能。

According to different geological conditions and pore size, the molecular weight can be selected among 500,000 and 20 million, which can realize three different ways of profile control and water plugging function: delaying cross-linking, pre-crosslinking and secondary cross-linking.

产品型号 Product name	电荷密度 Electric density	分子量 Molecular weight
5011	很低 Very low	极低 Extreme low
7052	中 Middle	中 Middle
7226	中 Middle	高 High

压裂用高效减阻剂 High Efficiency Drag Reducer for Fracturing

压裂用高效减阻剂, 广泛应用于页岩油、气生产中的压裂减阻及携沙。具有以下特点: i) 即配即用, 具有高效减阻及携沙性能, 易于返排。ii) 有适合清水及含盐水配制的不同型号。

Efficient drag reducing agent for fracturing, widely used in fracturing drag reduction and sand carrying in shale oil and gas production. It has following characteristics: i) Ready to use, has high drag reduction and sand carrying performance, easy to flow back. ii) There are different models suitable for the preparation both with fresh water and salt water.

产品型号 Product name	电荷密度 Electric density	分子量 Molecular weight	适应性 Application
7196	中 Middle	高 High	清水及含盐不高水 Clean water and low brine
7226	中 Middle	高 High	中低含盐水 Low to medium brine
40415	低 low	高 High	中低含盐水 Medium brine
41305	很低 Very low	高 High	高含盐水 High brine

钻井液包被剂 Drilling Fluid Wrapping Agent

钻井液包被剂加入钻井液后可有效控制表观粘度、塑性粘度、滤失量。能有效包被钻屑、防止钻屑泥水化, 有利于井壁稳定, 同时还具有抗高温、抗盐能力。

Applying drilling fluid coating agent to drilling fluid can effectively control the apparent viscosity, plastic viscosity and filtration loss. It can effectively wrap the cuttings and prevent the cuttings mud from hydration, which is beneficial to stable the well wall, and also give the fluid with the resistance to high temperature and salt.

产品型号 Product name	电荷密度 Electric density	分子量 Molecular weight
6056	中 Middle	中低 Middle low
7166	中 Middle	高 High
40415	低 Low	高 High



PAPER MAKING INDUSTRY

造纸领域

造纸分散剂

Dispersing Agent for Paper Making

造纸工艺过程中加入聚丙烯酰胺分散剂，可以有效防止纤维的团聚，可以提高纸张的均匀度。本公司的造纸分散剂均可在 60min 内溶解，低添加量下能促进造纸纤维的良好分散和极佳的纸张成型效果，改善纸浆均匀度和纸张的柔软度，还能使纸的强度性能增高。适用于各种卫生纸、餐巾纸、面巾纸等家庭生活用纸及其他薄页纸等，在某些纸厂可完全取代 PEO

In paper making process, PAM is used as dispersing agent to prevent fiber agglomeration and improve paper evenness. Our product can be dissolved within 60 minutes. Low addition amount can promote the good dispersion of paper fiber and excellent paper forming effect, improving the evenness of pulp and the softness of paper, and increasing the strength of paper. It is suitable for toilet paper, napkin and other daily used paper.

产品型号 Product name	电荷密度 Electric density	分子量 Molecular weight
Z7186	中 Middle	高 High
Z7103	低 Low	中 Middle

短纤维回收脱水剂

Staple fiber recovery dehydrator

造纸废水中含有短、细小纤维，经絮凝回收后，利用滚动脱水干燥进行回收。选用公司产品可有效降低含水率

Papermaking wastewater contains short, fine fibers after flocculation recovery, then recovery by rolling dehydration drying. It can reduce moisture content by use our product

产品型号 Product name	电荷密度 Electric density	分子量 Molecular weight
9103	低 Low	低 Low
9102	低 Low	低 Low

造纸助留助滤剂

Retention and Filter Agent for Paper Making

阳离子助留助滤剂可以提高纤维、填料、细小纤维和其他化学品的保留，带来清洁稳定的湿部化学环境，节约浆料和各种化学品的消耗，降低生产成本，提高纸张品质和纸机生产效率。良好的助留助滤剂是保证纸机平稳运行和良好纸张质量的先决条件和必要因素。要根据不同的条件选择合适的产品，通常情况下高分子量的聚丙烯酰胺对体系 PH 适应更广（PH 范围为 4-10）

It can improve the retention rate of fiber, filler and other chemicals, bringing clean and stable wet chemical environment, saving the consumption of pulp and chemicals, reducing production costs, and improving paper quality and paper machine production efficiency. Good retention and filter agent is the prerequisite and necessary factor to ensure the smooth operation of the paper machine and good paper quality. High molecular weight polyacrylamide is more widely suitable for different PH value. (PH range 4-10)

产品型号 Product name	电荷密度 Electric density	分子量 Molecular weight
Z9106	中 Middle	中 Middle
Z9104	低 Low	中 Middle



MINING

矿产领域

K 系列聚丙烯酰胺 K series Polyacrylamide

聚丙烯酰胺应用于煤炭、金、银、铜、铁、铅锌、铝、铀、镍、磷、钾、锰、盐等矿物的开采加工及尾矿处理过程，主要用途是提高固液分离的效率和回收率；其中在煤炭工业中，煤浆与尾矿的沉降和澄清、尾矿过滤和离心过程中的固液分离；在金或银或铜矿中，过滤槽前浓缩机加入的沉降剂；在 PH 值较低（小于 4）的矿液中，如铅锌矿中，用于沉降添加剂等；在铝矿中，当铝酸钠溶液和赤泥分离后，在洗涤过程中添加的一种助剂，以促进赤泥颗粒快速沉降，得到符合要求的澄清溢流。

Polyacrylamide is used in exploitation and tailing disposal of minerals, such as, coal, gold, silver, copper, iron, lead, zinc, aluminum, nickel, potassium, manganese and etc. It is used to improve efficiency and recovery rate of solid and liquid.

产品型号 Product name	电荷密度 Electric density	分子量 Molecular weight
K5500	极低 Extreme low	低 Low
K5801	极低 Extreme low	低 Low
K7102	低 low	中低 Middle low
K6056	中 Middle	中低 Middle low
K7186	中 Middle	高 High
K169	很高 Very high	中高 Middle high

Furfuryl alcohol and Foundry chemicals

糠醇及铸造用化学品系列

公司与华东理工大学合作最早采用釜式连续化反应、连续化蒸馏工艺生产糠醇，完全实现了低温反应、远程自控操作，质量更稳定、成本更低。铸造材料已形成了较完备的产业链，在工艺及技术创新上有了质的飞跃，品种齐全，质量稳定，可按客户要求，开发生产专用产品。拥有专业的生产团队、研发团队及服务团队，能及时帮助客户解决铸造类难题，在铸造行业领域中享有良好口碑。

Our company cooperates with East China University of Science and Technology, and firstly adopts continuous reaction in kettle and Continuous distillation process for the production of Furfuryl alcohol. Entirely realized the reaction at low temperature and automatic remote operation, making the quality more stable and production cost lower. We have comprehensive product chain for casting materials, and made great progress in the technique and product varieties. Special products made to order is also available as per the request from the clients. We have professional teams enjoying good reputation in the industry for production, research and service, whom can solve your casting problems timely.

糠醇

Furfuryl alcohol

CAS: 98-00-0 分子式: C₅H₆O₂ 分子量: 98.1

CAS:98-00-0 Molecular formula:C₅H₆O₂ Molecular Weight:98.1

物理性状 / Physical properties

淡黄色液体, 暴露在日光或空气中会变成棕色或深红色。可燃、有苦杏仁味、能与水混溶, 不溶于石油烃。遇酸易聚合并发生剧烈反应, 生成不易熔化的树脂。

Light yellow flammable liquid with bitter almond flavor, it will turn brown or deep red when exposed to sunlight or air. It is miscible with water, insoluble in petroleum hydrocarbons. It is easy to polymerize and react violently in case of acid, forming resin that is not melted.

产品用途 / Application

本品是有机合成的原料之一, 可制乙酰丙酸, 各种性能的呋喃树脂、糠醇-脲醛树脂及酚醛树脂等, 以它为原料做的增塑剂之耐寒性优于丁、辛醇酯类, 又是呋喃树脂、清漆、颜料的良好溶剂和火箭燃料。此外, 还用于合成纤维、橡胶、农药和铸造工业等。

As one of the raw materials for organic synthesis, it can be used to produce levulinic acid, furan resin with various properties, furfuryl alcohol-urea resin and phenolic resin. The cold resistance of plasticizers made from it is better than that of Butanol and Octanol esters. It is also good solvents for furan resins, varnishes, and pigments, and rocket fuels. In addition, it is also used in synthetic fibers, rubber, pesticides and foundry industries.

包装与储存 / Packaging and storage

用净重 240 公斤的新铁桶包装。19.2 吨 (80 桶) /20 尺集装箱。用净重 21-25 吨集装罐或散装发运。

贮存在阴凉、干燥、通风处, 严禁火种, 切忌与强酸性、强氧化性化学药品及食品共贮存。

Packed in iron drum with net weight of 240kg. 19.2 tons (80 drums) in 20FCL .Or 21-25 tons in ISO TANK or bulk. Store in a cool, dry, ventilated place. Tinder is strictly prohibited. Do not store with strong acidic, oxidizing chemicals and food.

