# 中国石化化工销售有限公司 简介

中国石化化工销售有限公司(以下简称化工销售)是中国石化下属全资子公司,负责中国石化所属企业生产的石化产品资源统筹、市场营销、产品销售、物流运作、客户服务,以及所需相关化工原料采购和供应工作,并开展物流设施及海外化工业务投资。

化工销售是目前国内及亚洲最大的内外贸一体化石化产品专业经营公司,年经营化工产品逾5000万吨,主要包括:合成树脂、合成橡胶、合成纤维原料(对二甲苯、精对苯二甲酸、乙二醇、己内酰胺、丙烯腈、聚乙烯醇)、合成纤维和聚合物、有机化工原料(纯苯、邻二甲苯、苯乙烯、丁二烯、环氧乙烷、丁醇、辛醇、苯酚、丙酮、醋酸乙烯等)、化肥及特殊化学品(甲醇、MTBE、1,4-丁二醇、聚四氢呋喃)等,主要产品国内市场份额领先。

化工销售总部位于北京,分别在北京、上海、广州、武汉、南京设有华北、华东、华南、华中、江苏五家区域性分公司,负责产品销售、市场开拓和客户服务等,在全国各主要消费集中地和物流集散地设立有24个营销网点,配备中转仓库,贴近市场一线,快捷服务客户。在境外设有香港公司,依托香港公司在越南、台湾、新加坡、迪拜、休斯顿设立有5个办事处,密切与全球同行合作,服务全球市场客户。

化工销售拥有国内领先的商务、物流和经营管理信息化平台,以资源计划管理系统(ERP)为核心,客户关系管理系统(CRM)、物流信息系统(LIS)、数据仓储系统(BW)以及IC电子提货卡等紧密集成的系统为支撑,对公司业务运行和经营管理提供全方位支持。客户服务中心为客户提供一站式咨询和

服务,借助先进的呼叫中心平台和客户关系管理系统,能够对销售订单、资金往来和货款余额等关键信息进行实时查询,实现与客户的实时沟通交流。化工销售依托生产企业、科研开发单位和加工应用研究中心,建立产销研用(MPRC)四位一体的技术服务体系,为客户提供全流程解决方案。

化工销售致力成为国内化工物流行业的引领者和促进者,建立有化工物流管理体系和安全标准,能够为客户量身定制整体物流解决方案,特别是物流信息系统 (LIS)与ERP、CRM、IC卡、TMIS(铁路运输管理信息系统)、GPS等系统有效集成,对运输、仓储、交付等物流环节实施全过程管理,对物流运行状态实行自动跟踪监控。与众多知名物流服务商建立战略伙伴关系,年物流运作量超过1500万吨。在全国范围内建设及租赁有70余个中转仓库,拥有3200多辆铁路槽车,在长江沿线拥有三个独立自有液体罐区和码头,总罐容达30万立方,物流服务范围覆盖全国,能够为国内客户提供优质、高效的物流服务。化工销售投资的2条低温乙烯船,航线遍及韩国、日本、台湾和东南亚等国家和地区。

#### 经营理念

化工销售坚持中国石化"为美好生活加油"的企业使命,以及"人本、责任、诚信、精细、创新、共赢"的核心价值观,以市场为导向,以客户为中心,完善营销网络,塑造中国石化品牌,携手中国石化所属生产企业和科研院所,致力于为客户提供优质产品和服务,通过服务为客户创造价值,与客户共同成长和发展。化工销售积极应对世界石化行业发展变化,努力建设成为"国内领先、国际一流的石化产品贸易商"。

# 化工销售区域分公司 简介

About SCCHC's Regional Companies

化工销售华北、华东、华南分公司于2005年5月正式挂牌成立,华中分公司于2008年8月正式挂牌成立,江苏分公司于2010年4月正式挂牌成立,香港公司于2007年9月20日注册成立。化工销售区域分公司主要负责其所辖区域内的产品销售、市场开拓和客户服务,以及与中国石化所属相关企业的产销衔接。