规格 / Specification

◎主含量: 98.0%MIN	◎ Main content: 98.0%MIN
◎水分: 0.3%MAX	◎ Moisture: 0.3%MAX
◎残醛: 0.7%MAX	◎ Residual aldehyde: 0.7%MAX
◎酸份: 0.01mol/L MAX	◎ Acid content: 0.01mol/L MAX
◎比重: (20/4°C):1.159-1.161	◎ Specific gravity: (20/4°C): 1.159-1.161
◎折光率: 1.485-1.488	◎ Refractive index: 1.485-1.488
◎浊点: 10°C MAX	◎ Cloud point: 10°C MAX

自硬呋喃树脂

Self-hardening Furan Resin

特点 / Characteristic

1. 流动性好, 易于混砂, 铸件表面光洁, 尺寸精度高。
2. 游离醛含量低, 作业时气味小, 烟气少, 具有较好的环保性能。
3. 可用于铸钢、铸铁、有色金属铸件的生产, 固化性能优异, 强度高、透气性好且易于脱模。
4. 砂型易溃散、易再生。可减少铸造成本。

1. Good fluidity, easy to mix sand, smooth casting surface, high dimensional accuracy
2. Low free aldehyde content, low odor during operation, less smoke, with better environmental performance
3. It can be used for the production of cast steel, cast iron, and non-ferrous metal castings. It has excellent curing properties, high strength, good permeability, and easy release.
4. The sand mold is easy to break up and regenerate. Can reduce casting costs

包装与储存 / Packaging and storage

净重 1000kg 的塑料桶密封包装或 230kg 的铁桶包装, 需要贮存在阴凉干燥处, 避免受热及阳光直射; 树脂不能与固化剂等酸性物质直接混合, 否则会引起剧烈反应。

Sealed plastic drums with a net weight of 1000kg or iron drums with a weight of 230kg should be stored in a cool and dry place to avoid heat and direct sunlight; the resin cannot be directly mixed with acidic substances such as curing agents, otherwise it will cause a violent reaction.

规格 / 型号 / Specifications/Model

型号 Model	密度 g/cm ³ Density g/ cm ³	粘度 mpa.s ≤ Viscosity mpa.s ≤	游离甲醛 % ≤ Formaldehyde %	含氮量 % ≤ Nitrogen content % ≤	保质期 (月) Shelf life (month)	适用范围 Applicable scope
RHF-840	1.15-1.20	25-30	0.2	5.8	6	普通灰铁小件 Ordinary gray iron small pieces
RHF-850	1.15-1.18	20-25	0.16	5	6	灰球铸件中小件 Small and medium gray iron castings
RHF-860	1.12-1.18	25-30	0.10	4.5	6	灰球铸件 Gray iron cast
RHF-300	1.10-1.15	30-35	0.08	4	6	中大型球墨铸件及灰铁铸件 Medium and large ductile castings and gray iron castings
RHF-863	1.10-1.15	15-20	0.03	3	6	大型灰球铸件 Large gray cast iron
RHF-900	1.10-1.16	30-35	0.01	0.3	3	大型铸钢件合金铸件 Large alloy steel castings
MF-901	1.12-1.18	25-30	0.01	0.7	3	大型铸钢及合金钢铸件 Large alloy steel castings
RHF-286	1.12-1.16	18--22	0.02	2.7	3	大型风电铸件 Large cast steel and alloy steel castings
RHF-860C	1.12-1.18	22-26	0.08	4.5	6	铸铝铸件 Cast aluminum casting

备注: 可按客户要求, 开发生产专用产品。

自硬呋喃树脂配套用磺酸固化剂 Sulfonic Acid Curing Agent for Self-hardening Furan Resin

物理性状 / Physical properties

外观浅褐色透明液体，结晶温度≤-15°C。

Light brown transparent liquid, crystallization temperature ≤-15°C.

包装与储存 / Packaging and storage

塑料桶密闭包装，净重 25kg 或 1000kg。请储存于通风阴凉处，避免阳光直射，禁止明火。

严禁与树脂直接混合，以免发生爆炸事故。

使用时请穿戴劳保用品，如不慎与身体直接接触，请立即用清水连续清洗，必要时接受医生治疗。

Sealed packaging in plastic drums, net weight 25kg or 1000kg. Please store in a ventilated and cool place, avoid direct sunlight, and prohibit open flames.

It is strictly forbidden to directly mix with resin to avoid explosion accidents.

Please wear labor protection equipment when using it. If come into direct contact with your body, please immediately wash it with clean water and receive medical treatment if necessary.

规格 / 型号 / Specifications/Model

型号 Model	密度 g/cm ³ Density g/cm ³	粘度 mpa.s ≤ Viscosity mpa.s ≤	酸度 以硫酸计 % Acidity in sulfuric acid %	游离硫酸 % ≤ Free sulfuric acid % ≤	适用砂温范围 °C Applicable sand temperature range °C	适用范围 Applicable scope
RHG-04	1.10-1.15	10-15	25	4-6	25--30	灰球铁铸件 Gray Ductile Iron Casting
RHG-03	1.15-1.18	15-18	30	6-8	20-25	灰球铁铸件 Gray Ductile Iron Casting
RHG-09	1.16-1.20	16-20	35	8-9	15-20	灰球铁铸件 Gray Ductile Iron Casting
RHG-10	1.25-1.30	20-25	40	9-11	0-10	灰球铁铸件 Gray Ductile Iron Casting
RHG-12	1.30-1.35	20-25	45	12-14	零下 5-10	灰球铁铸件 Gray Ductile Iron Casting
RHG-16	1.35-1.40	25-30	50	16-18	零下 10-15	灰球铁铸件 Gray Ductile Iron Casting
RHG-AZ	1.35-1.40	20-25	AB 固化剂智能控制仪专用 Special for AB curing agent intelligent controller			铸钢专用 Cast steel special
RHG-BZ	1.15-1.20	10-13				
RHG-A	1.16-1.20	16-20				灰球铁铸件 Gray Ductile Iron Casting
RHG-B	1.10-1.15	10-13				

AB 固化剂树脂自动控制仪优点 / AB Curing Agent Intelligent Controller

保持脱模时间恒定：在砂温 0-60°C 的范围内，实现恒定起模。减少头砂和尾砂。

固化速度、加入量根据砂温和天气温度自动调整实现自控。

全年只需高酸度磺酸固化剂和低酸度磺酸固化剂，便于生产管理。

优化树脂砂工艺：保持固化剂最佳配比，充分发挥树脂的效能降低加入量，提高型芯质量，减少铸件废品，增加经济效益。

树脂、固化剂加入量和砂流量实现屏幕显示更直观。

实现型砂背砂、面砂树脂加入量一键式转换，操作方便经济实用降低树脂加入量。

Keep the demoulding time constant: within the sand temperature 0-60 °C , to achieve a constant mold release. Reduce head and tail sand. The curing speed and the amount of addition are automatically adjusted according to the sand temperature and weather temperature . Only high and low acidity sulfonic acid curing agent are needed throughout the year, which is convenient for production management. Optimize the resin sand process: maintain the best ratio of curing agent, give full play to the effectiveness of the resin, reduce the amount of addition, improve the quality of the core, reduce casting waste, and increase economic benefits. The addition amount of resin and curing agent ,the flow rate of sand realize the screen display more intuitively. Realize one-click conversion of resin addition amount of molding sand backing sand and surface sand, easy to operate, economical and practical, reduce resin addition amount.

新一代自硬碱性酚醛树脂 A New Generation of Self-hardening Alkaline Phenolic Resin

特性 / Properties

系统不含铸造有害元素：氮、硫、磷，尤其适合碳钢、合金钢、球铁铸件铸造生产。

在高温条件下能二次固化，具有良好的热塑性，可减少铸件热裂纹、脉纹、气孔缺陷。

在作业过程中几乎不产生有害及刺激性气味，作业环境大为改善。

The system does not contain harmful casting elements: nitrogen, sulfur, phosphorus, especially suitable for casting production of carbon steel, alloy steel, ductile iron castings.

It can be secondary cured under high temperature conditions and has good thermoplasticity, which can reduce the thermal cracks, veins and pore defects of castings. During the operation process, no harmful and irritating odors are generated, and the working environment is greatly improved.

包装与储存 / Packaging and storage

250kg 铁桶包装或 1000kg 吨桶密封包装。储存在阴凉通风处，作业时请穿戴劳保用品，以防灼伤身体。

250kg iron drum packaging or 1000kg ton drum sealed packaging. Stored in a cool and ventilated place, please wear labor protection equipment to prevent burns.

规格 / 型号 / Specifications/Model

碱性酚醛树脂
alkaline phenolic resin

型号 Model	密度 g/cm ³ Density g/cm ³	粘度 mpa.s ≤ Viscosity mpa.s ≤	游离甲醛 % ≤ Formaldehyde % ≤	PH 值 ≥ PH value ≥	保质期 ≤ 25°C Shelf life ≤ 25°C
JF-801	1.25-1.30	63-68	0.16	0.16	三个月 3months
JF-802	1.28-1.35	65-68	0.12	0.12	三个月 3months

有机脂固化剂
Organic fat curing agent

型号 Model	密度 g/cm ³ Density g/cm ³	粘度 mpa.s ≤ Viscosity mpa.s ≤	酸度 % ≤ acidity % ≤	使用砂温 °C Sand temperature °C	固化速度 Curing speed
RHG80	1.05-1.20	20-26	0.2	30-35	慢 ↓ slow 快 ↓ quick
RHG60				15-25	
RHG40				0-10	
RHG20				-10-0	

热芯盒呋喃树脂 Hot Core Box Furan Resin

物理性状 / Physical properties

MFR 型热芯盒呋喃树脂具有强度高、气味小、发气量低、性能稳定等优点。

MFR type hot core box furan resin has the advantages of high strength, low odor, low gas output, stable performance.

产品用途 / Application

主要用作铸钢、铸铁、铸有色金属铸件砂型（芯）粘结剂。

Mainly used as sand (core) binder for cast steel, cast iron and non-ferrous metal castings.

包装与储存 / Packaging and storage

净重 230/240kg 铁通密封包装或按客户要求包装。

Net weight 230/240kg iron drum sealed packaging or according to customer requirements.

规格 / 型号 / Specifications/Mode

型号 Model	含氮量 % ≤ Nitrogen content % ≤	密度 g/cm ³ Density g/cm ³	粘度 mpa.s ≤ Viscosity mpa.s ≤	游离甲醛 % Formaldehyde %	适用范围 Application
RHR-114	14	1.1-1.3	800	1.2	铸铜、铸铝 Cast copper, cast aluminum



CO₂ 固化自硬碱性酚醛树脂 CO₂ Curing Self-hardening Alkaline Phenolic Resin

特点 / Characteristic

不含 N、P、S 等铸造有害元素，特别适应于碳钢、合金钢和球铁件的铸造生产

树脂中游离酚和游离醛含量低，环保健康

砂型（芯）溃散性好

树脂可使用时间长

工艺简单，生产效率高，可实现自动化生产

No harmful casting elements such as N, P, S, etc., especially suitable for casting production of carbon steel, alloy steel and ductile iron parts

Low content of free phenol and free aldehyde in resin, environmental protection and health

The sand mold (core) has good collapsibility

The resin can be used for a long time

The process is simple, the production efficiency is high, and automatic production can be realized

包装与储存 / Packaging and storage

应密闭储存于阴凉、干燥处，避免受热或日光照射。储存温度在 5°C ≤ 25°C 时，保质期 6 个月

铁桶包装，每桶净重 240kg。或按客户要求包装

(1) Sealed and stored in a cool, dry place, avoiding heat or sunlight. When the storage temperature is 5°C ≤ 25°C, the shelf life is 6 months (2) Packed in iron drums with a net weight of 240kg per drum. Or according to customer requirements

规格 / 型号 / Specifications/Model

型号 Model	外观 Appearance	密度 (g/cm ³ , 25°C) Density (g/cm ³ , 25°C)	粘度 (mpa.s, 25°C) Viscosity (mpa.s, 25°C)	游离甲醛 % Formaldehyde %	保质期 Appearance
MJ-800	棕红色透明液体 Brownish red transparent liquid	1.25-1.35	≤ 300	≤ 0.1	6 个月 6months



冷芯盒树脂

Cold Core Box Furan Resin

特点 / Characteristic

适用于铸钢、铸铁及有色金属铸件生产
强度高，树脂加入量少
耗胺小，固化效率高
无芳烃类物质，气味小，环境危害小

Suitable for the production of cast steel, cast iron and non-ferrous alloy castings
High strength and low resin addition
Low amine consumption and high curing efficiency
No aromatic hydrocarbons, low odor and low environmental hazard

包装与储存 / Packaging and storage

密闭储存于阴凉干燥处，避免受热或阳光照射，保质期 6 个月
可按客户要求包装

Sealed and stored in a cool and dry place, avoid heat or sunlight, the shelf life is 6 months
Can be packed according to customers' requirement.

规格 / 型号 / Specifications/Model

型号 Model	外观 Nitrogen content %≤	密度 (g/cm ³ , 25°C) Density (g/cm ³ , 25°C)	粘度 (mpa.s, 25°C) Viscosity (mpa.s, 25°C)	保质期 Shelf life
MFL I -203	淡黄色至棕色液体 Light yellow to brown liquid	1.05-1.15	≤ 250	6 个月 6months
MFL II -204	褐色液体 Brown liquid	1.05-1.20	≤ 100	6 个月 6months

注意事项 / Cautions

使用时请穿戴好劳保用品，如不慎直接与人体接触，立即用清水连续冲洗，必要时就医
本品为可燃液体，使用时应远离火源、热源。

Please wear good labor protection products during use. If you come into direct contact with the human body, rinse immediately with water and seek medical treatment if necessary.

This product is a flammable liquid, and it should be kept away from fire and heat sources during use.

低浓度 SO₂ 冷芯盒树脂

Low Concentration SO₂ Cold Core Box Resin

特点 / Characteristic

可显著改善铸件表面质量，提高尺寸精度，减少气孔等铸造缺陷
不含甲醛、苯酚、胺等有害气体，作业环境显著改善
树脂加入量少，强度高，发气量低，溃散性好
混合料有超长的可使用时间

Can significantly improve the surface quality of castings, increase dimensional accuracy, and reduce casting defects such as blowholes
No harmful gases such as formaldehyde, phenol, amine, etc., the working environment is significantly improved
The amount of resin added is small, the strength is high, the gas output is low, and the collapsibility is good
The mixture has a long service life

规格 / 型号 / Specifications/Model

	I	I	II	II
型号 Model	MXL-100	MXL-400	MXL-110	MXL-410
外观 Appearance	无色透明至淡黄色液体 Colorless transparent to light yellow liquid			
密度 (g/cm ³ , 25°C) Density (g/cm ³ , 25°C)	1.10-1.20	1.10-1.20	1.10-1.20	1.10-1.20
粘度 (mpa.s, 25°C) Viscosity (mpa.s, 25°C)	≤ 350	≤ 350	≤ 650	≤ 650
适用范围 Application	有色金属 Nonferrous alloy	铁、钢等黑色合金 Black alloys such as iron and steel	有色金属 Nonferrous alloy	铁、钢等黑色合金 Black alloys such as iron and steel

包装与储存 / Packaging and storage

应密闭储存于阴凉、干燥处，避免受热或日光照射，保质期 6 个月
铁桶包装，每桶净重 220kg。

Sealed and stored in a cool, dry place, keep away from heat and sunlight, the shelf life is 6 months.

Packed in iron drums with net weight of 240kg.

冷芯盒树脂用脱模剂

Release Agent for Cold Core Box Resin

特点 / Characteristic

显著降低脱模阻力，降低模具磨损，防止砂型（芯）损伤
大大提高砂型（芯）表面质量和劳动效率

Significantly reduce demoulding resistance, reduce mold wear, and prevent sand mold (core) damage
Greatly improve the surface quality and labor efficiency of the sand mold (core)

包装及储存 / Packaging and storage

应密闭储存于阴凉、干燥处，远离火源、热源。保质期 6 个月

MX-1 脱模剂用玻璃瓶包装，每瓶净重 0.75kg，20 瓶一箱。

MX-2, MX-3 脱模剂用铁桶包装，每桶净重 3kg，6 桶一箱。

It should be sealed and stored in a cool, dry place, away from fire and heat sources. Shelf life 6 months

The MX-1 release agent is packaged in glass bottles with a net weight of 0.75kg per bottle and a box of 20 bottles.

MX-2 and MX-3 release agents are packed in iron drums, with a net weight of 3kg per drum and a box of 6 drums.

规格 / 型号 / Specifications/Model

型号 Model	外观 Appearance	密度 (g/cm ³ , 25°C) Density (g/cm ³ , 25°C)	适用范围 Application
MX-1	银白色液体 Silvery white liquid	1.20-1.40	通用型，尤其适用于木模 Universal type, especially suitable for wood mold
MX-2	银白色液体 Colorless liquid	0.65-0.75	通用型，尤其适用于木模 Cold core box process, less adhesion of sand core surface
MX-3	银白色液体 Colorless liquid	0.92-1.00	通用型，尤其适用于木模 No VOC emissions
MX-4	银白色液体 White lotion	0.75-0.95	通用型，尤其适用于木模 Tidal sand process, water-containing, high safety

注意事项 / Cautions

使用时请穿戴好劳保用品，如不慎直接与人体接触，立即用清水连续冲洗，必要时就医

本品为可燃液体，使用时应远离火源、热源

Please wear good labor protection equipment when using it. If it comes into direct contact with the human body, rinse immediately with water immediately and seek medical treatment if necessary.

This product is a flammable liquid, and it should be kept away from fire and heat sources during use.

冷芯盒清洗剂

Cold Core Box Cleaning Agent

特点 / Characteristic

迅速溶解已固化的树脂膜和模具表面污垢，但又不损伤模具表面、排气塞和密封条等

迅速使排气塞通畅，提高砂型质量，保证尺寸精度

不需专用设备，操作简单

Quickly dissolve the cured resin film and the dirt on the surface of the mold, but do not damage the mold surface, exhaust plug and sealing strip, etc.

Quickly clear the exhaust plug, improve the quality of the sand mold, and ensure the dimensional accuracy

No special equipment is required, and the operation is simple

包装及储存 / Packaging and storage

应密闭储存于阴凉、干燥处，远离火源、热源。保质期 6 个月。

铁桶包装，每桶净重 4kg，6 桶 / 箱

Store in a cool and dry place, away from fire and heat. The shelf life is 6 months.

Packed in iron drums, net weight 4kg per drum, 6 drums/carton

规格 / 型号 / Specifications/Model

型号 Model	外观 Appearance	密度 (g/cm ³ , 25°C) Density (g/cm ³ , 25°C)	适用范围 Application
MXLQ-1	银白色液体 Colorless transparent liquid	0.92-0.98	冷芯盒金属膜 Cold core box metal film

注意事项 / Cautions

使用时穿戴好防护用品，如不慎直接与人体接触，立即用清水冲洗，必要时就医。

Wear protective equipment when using it. If it comes into direct contact with the human body, rinse immediately with water and seek medical treatment if necessary.