#### 区域市场及区内生产企业

- 华北分公司 所辖市场区域包括北京、天津、河北、山东、山西、陕西、甘肃、宁夏、青海、新疆、辽宁、吉林、黑龙江、内蒙古等14个省市自治区,区内相关生产企业包括中国石化燕山分公司、齐鲁分公司、天津分公司、青岛炼化公司、石家庄炼化分公司、沧州分公司、济南分公司等。
- 华东分公司 所辖市场区域包括上海、浙江、江苏、江西、安徽等5个省市,区内生产企业包括中国石化上海石化、扬子石化、镇海炼化公司、高桥分公司、仪征化纤公司、金陵分公司、九江分公司、安庆分公司、齐鲁分公司腈纶分厂等,并为合资公司扬子-巴斯夫有限公司、上海赛科石油化工有限责任公司以及宁波镇海炼化利安德化学有限公司的部分产品提供代理和经销服务。
- 华南分公司 所辖市场区域包括广东、广西、海南、福建、云南、贵州、西藏等7个省市自治区,区内生产企业包括中国石化茂名分公司、广州分公司、海南炼化公司、四川维尼纶厂、湛江东兴石油公司、北海分公司等,并为合资公司福建联合石油化工有限公司部分产品提供经销服务。
- 华中分公司 所辖市场区域包括湖南、湖北、河南、四川、重庆等5个省市,区内生产企业包括中国石化巴陵分公司、中原石化、武汉分公司、洛阳分公司、长岭分公司、荆门分公司等。

#### 国内外营销网点及中转仓库

- 华北分公司 在燕山、天津、淄博等地设立经营部,在石家庄、临沂、青岛、济南、沈阳、西安等地设立代表处,并在天津、青州、青岛、临沂、沈阳、西安等地设立中转仓库。
- ◆ 华东分公司 在宁波、张家港设立了经营部,在南京、杭州、漕泾等地设立代表处,并在江阴、无锡、常熟、苏州等地设立中转仓库。
- <mark>华南分公司</mark> 在晋江设立了控股公司,在汕头设立经营部,在茂名、昆明等地设立代表处,并 在汕头、泉州、东莞、茂名、广州、佛山等地设立中转仓库。
- 华中分公司 在重庆、郑州、长沙、成都等地设立代表处,并在郑州、成都、重庆、株洲等地设立中转仓库。
- 江苏分公司 在江阴、南通等地设立了经营部,在镇江、江阴、南通等地拥有液体储罐。
- 化工销售(香港)有限公司 在越南、台湾、新加坡、迪拜、休斯顿设立有五家海外办事处。

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# 合成树脂

Synthetic Resin

合成树脂为人工合成的高分子聚合物,是由低分子原料(如乙烯、丙烯、氯乙烯等)通过聚合反应生产的。工业上常用的聚合方法有本体聚合、悬浮聚合、乳液聚合和溶液聚合四种。通常为加热可软化的固体,受热时通常有熔融或软化的温度范围,在外力作用下可呈塑性流动状态。

Synthetic resin is a high-molecular polymer produced artificially through the polymerization of low-molecular monomers such as ethylene, propylene and chloroethylene etc. The most common industrial polymerization technique are bulk polymerization, suspension polymerization, emulsion polymerization and solution polymerization. Synthetic resin is typically a solid which would soften when heated. There is typically a temperature range within which synthetic resin would melt or soften when heated. In the presence of an external force, synthetic resin may exhibit a plastic flowed.

# 中国石化合成树脂产品简介

Sinopec synthetic resin products

中国石化拥有世界先进的生产工艺,近年来自主知识产权和技术应用比例有较大提高,部分技术达到国际先进水平,可生产聚乙烯、聚丙烯、聚碳酸酯、聚氯乙烯、聚苯乙烯、ABS等五大合成树脂和聚碳酸酯、聚醚、环氧树脂等产品,并成功开发生产了多种高附加值的专用树脂,目前国内市场使用的聚烯烃产品中90%以上都能够生产。

中国石化五大合成树脂产量位居中国和亚洲第一。2013年,五大合成树脂中的聚烯烃国内市场占有率约为32%,产能居世界第四位,其中,聚丙烯产能居世界第二位,聚乙烯产能居世界第四位。

化工销售有限公司销售的合成树脂产品包括低密度聚乙烯 (LDPE)、高密度聚乙烯 (HDPE)、线型低密度聚乙烯 (LLDPE)、聚丙烯 (PP)、聚苯乙烯 (PS)、及丙烯腈一丁二烯一苯乙烯共聚物(ABS)等。

中国石化合成树脂主要生产企业有:中国石化北京燕山分公司、齐鲁分公司、上海石化、扬子石化、茂名分公司、广州分公司、天津分公司、中原石化、青岛炼化、镇海炼化公司、巴陵分公司、武汉分公司、高桥分公司、济南分公司、荆门分公司、洛阳分公司、九江分公司、长岭分公司、海南炼化公司、沧州炼化、天津中沙石化、上海赛科石化、扬子巴斯夫公司、福建联合石化、上海金菲石化、中韩石化等。

Sinopec has advanced synthetic resin production technologies. In recent years, the company's proprietary technologies have been playing an increasingly big role in the company's petrochemical production. Some of these technologies are among the most advanced worldwide. The products mainly include polyethylene, polypropylene, polyvinylchloride, polystyrene, ABS (known as the five major synthetic resin products), polycarbonate,polyether, epoxy resin ,etc. The company has developed a series of high-value-added specialty resin products. Sinopec is capable of producing over 90% of the polyolefin products available in China's domestic market.

Sinopec is the largest producer of the five major synthetic resn in China and Asia. In 2011, Sinopec controls around 32% share of China's domestic polyolefin market and its polyolefin capacity is the fourth largest worldwide. The company's polypropylene capacity is the second-largest worldwide and polyethylene capacity is the fourth-largest worldwide.

SCCHC' synthetic resin products include low-density polyethylene (LDPE), high-density polyethylene (HDPE), linear low-density polyethylene (LLDPE), polypropylene (PP), polycarbonate (PC), polystyrene (PS), polyvinyl chloride (PVC) and acrylonitrile-butadienestyrene (ABS),etc.

Major Sinopec manufaturers that produce synthetic resin include Sinopec Beijing Yanshan Company, Sinopec Qilu Company, Sinopec Shanghai Petrochemical Co., Ltd., Sinopec Yangzi Petrochemical Co., Ltd., Sinopec Maoming Company, Sinopec Guangzhou Company, Sinopec Tianjin Company, Sinopec Zhongyuan Petrochemical Company, Sinopec Qingdao Refining and Chemical Company, Sinopec Zhenhai Refining and Chemical Company, Sinopec Baling Company, Sinopec Wuhan Company, Sinopec Gaoqing Company, Sinopec Jinan Company, Sinopec Jinmen Company, Sinopec Luoyang Company, Sinopec Jiujiang Company, Sinopec Changling Company, Sinopec Hainan Refining and Chemical Company, Sinopec Sabic TianJin Petrochemical, Sinopec Secco Petrochemical Company, Sinopec Yangzi-BASF Company, Fujian Refining and Petrochemical Company Limited and Shanghai Golden Phillips Petrochemical Co., Ltd..





聚乙烯 (PE)

8 Polythene (PE)

低密度聚乙烯 (LDPE)

9 Low-density Polyethylene (LDPE)

薄膜料

11 Film Grade

注塑料

14 Injection Molding Grade

涂覆料

15 Coating Grade

花料

16 Artificial Flower Grade

电缆料

17 Wire & Cable Grade

乙烯-乙酸乙烯酯共聚物

18 Ethylene Vinyl Acetate (EVA)

High-density Polyethylene (HDPE)

高密度聚乙烯 (HDPE)

21 Film Grade

中空料 23

23 Blow Molding Grade

拉丝料

薄膜料

25 Filament Grade

注塑料

26 Injection Molding Grade

管材料

28 Pipe Grade

电缆料

30 Wire & Cable Grade

氯化聚乙烯用基础树脂

32 Base Resin for Chlorinated Polyethylene

线型低密度聚乙烯 (LLDPE)

Linear Low-density Polyethylene (LLDPE)

薄膜料 34

Film Grade

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滚塑料 37 Rotomolding Grade

聚丙烯 (PP) 38 Polypropylene (PP)

薄膜料 41 Film Grade

取向拉伸料 41 Orientation Stretching Polypropylen (OPP)

流延膜料 43 Casting Polypropylene (CPP)

注塑料 45 Injection Molding Grade

抗冲共聚料 45 Impact Copolymer

无规共聚料 50 Random Copolymer

均聚料 52 Homopolymer

管材料 54 Pipe Grade

纤维料 55 Fiber Grade

拉丝料 57 Yarn Grade

涂覆料 58 Coating Grade

发泡料 59 Foaming Grade

粉料 60 Powder Grade

聚苯乙烯 (PS) 61 Polystyrene (PS)

注塑料 63 Injection Molding Grade

高抗冲击料 64 High Impact Polystyrene (HIPS)

丙烯腈-丁二烯-苯乙烯共聚物 (ABS) 65 Acrylonitrile-Butadiene-Styrene (ABS)