醇基铸造涂料

Alcohol-based Casting Coating

特点 / Characteristic

有良好的触变性和流平性，涂层无刷痕。具有优良的悬浮稳定性，便于操作使用。

发气量低，可减少铸件缺陷；

抗粘砂性好，铸件表面光洁，易清理。

It has good thixotropy and leveling, and the coating has no brush marks. Has excellent suspension stability, easy to operate and use.

Low gas generation, which can reduce casting defects;

Good anti-sticking sand, smooth casting surface, easy to clean.

包装及储存 / Packaging and storage

净重 25-30kg 的塑料桶密闭包装，1000kg 不锈钢罐包装。应在室内阴凉处储存，禁止阳光直射，注意防火。

Packed in plastic drums with a net weight of 25-30kg and 1000kg in stainless steel cans. It should be stored in a cool place indoors, direct sunlight is prohibited, pay attention to fire prevention.

规格 / 型号 / Specifications/Model

型号 Model	外观 Appearance	密度 g/cm ³ Density g/cm ³	粘度 (Φ4mm 流杯) Viscosity (Φ4mm Flow cup)	24 小时悬浮性 ≥ % 24-hour suspension ≥ %	保质期 (月) Shelf life (month)	适用范围 Application
RHT-201	黑色浆状 Black paste	1.20-1.30	13-19	95	3	中大型灰铁或球铁 Medium and large gray iron or ductile iron
RHT-202	灰黑色浆状 Gray-black paste	1.25-1.35	18-20	95	3	中小型灰铁及球铁 Small and medium gray iron and ductile iron
RHT-205	白色浆状 White paste	1.30-1.50	18-20	95	3	一般灰铁或球铁 General gray iron or ductile iron
RHT-206	红褐色浆状 Reddish brown paste	1.25-1.35	13-19	95	3	一般灰铁或球铁 General gray iron or ductile iron
RHT-207	白色浆状 White paste	1.50-1.80	18-20	95	3	普通铸钢铸件 Ordinary cast steel castings
RHT-204	白色浆状 White paste	1.70-2.20	25-30	98	3	大型铸钢合金钢铸件 Large cast steel alloy steel castings
RHT-208	灰色浆状 Grey paste	1.60-2.20	26-30	98	3	铸钢合金钢铸件 Cast steel alloy steel castings
RHT-209	白色浆状 White paste	1.90-2.20	23-29	98	3	大型铸钢铸件 Large cast steel and aluminum castings
RHT-306	灰白色浆状 White paste	1.90-2.30	23-30	98	3	高锰钢不锈钢铸件 High manganese steel stainless steel castings

不锈钢涂料罐优点 / Advantages of stainless steel paint cans

不锈钢涂料罐储存、运输安全可靠。不会有泄漏、外撒等现象。

罐可长时间重复利用不会造成废桶污染环境和材料浪费。

使用更便利，省时省力。不需要工人搅拌涂料。用时打开阀门即时出料。

人工搅拌涂料用的普通搅拌设备存在安全隐患，我司研发的防爆搅拌和气动搅拌更安全可靠。

罐体为不锈钢抛光内壁，涂料不会残留在罐壁上造成浪费。与塑料小桶相比较，每吨至少可节省 300 元。

企业在车间使用过程中，更能体现其价值，完全规避了小桶涂料在车间到处乱放，桶内醇基溶剂随时挥发，极易发生易燃易爆危险，不符合安全及环保要求规定的现象。

The storage and transportation of stainless steel paint cans are safe and reliable. There will be no leakage, external scattering and other phenomena.

The tank can be reused for a long time without causing waste barrels to pollute the environment and waste materials.

It is more convenient to use and saves time and effort. No workers are required to stir the paint. When the valve is used, the material is discharged immediately.

The common mixing equipment used for manual mixing of paints has hidden safety risks. The explosion-proof mixing and pneumatic mixing developed by our company are safer and more reliable.

The tank body is a stainless steel polished inner wall, and the paint will not remain on the tank wall to cause waste. Compared with plastic kegs, it can save at least 300 yuan per ton.

In the process of using the workshop, the enterprise can better reflect its value, completely avoiding the small bucket of paint being scattered everywhere in the workshop, the alcohol-based solvent in the bucket is volatilized at any time, and it is extremely prone to flammable and explosive danger, which is not in line with safety and environmental protection.

V 法造型专用涂料

Special Coating for V Method Modeling

特点 / Characteristic

优良的附着性、悬浮性，高温冲击下稳定性好，烘干或自干后强度高，不分层，不开裂。

耐火度高，优良的剥离性，发气量低，铸件表面光洁，无气孔，无粘砂现象。

适用于铸铁、铸钢和有色合金铸件。

可以开发满足生产要求的专用产品。

Excellent adhesion and suspension, good stability under high temperature impact, high strength after drying or self-drying, no delamination and no cracking.

High refractoriness, excellent peelability, low outgassing, smooth casting surface, no pores and no sticky sand.

Suitable for cast iron, cast steel and non-ferrous alloy castings.

Special products that meet production requirements can be developed.

包装及储存 / Packaging and storage

净重 25-30kg 的塑料桶米波包装，应在室内阴凉处储存，注意密封储存，禁止阳光直射，注意防火。

Packed in a plastic barrel with a net weight of 25-30kg Meepo should be stored indoors in a cool place, pay attention to sealed storage, prohibit direct sunlight, and pay attention to fire prevention.

规格 / 型号 / Specifications/Model

型号 Model	外观 Appearance	粘度 mpa.s ≤ Viscosity mpa.s ≤	粘度 (Φ4mm 流杯) Viscosity (Φ4mm Flow cup)	2 小时悬浮性 ≥ % 2-hour suspension ≥ %	发气量 ≤ Gas volume ≤	适用范围 Application
MT-302	黑色浆状 Black paste	1.2-1.3	25-28	95	20	一般灰铁或球铁件 Cold core box metal film
MT-305	灰白色浆状 Off-white paste	1.25-1.35	25-28	95	20	一般及球铁件 General and ductile iron parts

粉状涂料

Powder Coating

特点 / Characteristic

悬浮稳定性好，触变性、流平性优良和易燃的特点。

可采用刷涂、流涂、漫涂、喷涂等施涂方式。

涂料涂层强度高，发气量低，不开裂，不起泡，耐冲刷好、抗渗透强。

涂层表面光洁，可显著消除表面缺陷，提高铸件质量。

- (1) Good suspension stability, excellent thixotropy, leveling and flammability.
- (2) Brushing, flow coating, diffuse coating, spraying and other application methods can be used.
- (3) The coating has high coating strength, low outgassing, no cracking, no blistering, good erosion resistance and strong penetration resistance.
- (4) The surface of the coating is smooth, which can significantly eliminate surface defects and improve the quality of castings.

使用说明 / Instructions for use

使用前将干粉涂料稀释到使用密度状态，并搅拌均匀。

Dilute the dry powder coating to the density of use before use, and stir evenly.

产品包装 / Packaging

25kg 编织袋或 1000kg 吨袋

25kg woven bag or 1000kg ton bag

规格型号 / Specifications/Model

型号 Model	适用范围 Application
MT-101	铸钢 Cast steel
MT-102	铸铁 cast iron
MT-103(V 法干粉涂料) MT-103(V method dry powder coating)	铸钢、铸铁、有色合金铸件 Cast steel, cast iron, non-ferrous alloy castings

YJ-2 型呋喃树脂系列产品

YJ-2 Type Furan Resin Series Products

特点 / Characteristic

YJ-2 型呋喃树脂是在原 YJ 呋喃树脂基础上研制出的第二代新技术产品，其物理力学性能特别是粘结强度、抗拉强度有了显著提高。

优良的耐腐蚀性能，耐强酸、强碱、电解质溶液和有机溶剂，但不耐强氧化性介质。

可耐 180-200 度高温。

YJ-2 型呋喃树脂系列产品，是由改性糠醇树脂和混有固化剂的各种粉状填料构成的双组份耐腐蚀材料。包括：呋喃胶泥、呋喃玻璃钢、呋喃砂浆和呋喃混凝土。

YJ-2 type furan resin is a second-generation new technology product developed on the basis of the original YJ furan resin. Its physical and mechanical properties, especially the bonding strength and tensile strength, have been significantly improved.

Excellent corrosion resistance, resistant to strong acids, strong bases, electrolyte solutions and organic solvents, but not resistant to strong oxidizing media.

High temperature resistance of 180-200 degrees.

YJ-2 type furan resin series products are two-component corrosion-resistant materials composed of modified furfuryl alcohol resin and various powdered fillers mixed with curing agent. Including: furan mastic, furan fiberglass, furan mortar and furan concrete.

规格型号 / Specifications/Model

糠醇树脂

Furfuryl alcohol resin

丙酮不溶物 % Acetone insoluble %	水分 % Moisture %	粘度 mpa.s ≤ Viscosity mpa.s ≤	密度 g/cm ³ Density g/cm ³
≤ 0.5	≤ 0.5	≥ 10 万	≥ 1.22

YJ 型呋喃液

YJ type furan liquid

外观 Appearance	粘度 (20°C) 涂 4 杯 Viscosity (20°C) Painted 4 cups	密度 g/cm ³ Density g/cm ³
棕褐色液体 Brown liquid	20-30 秒 20-30s	≥ 1.18

主要用途 / Application

主要用于生产玻璃钢和呋喃胶泥。

It is mainly used to produce FRP and furan clay.

铸造辅助材料

Casting Auxiliary Materials

封箱泥条 / Sealing Sticks

性能特点 / Performance characteristics

本产品具有优良的可塑性，在上下型合箱后不断裂，能有效防止铸件飞边、跑火等缺陷，使用方便，节省工时，适用于各种砂型。

This product has excellent plasticity, and does not break after the upper and lower boxes are combined. It can effectively prevent defects such as flashing and fire running of castings. It is easy to use and saves working hours. It is suitable for various sand molds.