# POLYETHYLENE(PE) 聚乙烯 (PE)

P8~P37

# ● 低密度聚乙烯 (LDPE)

11 | 薄膜料

14 | 注塑料

15 | 涂覆料

16 | 花料

17 | 电缆料

18 | 乙烯-乙酸乙烯酯共聚物

# ● 高密度聚乙烯 (HDPE)

21 | 薄膜料

23 | 中空料

25 | 拉丝料

26 | 注塑料

28 | 管材料

30 | 电缆料

32 | 氯化聚乙烯用基础树脂

# ● 线型低密度聚乙烯 (LLDPE)

34 | 薄膜料

36 | 注塑料

37 | 滚塑料

#### Low-density Polyethylene (LDPE)

11 | Film Grade

14 | Injection Molding Grade

15 | Coating Grade

16 | Artificial Flower Grade

17 | Wire & Cable Grade

18 | Ethylene Vinyl Acetate (EVA)

# High-density Polyethylene (HDPE)

21 | Film Grade

23 | Blow Molding Grade

25 | Filament Grade

26 | Injection Molding Grade

28 | Pipe Grade

30 | Wire & Cable Grade

32 | Base Resin for Chlorinated Polyethylene

# Linear low-density Polyethylene (LLDPE)

34 | Film Grade

36 | Injection Molding Grade

37 | Rotomolding Grade

# 低密度聚乙烯 (LDPE)

Low-density polyethylene (LDPE)

低密度聚乙烯是高压下乙烯自由基聚合而获得的合成树脂,故又称"高压聚乙烯"。由于分子链中含有较多的长短支链,因此产品密度较小,柔软,耐低温性、耐冲击性较好;具有良好的化学稳定性,除强氧化酸外,一般情况下耐酸、碱、盐类的腐蚀作用,具有优异的电绝缘性能,水蒸气透过率低,流动性好,具有良好的成型加工性能,适合注塑、挤塑、吹塑、旋转成型、涂覆、发泡工艺、热成型、热风焊、热焊接等热塑性成型加工的各种工艺。

Low-density polyethylene (LDPE) is a synthetic resin using a high pressure process via free radical polymerization of ethylene and is therefore also called "high-pressure polyethylene". Since its molecular chain has many long and short branches, LDPE is less crystalline than high-density polyethylene (HDPE) and its density is lower. It features light, flexible, good freezing resistance and impact resistance. LDPE is chemically stable. It has good resistance to acids (except strongly oxidizing acids), alkali, salt, excellent electrical insulation properties. Its vapor penetration rate is low. LDPE has high fluidity and good processability. It is suitable for being used in all types of thermoplastic processing processes, such as injection molding, extrusion molding, blow molding, rotomolding, coating, foaming, thermoforming, hot-jet welding and thermal welding.

### 主要用途

低密度聚乙烯主要用于做薄膜产品,在农业用薄膜(如地面覆盖薄膜、大棚膜等)、包装用膜(可用于糖果、蔬菜、冷冻食品等包装)、液体包装用吹塑(涂覆)薄膜(可用于牛奶、酱油、果汁、豆腐、豆奶等包装)、重包装袋、收缩包装薄膜、弹性薄膜、内衬薄膜、建筑用薄膜以及一般工业包装薄膜和食品袋等方面有广泛的应用;低密度聚乙烯还用于电线电缆绝缘和护套,经过交联的低密度聚乙烯是高压电力电缆绝缘层的主要材料;此外,低密度聚乙烯还用于注塑制品,如塑料花、医疗器具、药品和食品包装材料;挤塑成型管材、板材、异型材等制品;低密度聚乙烯也可用于生产吹塑成型中空制品,如食品容器,药物、化妆品、化工产品的容器,槽罐等。

#### **Applications**

LDPE is principally used for making films. It is widely used in the production of agricultural film (mulching film and shed film), packaging film (for use in packing candies, vegetables and frozen food), blown film for packaging liquid (for use in packaging milk, soy sauce, juice, bean curds and soy milk), heavy-duty packaging bags, shrinkage packaging film, elastic film, lining film, buildinguse film, general-purpose industrial packaging film and food bags. LDPE is also widely used in the production of wire & cable insulation sheath. Cross-linked LDPE is the main material used in the insulation layer of high-voltage cables. LDPE is also used in the production of injection-molded products (such as artificial flowers, medical instruments, medicine and food packaging material) and extrusion-molded tubes, plates, wire & cable coatings and profiled plastic products. LDPE is also used for making blow-molded hollow products such as containers for holding food, medicine, cosmetics and chemical products, and tanks.

中国石化是国内最大的低密度聚乙烯生产商,产能占国内产能的64%,产品类别齐全、牌号众多,基本覆盖了低密度聚乙烯全部应用领域,包括普通膜料、高透明膜料、重包装膜料、收缩膜料、流延膜料、注塑料、涂覆料、电缆料等总计约96个牌号的产品。

Sinopec is China's largest LDPE producer. Its LDPE capacity accounted for 64% of the country's total capacity. The company is able to produce a full product portfolio of LDPE products in all fields. The company produces around 96 grades of LDPE products for general-purpose film, highly transparent film, heavy-duty packaging film, shrinkable film, injection molding, coatings and cables.

# 主要生产企业及工艺列表

Manufacturers and Processes

生产企业 Manufacturers	所在地 Locations	产能 (万吨/年) Design Capacity	工艺技术 Processes	企业认计 Certificatio 质量管理体系	ons HSE管理体系
		(10,000 Tons/a)		Qualification Management System	HSE Management
燕山分公司 Yanshan	北京	18	日本住友釜式法 Autoclave Process of Japan Sumitomo Chemical	ISO 9001	System  GB/T 19001-2000
Petrochemical	Beijing	20	美国EXXONMOBIL管式法 Loop Process of US Exxon Mobil	100 0001	GB/1 10001 2000
齐鲁分公司 Qilu Petrochemical	淄博 Zibo	14	荷兰国家能源管式法 Loop Process of Netherlands Essent	ISO 9001	GB/T 19001-2000
上海石化 Shanghai	上海	8	日本三菱油化管式法 Loop Process of Japan Mitsubishi Petrochemical	ISO 9001	GB/T 19001-2000 GB/T 24001-2004
Petrochemical	Shanghai	8	日本三菱油化管式法 Loop Process of Japan Mitsubishi Petrochemical	100 0001	GB/T 28001-2001
茂名分公司 Maoming	茂名	10	美国匡藤管式法 Loop Process of US Quantum Chemical	ISO 9001	GB/T 19001-2000
Petrochemical	Maoming	25	巴塞尔管式法 Loop Process of Basell	130 9001	GB/1 19001-2000
扬巴石化 BASF-YPC	南京 Nanjing	40	巴塞尔管式法 Loop Process of Basell	ISO 9001	GB/T 28001-2001 GB/T 24001-2004 GB/T 19001-2000

# 薄膜料

# Film Grade

#### 产品简介

中国石化低密度聚乙烯薄膜料分为普通膜料、高透明膜料、重包装膜料、收缩膜料、流延膜料等几个类别,产品具有优异的力学性能,良好的化学稳定性和电绝缘性能,水蒸气透过率低,产品的加工性能优良,薄膜制品的透明性和耐老化性能优异。

#### Overview

Sinopec LDPE film grade can be categorized into several groups—general purpose film, highly transparent film, heavy-duty film, shrinkage film and casting film. These products have excellent physical and mechanical performence, good chemical stability and electric insulation, low permeability to vapor, and excellent processability. Films produced using these resins has excellent transparence and aging resistance.

# 产品用途

低密度聚乙烯薄膜料,主要用于吹塑包装薄膜、农膜,并可与线型低密度聚乙烯掺混进行复合改性,此外还应用于热收缩包装膜、层压膜、冷冻膜、医用包装、共挤出多层膜、重包装膜、管道涂覆、电缆护套料、内衬以及高档化学发泡等领域。



#### **Applications**

LDPE film grade is principally used in the production of blow-molding packaging film, agricultural film and can be blended with linear low-density polyethylene (LLDPE) to produce modified PE. In addition, it can be used for heat shrinkable packaging film, laminated film, freezing film, medical packaging, multi-layer co-extrusion film, heavy-duty packaging film, pipe coatings, cable sheathing, lining and high-end chemical foaming.

#### 产品包装及贮运要求

产品采用重包装袋 (FFS) 包装,净重25Kg/袋。

产品应存放在通风、干燥的仓库内,远离火源,防止阳光直接照射,不得露天堆放。产品运输时不得在阳光下曝晒或雨淋,不得与沙土、碎金属、煤炭、玻璃等混合装运,更不可与有毒物质、腐蚀性和易燃物品混装。

# Package, Storage and Transportation

The resin is packaged in internally film-coated polypropylene woven bags. The net weight is 25Kg/bag.