规格 / Specifications

直径为 4.5、6、8、10、12 (mm) Diameter is 4.5, 6, 8, 10, 12 (mm)

使用说明 / Instructions for use

使用该产品，只需沿型腔周边 30-50mm 处均匀铺放即可；用户可根据砂型尺寸及浇注重量，选用合适的泥条直径。

To use this product, you only need to lay it evenly along the circumference of the mold cavity 30-50mm; the user can choose the appropriate diameter of the stick according to the size of the sand mold and the pouring weight.

包装及储存 / Package and storage

缠绕在塑料轴上，每件 1Kg 或 1.5Kg，塑料袋密封包装，每箱 16Kg；存放在室内阴凉处，保存期 3 个月。

Wrapped around a plastic shaft, 1Kg or 1.5Kg per piece, sealed in plastic bags, 16Kg per box; stored in a cool place indoors, storage period is 3 months.

透气绳 / Breathable rope

性能特点 / Performance characteristics

聚丙烯纤维编织而成的空心绳，置于砂型中有利于浇注过程中产生的气体顺利排放，防止铸件产生气孔。

Hollow rope woven from polypropylene fiber, placed in the sand mold, is conducive to the smooth discharge of the gas generated during the casting process and prevents blowholes in the casting.

产品规格 / Product specification

直径 (mm) 12、10、8、6 等规格。 Diameter (mm) 12, 10, 8, 6 and other specifications.

封箱泥膏 / Sealing Mud Paste

性能特点 / Performance characteristics

本品为棕红色膏状物，由多种复合材料制成，塑性好，易成型，密封性好，可有效防止铸件跑火、飞边等缺陷；提高铸件尺寸精度，使用方便，节约工时，适用于各种砂型。

This product is a brown-red paste, made of a variety of composite materials, with good plasticity, easy to form, and good sealing, which can effectively prevent casting defects such as running fire and flash; improve the dimensional accuracy of castings, Easy to use, save working hours, suitable for all kinds of sand molds.

使用说明 / Instructions for use

挤出封箱泥膏，涂敷于下型面，合箱即可。 Extrude the sealing paste and apply it to the lower molding surface, just close the box.

型号规格 / Specifications/Model

型号 Model	外观 Appearance	发气量 (mL/g) Gas volume (mL/g)	耐火度 Refractoriness
MN-01	灰白色粘稠膏体 Off-white sticky paste	< 18	> 1600°

包装及储存 / Packaging and storage

外用纸箱，内用塑料袋包装，每箱净重 20Kg；存放在阴凉通风的室内，避免受潮，保质期 3 个月。

Net weight 20Kg Carton box; stored in cool and ventilated place, avoid moisture, shelf life 3 months.

自硬砂脱模剂 / Self-hardening sand release agent

性能特点 / Performance characteristics

外观为银白色悬浮液体，具有挥发快、脱模效果等优点，喷刷一次可连续使用 5-10 次，能有效防止树脂砂、水玻璃砂粘模问题。

Performance characteristics: The appearance is silver-white suspension liquid, which has the advantages of fast volatilization and demoulding effect. It can be used continuously for 5-10 times in one spraying, which can effectively prevent the resin sand and water glass sand from sticking to the mold.

使用说明 / Instructions for use

使用前将脱模剂摇匀，将模型表面清理干净，用喷或刷的方式将该产品涂覆到模型表面，待涂面干燥后即可填砂造型。

Shake the release agent before use, clean the surface of the model, apply the product to the surface of the model by spraying or brushing, and fill the sand after the coating surface is dry.

包装及储存 / Packaging and storage

脱模剂用铁桶密封包装、2.5Kg/ 桶，每箱净重 15Kg。；该产品含有易挥发、易燃的有机溶剂，注意密封保存，远离火源、热源，应储存在通风阴凉处，保质期 6 个月。

The release agent is sealed in iron drums, 2.5Kg/drum, net weight 15Kg per carton. The product contains volatile and flammable organic solvents, pay attention to sealed storage, away from fire and heat sources, should be stored in a ventilated and cool place, the shelf life is 6 months.

粘结剂 / Adhesive

性能特点 / Performance characteristics

干燥速度快，强度高，发气量低，使用方便；适用于树脂砂、水玻璃砂、油砂等型芯的粘合与修补。

Fast drying speed, high strength, low gas output, easy to use; suitable for bonding and repairing of resin sand, water glass sand, oil sand and other cores.

规格型号 / Specifications/Model

型号 Model	外观 Appearance	2h 抗拉强度 (MPa) 2h tensile strength (MPa)	特点 Features
MN-01	棕色粘稠膏体 Brown sticky paste	1.0	普通型 Normal type
MN-02	棕色粘稠膏体 Brown sticky paste	1.1	快干型 Quick-drying

包装及储存 / Packaging and storage

外用纸箱，内用塑料小瓶或塑料袋包装，每箱净重 20Kg；存放在阴凉通风的室内，避免受潮，保质期 3 个月。

Small packaging of plastic vials or plastic bags in 20Kg Carton box, stored in cool and ventilated place to avoid moisture, shelf life is 3 months.

碳化硅制泡沫陶瓷过滤器 / Silicon carbide foam ceramic filter

性能特点 / Performance characteristics

1. 滤渣，减少渣对铸件的危害。2. 滤出金属液中的气泡。3. 整流，减轻金属液的二次氧化和吸气，提高铸件质量。

1. Slag filtering to reduce the harm of slag to castings. 2. Filter out bubbles in the metal liquid. 3. Rectifying, reducing the secondary oxidation and suction of the molten metal, and improving the quality of castings.

用途 / Application

适用于球磨铸铁、灰铸铁和铜合金铸造。 Suitable for casting of ball milled cast iron, gray cast iron and copper alloy.

包装 / Packaging

25kg 编织袋或 1000kg 吨袋。

25kg woven bag or 1000kg ton bag.

Environmental Friendly

环保溶剂及其他精细化学品系列

公司自 2016 年在齐鲁化工园区上马 10 万吨环保溶剂及精细化学品项目，总投资 3.2 亿元；2020 年实现两个车间投产。未来将围绕醇醚环保溶剂、涂料助剂等加快产品链延伸，扩大产能，提高附加值；并进一步依托公司丙烯酰胺、糠醇产业链，做更多精细化产品项目，完善产品链，提高项目的竞争力。

Our company has launched 100,000 ton environmental friendly solvents and fine chemicals projects in Qilu Chemical Park, with a total investment of CNY 320 million. Two workshops has been put into operation in 2020. In the future, we will speed up the extension of product chain and production capacity to increase added value in alcohol ether environmental protection solvent and coating additives. We shall carry out more fine chemical projects relying on the industrial chain of Acrylamide and Furfural alcohol, improving the product chain and strengthening the competitiveness of the project.

二乙二醇特丁基醚 Diethylene glycol tertiary butyl ether

CAS 号: 110-09-8 分子式: C₈H₁₈O₃
CAS No.:110-09-8 Molecular formula:C₈H₁₈O₃

特性 / Properties

二乙二醇叔丁醚是一种优良的低毒性溶剂，由于其化学结构上具有两个较强溶解能力的基团——亲油性的共价醚键和亲水性的醇羟基，既可以溶解憎水性化合物也可以溶解水溶性化合物，所以有“万能溶剂”之称。

DETB 具有极低的气味、低水溶性和良好的结合力，并对涂料树脂具有良好的溶解性。对各种树脂显示出良好的结合性能。此外它还具备卓越的成膜特性。

DETB is an excellent solvent with low toxicity. Because it has two groups with strong solubility in chemical structure - lipophilic covalent ether bond and hydrophilic alcohol hydroxyl, it can dissolve both hydrophobic and water-soluble compounds, so it is called "universal solvent". DETB has very low odor, low water solubility and good adhesion, and has good solubility for coating resin. It shows good binding property to all kinds of resins. In addition, it has excellent film-forming properties.

产品用途 / Application

1. 可作为丙烯酸树脂，苯乙烯丙烯酸树脂，多乙酸乙烯酯的凝聚剂，赋予漆膜优异的性能。是众多水性涂料最有效的成膜助剂之一。
2. 主要用作涂料、印刷油墨、图章用印台油墨、油类、树脂等的溶剂，也可用作金属洗涤剂、脱漆剂、脱润滑油剂、汽车引擎洗涤剂、干洗溶剂、环氧树脂溶剂、药物萃取剂；用作乳胶漆的稳定剂、飞机涂料的蒸发抑制剂、高温烘烤瓷漆的表面加工改进等。
3. 清洗剂：适用于清洗剂特别是要求极低挥发速度的体系中，譬如除蜡剂和地板清洁剂。是润滑脂和油脂很好的偶合剂，可用作除漆剂和动物油脂除去剂。

1.It can be used as the coagulant of acrylic resin, styrene acrylic resin and polyvinyl acetate to give the film excellent performance. It is one of the most effective film forming aids for many waterborne coatings.

2.It is mainly used as solvent for coating, printing ink, stamp printing ink, oil, resin, etc., as well as metal detergent, paint remover, lubricating oil remover, automobile engine detergent, dry cleaning solvent, epoxy resin solvent and drug extract; as stabilizer of emulsion paint, evaporation inhibitor of aircraft paint, surface processing improvement of high-temperature baking enamel, etc.

3.Cleaning agent: suitable for cleaning agents, especially for systems requiring very low volatilization speed, such as wax remover and floor cleaner. It is a good coupling agent for lubricating grease and grease. It can be used as paint remover and animal grease remover.

技术指标 / Technical Index

项目 Item	指标 Standard
外观 Appearance	无色透明 Colorless Transparent
酯含量 % Acrylamid (%)	≥ 99.0
酸值 mgKOH/mg Acrylonitrile(≤ %)	< 0.30
色度 (铂 - 钴色号) Acrylic acid (≤ %)	≤ 10
沸程°C Acrylic acid (≤ %)	208-218
水分含量 % Conductivity (us/cm)	< 0.10

包装与储存 / Packaging and storage

200kg/ 桶装 或者 1000kg/ 吨桶，需要储存于阴凉、通风仓库内，禁止明火。

200kg/drum or 1000kg/IBC tank. Should be stored in a cool and ventilated warehouse. Fire is prohibited.

二乙二醇甲基特丁醚 Methyl Diethylene Glycol Tert-butyl Ether

CAS 号: 52788-79-1 分子式: C₉H₂₀O₃
CAS No.:52788-79-1 Molecular formula:C₉H₂₀O₃

特性 / Characteristic

无色透明液体，具有令人愉悦的果香味，是一种优良的低毒溶剂。

Colorless, transparent liquid with a pleasant smell.

产品用途 / Application

用做有机合成溶剂，涂刷用硝基喷漆成分、纤维及皮革的匀染剂；用作印刷油墨图章用印台油墨等的溶剂，也可用于制备陶瓷墨水溶剂。

It is used as an organic synthetic solvent, and leveling agent for fiber and leather. It can also be used as solvent for printing ink and ceramic ink.

技术指标 / Technical Index

项目 Item	指标 Standard
外观 Appearance	无色透明 Colorless Transparent
酯含量 % Acrylamid (%)	≥ 99.0
酸值 mgKOH/mg Acrylonitrile(≤ %)	< 0.30
色度 (铂 - 钴色号) Acrylic acid (≤ %)	≤ 10
水分含量 % Conductivity (us/cm)	< 0.10

包装与储存 / Packaging and storage

220 公斤的铁桶包装。库房通风低温干燥，与氧化剂、酸类分开存放。

220kg/drum tank. Should be stored in a cool and ventilated warehouse.



醋酸环戊酯 Cyclopentyl acetate

CAS 号: 933-05-1 分子式: $C_7H_{12}O_2$
CAS No.:933-05-1 Molecular formula: $C_7H_{12}O_2$

特性 / Properties

无色透明液体, 不溶于水, 可与大多数有机溶剂混溶; 是一种高沸点、含多官能基的酯类溶剂, 同时是生产环戊酮的原料。

Colorless and transparent liquid, insoluble in water, can be mixed with most organic solvents; it is an ester solvent with high boiling point and multi functional groups, and also the raw material for cyclopentanone production.

技术指标 / Technical Index

检测项目 Item	标准要求 Standard
外观 Appearance	无色透明液体 Colorless and transparent liquid
色度, \leq Chroma (\leq)	10#
含量, \geq Content (\geq)	99.00%
水分, \leq Moisture (\leq)	0.10%

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规格 / Specifications

密度 Density	0.98g/cm ³
沸点 Boiling poin	159°C at 760mmHg
闪点 Flashing point	43.6°C
折射率 Refractive index (η_{D20})	1.44

环戊酮 Cyclopentanone

CAS 号: 120-92-3 分子式: C_5H_8O
CAS No.:120-92-3 Molecular formula: C_5H_8O

特性 / Properties

无色液体, 与醇、醚混溶, 不溶于水, 有薄荷香气, 易聚合, 特别是在微量酸存在下更易聚合。用作医药、香料、合成橡胶、农药的中间体。是一种重要的精细化工中间体, 应用领域十分广泛, 它是制备新型香料二氢茉莉酮酸甲酯和白兰酮以及抗焦虑药丁螺环酮等产品的原料。由于他对各种树脂具有很好的溶解性能, 在电子行业作为溶剂得到了广泛应用。

Colorless liquid with mint fragrance, is miscible with alcohol and ether, insoluble in water. Which is easy to polymerize, especially in the presence of trace acids. It is used as intermediate for medicine, perfume, synthetic rubber and pesticide. It is the raw material for the production of new perfume--dihydrojasmonate and brandone, as well as the anxiolytic drug--Dimethylcyclone. Due to the good solubility to various resins, it has been widely used as a solvent in the electronic industry.

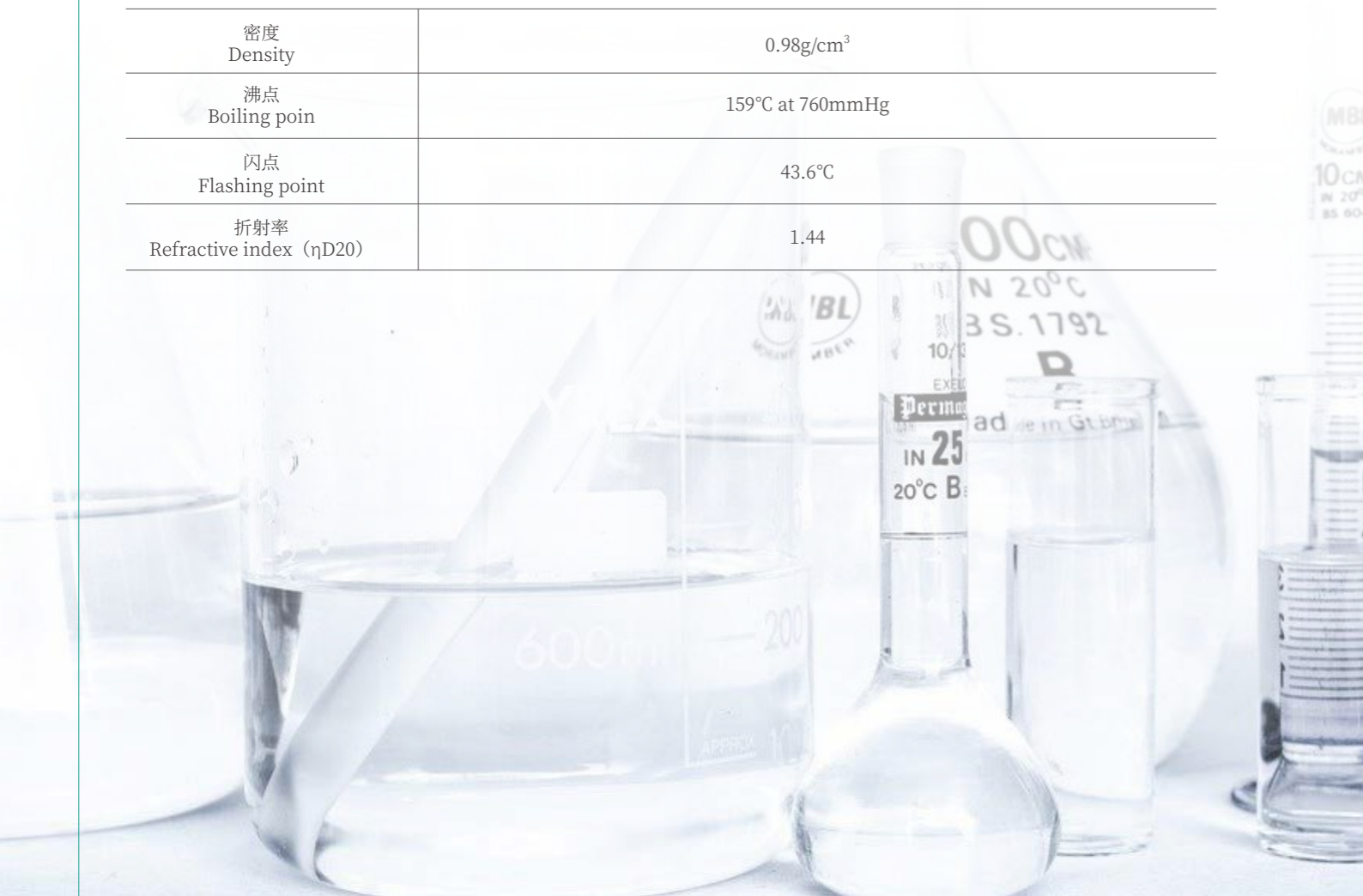
技术指标 / Technical Index

检测项目 Item	标准要求 Standard	结果 Result
外观 Appearance	无色透明液体 Colorless and transparent liquid	水白色液体, 有醚样气味 Colorless and transparent liquid
色度, \leq Chroma (\leq)	10#	8#
含量, \geq Content (\geq)	99.00%	99.50%
水分, \leq Moisture (\leq)	0.10%	0.05%

规格 / Specifications

熔点 Melting point	-58°C
沸点 Boiling point	131°C at 760mmHg
闪点 Flashing point	30°C
密度 Density	0.95g/cm ³
折射率 Refractive index	1.44
LD50	1820mg/kg

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四氢糠醇 Tetrahydrofurfuryl alcohol

CAS 号: 97-99-4 分子式: C₅H₁₀O₂
CAS No.:97-99-4 Molecular formula:C₅H₁₀O₂

特性 / Properties

无色液体, 微有气味, 有吸湿性, 可与水、乙醇、乙醚、丙酮、氯仿和苯混溶, 不溶于石蜡烃。

Colorless liquid with slight odor, moisture adsorption, flammability and low toxicity. It is miscible with water, alcohol, acetone, chloroform and benzene, and immiscible with paraffin hydrocarbon.

技术指标 / Technical Index

分子量 Purity (≥ %)	102.13
含量≥ % Furfuryl alcohol(%)	99
糠醇≤ % Moisture (≤ %)	0.2
含水量≤ % Refractive index (ηD20)	0.3
折射率 ηD20 Density (g/cm)	1.449-1.453
密度 (D420)g/cm ³ Density (g/cm)	1.051-1.054
5-甲基四氢糠醇≤ % 5-Methyl THFA (≤ %)	0.05
色度≤ Chroma (≤)	20
1,2-戊二醇≤ % 1,2-Pentanediol(≤ %)	0.3

用途 / Applications

四氢糠醇是重要的有机溶剂和精细化工原料。

- 用于电子化学品和助焊剂上的良好助焊溶剂;
- 其脂类用作增塑剂, 是树脂、涂料和油脂的溶剂;
- 用作制取二氢呋喃、四氢呋喃、赖氨酸等的原料;
- 用于制取长效维生素 B1;
- 用于生产聚酰胺类塑料、防冻剂、除草剂、杀虫剂等;
- 用于印染工业上的润滑剂、分散剂;
- 用作脂肪酸塔罗油及一些药品的脱色、脱臭剂。

Tetrahydrofurfuryl alcohol is an important raw material of organic solvent and fine chemicals.

- It's a kind of good flux solvent in electronic chemicals and flux industry;
- Its lipids are used as plasticizer, also solvent for resin, coating and grease;
- It can be used for making dihydrofuran, tetrahydrofuran, lysine;
- It's raw material for long-effective Vitamin B1;
- It can also be used for making polyamide plastic, antifreeze, herbicide, insecticide, etc;
- Used as lubricant, and dispersing agent in dyeing and printing industry;
- Used as decolorizer and deodorant in making fatty acid, tallol oil and medicines

包装与储存 / Packaging and storage

220 公斤铁桶, 或 21-25 吨 ISO TANK。储存在阴凉干燥处, 不能在阳光下曝晒。

220kg/plastic drum or ISO Tank.Stored in dark, dry and ventilated place. Keep away from sun exposure.

2- 甲基呋喃 2-Methylfuran

CAS 号: 534-22-5 分子式: C₅H₆O
CAS No.:534-22-5 Molecular formula:C₅H₆O

特性 / Properties

无色液体, 有醚样气味, 在空气中或阳光照射下变黄至黑色。

It is colorless liquid with the ether odor. It will turn yellow or even black when exposed to sunlight.

技术指标 / Technical Index

检测项目 Item	产品标准 Standard
分子量 Purity (%)	≥ 99.5
含量≥ % Moisture (%)	≤ 0.05
糠醇≤ % Boiling point (°C)	63.7-66
含水量≤ % Density(g/ml)	0.9130
折射率 ηD20 Refractive index (ηD20)	1.449-1.453
密度 (D420)g/cm ³ Cloud point (°C)	-30

用途 / Applications

2- 甲基呋喃可用于溶液聚合中作溶剂使用, 也可用于合成戊二烯、戊二醇、乙酰丙醇及酮类和 2- 甲基四氢呋喃。该品为有机合成中间体, 医药工业中用于制造维生素 B1、磷酸氯喹和磷酸伯氨喹等药物, 合成菊酯类农药及香精香料, 也是很好的溶剂。2- 甲基呋喃是拟除虫菊酯烯丙菊酯、丙炔菊酯的中间体烯丙醇酮的原料, 2- 甲基呋喃又是良好的溶剂。该品为有机合成中间体, 2- 甲基呋喃有麻痹作用。

It can be used in producing Vitamin B1, chloroquine phosphate and primaquine phosphate. It is used for the production of pyrethroid pesticides, essence and flavor. 2-methylfuran is the raw material of allyl ketone, which is the intermediate of Pyrethroid, Allethrin and Permethrin.

包装与储存 / Packaging and storage

包装: 用净重 220 公斤新铁桶包装, 17.6 吨 (80 桶) /20 尺集装箱或净重 21-25 吨集装罐。

储存: 库房通风低温干燥; 与氧化剂、酸类分开存放。

220KG steel drum, 17.6MT (80 drums) in 20'FCL, or 21-25MT in ISO tank.

Stored in dark, dry and ventilated place.

2- 甲基四氢呋喃 2-Methyl tetrahydrofuran

CAS 号: 96-47-9 分子式: C₅H₁₀O
CAS No.:96-47-9 Molecular formula:C₅H₁₀O

特性 / Properties

无色液体，见光、露置或久储变成淡黄色至棕色，具有类似醚的气味。

Colorless, transparent liquid with a similar smell of ether.

技术指标 / Technical Index

检测项目 Item	产品标准 Standard
主含量 (%) Purity (%)	≥ 99.5
水分 (%) Moisture (%)	≤ 0.03
沸点 (°C) Boiling point (°C)	78-80
相对密度 (g/ml) Density(g/ml)	0.86
折射率 (η _D 20) Refractive index (η _D 20)	1.4046-1.4066
抗氧化剂 BHT(PPM) BHT(PPM)	150-400

用途 / Applications

用作树脂、天然橡胶、乙基纤维素和氯乙酸-醋酸乙烯共聚物的溶剂；也是制药工业的原料，可用于抗痔药磷酸伯氨喹的合成。

用作绿色溶剂，可替代四氢呋喃做格氏反应溶剂，也可替代苯、甲苯、氯仿等溶剂，广泛用于合成香料、新材料等。

2- 甲基四氢呋喃也可以用在汽车燃料添加剂方面。

Used for making chloroquine phosphate, primaquine phosphate, etc.

It is also used as solvent,such as substitute for tetrahydrofuran in Grignard Reaction and also as a substitute for benzene, toluene, chloroform and other solvents. It is also widely used in the synthesis of spices, new materials and so on.

It is also used in automotive fuel additive.

包装与储存 / Packaging and storage

用净重 220 公斤的新铁桶包装，17.6 吨（80 桶）/20 尺集装箱或净重 21-25 吨集装罐。

库房通风低温干燥；与氧化剂、酸类分开存放。

170KG steel drum, 17.6MT (80 drums) in 20'FCL, or 20MT in ISO tank.

Stored in dark, dry and ventilated place. Keep away from fire and heat source. The temperature should not exceed 37°C .

Shelf-life: 12 months.

2—甲基丁醛 2-Methylbutanal

CAS 号: 96-17-3 分子式: C₅H₁₀O
CAS No.:96-17-3 Molecular formula:C₅H₁₀O

特性 / Properties

无色至淡黄色液体，微溶于水，溶于乙醇、乙醚、丙酮和丙二醇。

Colorless to yellowish liquid, slightly soluble in water, and soluble in ethanol, ether, acetone and propylene glycol.

技术指标 / Technical Index

检测项目 Item	标准要求 Standard
外观 Appearance	无色至淡黄色液体 Colorless to yellowish liquid
含量 ≥ % Content(≥)	98%
水分, ≤ Moisture (≤)	0.5%

规格 / Specifications

密度 Density	0.8g/cm ³
沸点 Boiling poin	93.5+8.0°C at760mmHg
熔点 Melting point	-60°C
闪点 Flashing point	4.4±0.0°C
折射率 Refractive index	1.383

包装与储存 / Packaging and storage

用净重 200 公斤的新塑料桶包装，16 吨（80 桶）/20 尺集装箱或用净重 21-25 吨集装罐。

储存于阴凉、通风的库房。远离火种、热源、防静电、防爆炸。包装密封，切勿与空气接触。应与氧化剂分开存放，切记混储。配备相应品种和数量的消防器材。储区应备有合适的材料收容泄漏物。

200KG plastic drums, 1000KG IBC tank, 21-25MT in ISO tank.

Should be stored in a cool and ventilated warehouse. Keep away from fire and heat. Keep the package tight from air. Fire is prohibited.

主要用途 / Applications

GB 2760 规定为允许使用的食品用香料。用于朗姆酒、巧克力、咖啡、面包、番茄等香精。

Permitted spices for food. Like Rum, chocolate, coffee, bread, tomato etc.

N-羟甲基丙烯酰胺 N-Methylol Acrylamide

CAS 号: 924-42-5 分子式: C₄H₇NO₂
CAS No.:924-42-5 Molecular formula:C₄H₇NO₂

特性 / Properties

白色晶体。本品是一种自交型活性单体，在分子结构中，有与羟基共轭的双键又有活性的官能基，极易溶于水和醇中，难溶于氯仿及四氯化碳，在中性或碱性介质中易发生缩合反应。在潮湿的空气或水中不稳定，易聚合，在水溶液中有酸存在时加热会迅速聚合成不溶的树脂。由于分子结构中含有聚合性能的乙烯基和缩合性能的羟甲基，因此使线型聚合物交联最为有效。如果与丙烯酸酯类单体共聚合，羟甲基被引入，仅加热即可交联。

White crystal. It is a type of self-crosslink monomer with double bond and active function group. It is unstable in humid air or water and easy to polymerize. In the presence of acid in aqueous solution, it will quickly polymerize into insoluble resin.

技术指标 / Technical Index

检测项目 Item	Standard
外观 Appearance	白色晶体 White crystal
熔点 (°C) Melting point (°C)	74-75
含量 (%) Content (%)	≥ 98%
水分 (%) Moisture (%)	≤ 1
游离甲醛 (%) Free formaldehyde (%)	≤ 0.3%
丙烯酰胺 (%) BHT(PPM)	≤ 0.5%
PH	7

用途 / Applications

可作交联剂，广泛用于纤维的改性树脂、加工染料、塑料粘合剂、土壤稳定剂等；是用途广泛的交联性单体，用于纤维的改性、树脂加工、粘合剂及纸张、皮革、金属表面的处理剂，还可用于土壤改良剂等。

The applications of NMA range from adhesives and binders in papermaking, textiles, and non-wovens to a variety of surface coating and resin for varnishes, films and sizing agents.

包装与储存 / Packaging and storage

每袋 25KG，有聚乙烯内衬袋的三合一复合纸袋。

-20°C，避光，存放于干燥、阴凉通风的库房，防止自聚变质。保质期五个月左右。

25KG 3-in-1 composite bag with PE liner.

-20°C, Stored in dark, dry and ventilated place. Shelf time: 5 months.

N,N'-亚甲基双丙烯酰胺 N,N'-Methylenebisacrylamide

CAS 号: 110-26-9 分子式: C₇H₁₀N₂O₂
CAS No.:110-26-9 Molecular formula:C₇H₁₀N₂O₂

特性 / Properties

白色粉末，无味，吸湿性极小。别名 MBA，又叫亚甲基双丙烯酰胺，次甲基双丙烯酰胺。遇高温或强光则自交联，微溶于水、乙醇。

White powder, Melting point: 185°C; relative density: 1.235. Dissolving in water and organic solvents such as ethanol, acetone, etc.

技术指标 / Technical Index

检测项目 Item	标准要求 Standard
外观 Appearance	白色粉末 Colorless to yellowish liquid
含量 ≥ % Content (≥)	≥ 99
水不溶物 (%) Moisture (≤)	≤ 0.2
硫酸盐 (%) Moisture (≤)	≤ 0.3
丙烯酸 (PPM) Moisture (≤)	≤ 15
丙烯酰胺 (PPM) Moisture (≤)	≤ 200

主要用途 / Applications

1. 本品与丙烯酰胺共聚可制成油田压裂液，与某种单体共聚制取不溶性树脂，可用作堵水灌浆材料，亦可用作交联剂。
2. 用于生产印染助剂、餐巾、保健用尿布巾和其它工业所用的高效吸水树脂。
3. 生物高分子化合物（蛋白质、多肽、核酸）的分离。制备聚丙烯酰胺凝胶的交联剂。聚丙烯酰胺凝胶技术和临床检验。
4. 是光敏尼龙或光敏塑料的重要原料。
5. 在地下建筑中，AM、MBA 注入土层所形成的不溶性凝胶对土层进行强化，防止渗水。加入混凝土可缩短混凝土的养护期，提高耐水性。
6. MBA 在电子、造纸、印刷制版、合成树脂改性以及涂料、粘合剂等方面也广泛应用。

1. It can react with acrylamide to produce fracturing fluid or react with monomer to produce insoluble resin. It also can be used as crosslink agent in Acrylic acid resin and adhesive.
2. It also can be used as auxiliary in table cloth, health care diaper and super absorbent polymer.
3. It can be used as insoluble gel to reinforce the earth layer or added into the concrete to reduce the maintenance time and improve the resistance to water.
4. Used in electronics, papermaking, printing, synthetic resin, coating and adhesive.

包装 / Packaging

每袋 25KG，有聚乙烯内衬袋的三合一复合纸袋。

25KG 3-in-1 composite bag with PE liner.

β-萘甲醚 2-Methoxynaphthalene

CAS 号: 93-04-9 分子式: C₁₁H₁₀O
CAS No.:93-04-9 Molecular formula:C₁₁H₁₀O

特性 / Characteristic

本品为白色晶体，不溶于水，易溶于乙醚、苯和氯仿，少溶于二硫化碳，微溶于甲醇和乙醇。能随水蒸气一同蒸发。

White crystal, insoluble in water, easily soluble in ether, benzene and chloroform, less soluble in carbon disulfide, slightly soluble in methanol and ethanol. It can evaporate with water vapor.

技术指标 / Technical Index

检测项目 Item	质量指标 Standard	检测结果 Standard
外观 Purity (%)	白色片状结晶 White flake crystal	白色片状结晶 White flake crystal
含量, % ≥ Content (%)	99.5	99.95
萘酚, % ≤ Naphthol (%)	0.03	0.01
萘, % ≤ Naphthalene (%)	0.03	0.01

主要用途 / Applications

1. 用于调配皂用香精、大众化的花露水和古龙香水等。2. 用于调配低档的有色皂、洗涤剂、日用品香精，适用香型为橙花、茉莉、百合。也可用于需要耐热耐碱的塑料制品，合成橡胶制品熏香等的加香。3. 作为原料生产医药中间体 6-甲氧基-2-萘乙酮后用于生产消炎镇痛药萘普生。也可用于三烯高诺酮和计划生育药物 18-甲基炔诺酮的生产。

1. It is used for blending soap essence, toilet water and Cologne perfume.
2. It is used for blending low-grade colored soap, detergent and essence of orange flower, jasmine and Lily.
3. It can be used to perfume in plastic or synthetic rubber products of heat and alkali resistant. Used to produce 6-Methoxy-2-naphthalene ethanone which is used to produce anti-inflammatory and analgesic drug-Naproxen. It can also be used in the production of Gestrinone and 18 Methylnorethisterone as a family planning drug.

包装与储存 / Packaging and storage

木桶内衬塑料袋 25 公斤 / 桶包装。

保持容器密闭，存放于凉爽、阴暗处，远离不相容的材料比如氧化剂存放。

25KG cardboard barrel with PE liner.
Stored in dark, dry and ventilated place.

β-萘乙醚 2-Ethoxynaphthalene

CAS 号: 93-18-5 分子式: C₁₂H₁₂O
CAS No.:93-18-5 Molecular formula:C₁₂H₁₂O

特性 / Characteristic

白色结晶，有橙花香味。溶于乙醇、乙醚、氯仿、石油醚、二硫化碳和甲苯几乎不溶于水。

White crystal, with orange fragrance. Soluble in ethanol, ether, chloroform, petroleum ether, carbon disulfide and toluene, almost insoluble in water.

技术指标 / Technical Index

检测项目 Item	质量指标 Standard	检测结果 Standard
外观 Purity (%)	白色片状结晶 White flake crystal	白色片状结晶 White flake crystal
含量, % ≥ Content (%)	99.5	99.95
萘酚, % ≤ Naphthol (%)	0.03	0.01
萘, % ≤ Naphthalene (%)	0.03	0.01

主要用途 / Applications

俗名橙花素，是一种合成香料，具有柔和的花香和持久的橙花香韵。能与其他香料化合物调和，效果良好，广泛应用于肥皂和化妆品中作为香料，还可用于玫瑰香、柠檬香的定香。也可用于调配洗涤剂和皂用香精。

Commonly known as Neroli, which is a kind of synthetic perfume with soft and lasting floral fragrance. It can be widely used in soap and cosmetics as perfume, and it can also be used for fixing the fragrance of rose and lemon. It can also be used for the blend of detergents and soap essence.

包装与储存 / Packaging and storage

木桶内衬塑料袋 25 公斤 / 桶包装。

保持容器密闭、冷藏储存。远离不相容的材料比如氧化剂存放。

25KG cardboard barrel with PE liner.
Stored in dark, dry and ventilated place.

醛类加氢铜系催化剂（环保铜硅催化剂） Copper catalysts for aldehydes hydrogenation

我公司生产的新型催化剂，是以硅铜为主要组分，俗称：蓝、白催化剂。其主要特点就是不含有害金属铬，从而避免了对环境的污染，以及对直接操作人员的危害。该新型催化剂前期经公司集团内糠醇厂使用，表现出良好的活性与选择性；结合工艺技术的调整，已完全替代含铬催化剂。该催化剂生产过程不需要焙烧，使用过的旧催化剂可回收再利用，实现了整个产业链的无污染、无毒害运行，是一重大科技进步，值得更好的推广使用。

The new catalyst produced by our company is mainly composed of silicon copper, commonly known as blue and white catalyst. It does not contain harmful metal chromium, so as to avoid environmental pollution and harm to operators. The new catalyst has been used by furfural alcohol plants, showing good activity and selectivity. It has completely replaced the chromium catalyst after adjustment of process technology. The catalyst does not need to be roasted in the production process, and can be recycled and reused, making the whole industrial chain free of pollution and non-toxic. It is a big scientific and technological progress, and worth better promotion.

技术指标 / Specifications

外观 Appearance	亮蓝或蓝色松散的粉末 Light blue loose powder
细度 Mesh Size (≥)	200 目以上
可挥发度 Metallic oxide content (≥)	小于 3%
PH 值	7.5 左右，水洗液呈中性或弱碱性
金属氧化物含量 Metallic oxide content (≥)	大于 75%

主要用途 / Applications

用于糠醛、脂肪族醛类的羰基加氢。

It is used for carbonyl hydrogenation of furfural and aliphatic aldehydes.

Company vision

公司愿景

携手瑞海，共赢未来！

Join hands with Ruihai to win the future!

国际化创新思维，行业内顶尖技术，雄厚的技术实力和强大的品牌价值，成就了瑞海的光荣和梦想。下一步，我们将进一步巩固瑞海的市场领先地位，借助资本市场平台，在化工行业转型升级的大潮中，顺势而上，锐意进取，永续光芒。我们将在成就合作伙伴的过程中实现企业价值，争做世界一流的原料供应商。携手瑞海，共赢未来！

International innovative thinking, top technology in the industry, strong technical strength and high brand value, achieved the glory and dream of Ruihai. The market leading position will be further consolidated, with the help of capital market platform. In the tide of transformation and upgrading of the chemical industry, we shall keep up with the trend, forge ahead and keep on shining. We will realize the enterprise value in the process of achieving partners and strive to be the world-class raw material supplier. Join hands with Ruihai for a win-win future.



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