# 主要产品牌号性能指标典型值(非保证值)

产品牌 <sup>-</sup> Grades		LD100AC	LD160AS	LD160BW	LD163	2102TN00
熔体流动速率 MFR	g/10min	2	4	4	0.31	2.40
密度 Density	23°C,g/cm <sup>3</sup>	0.9225	0.9225	0.9225	0.9220	0.920
雾度 Haze	%	-	-	-	-	7
拉伸强度 Tensile Strength	MPa	9	9	9	14	12
断裂伸长率 Elongation at break	%	500	450	450	500	550
认证情》 Certification		食品卫生/FDA	食品卫生/FDA	食品卫生/FDA	食品卫生/FDA	食品卫生/FDA
生产企业 Manufactu		燕山 Yanshan	燕山 Yanshan	燕山 Yanshan	燕山 Yanshan	齐鲁 Qilu
产品牌 <sup>-</sup> Grades		2100TN00	N150	N210	N220	Q210
熔体流动速率 MFR	g/10min	0.30	1.5	2.1	2.2	2.1
密 度 Density	23°C,g/cm <sup>3</sup>	0.920	0.919	0.921	0.922	0.921
雾度 Haze	%	14	24	16	16	10
拉伸强度 Tensile Strength	MPa	14	12.5	11	15	11
断裂伸长率 Elongation at break	%	550	550	550	500	550
认证情》 Certificatio		食品卫生/FDA	食品卫生ROHS/ FDA	食品卫生/ROHS/ FDA	食品卫生/ROHS/ FDA	食品卫生ROHS/ FDA
生产企业 Manufactu		齐鲁 Qilu	上海 Shanghai	上海 Shanghai	上海 Shanghai	上海 Shanghai
产品牌 <sup>!</sup> Grades		Q281	Q400	1810D	2420H	2426K
熔体流动速率 MFR	g/10min	2.8	4.0	0.3	2	4
密度 Density	23°C ,g/ cm³	0.924	0.923	0.920	0.923	0.925
雾度 Haze	%	10	10	15	9	10
拉伸强度 Tensile Strength	MPa	11	16	22	12	9
断裂伸长率 Elongation at break	%	550	450	700	580	550
认证情》 Certificatio		食品卫生ROHS/ FDA	食品卫生ROHS/ FDA	ROHS/FDA	ROHS/FDA	食品卫生/ROHS
生产企业 Manufactu		上海 Shanghai	上海 Shanghai	扬巴 BASF-YPC	扬巴 BASF-YPC	扬巴 BASF-YPC

# 主要产品牌号性能指标典型值(非保证值)

产品牌 <sup>長</sup> Grades		951-000	951-050	0	2426K		2426H	2520D	
熔体流动速率 MFR	g/10min	2.17 2.17			4.0		1.9	0.3	
密 度 Density	23°C ,g/ cm³	0.92	0.92		0.926		0.923	0.924	
雾度 Haze	%	9	9		10		8	11	
拉伸强度 Tensile Strength	MPa	8	8		18		15	11	
断裂伸长率 Elongation at break	%	400	400		550		600	600	
认证情》 Certificatio	认证情况 Certifications		ROHS/FE PAHS		食品卫生ROHS/ FDA/PAHS		卫生ROHS/ DA/PAHS	-	
生产企业 Manufactur		茂名 Maoming	茂名 Maoming	9	茂名 Maoming	ı	茂名 Maoming	茂名 Maoming	
产品牌号	1				QLT04			QLF39	
熔体质量流量	协速率	g/10min			3.0			0.75	
密度		g/cm^3			0.920			0.920	
雾度		%			10			报告	
拉伸强度	Ę	MPa			6			6	
断裂伸长	<b>率</b>	%			550			550	
产品认证	E			食品卫生/FDA		食品卫生/FDA			
生产企业	<u>′</u>				齐鲁 Qilu			齐鲁 Qilu	

# 注塑料

# Injection Molding Grade

#### 产品简介

中国石化低密度聚乙烯注塑料可广泛应用于聚乙烯发泡材料、粉末涂料及注射成型领域。产品具有支化的分子结构,熔体强度高,力学性能良好,耐热性能及耐化学腐蚀性能好,产品的加工性能优良,注射成型周期短,收缩率小,制品尺寸稳定。

#### Overview

Sinopec LDPE Injection-molding grade can be used in the production of polyethylene foaming material, powdered coating and injection-molded products. The resin has a molecular structure with branching. It has high melt strength, good mechanical behavior, heat endurance and chemical corrosion resistance and excellent processability. Products made from this resin have many advantages such as short shaping cycle, small shrinkage rate and stable dimensions.

### 产品用途

低密度聚乙烯注塑料产品主要用于生产民用爆破雷管、管材、板材、水果网套、交通护栏、小型注塑制品(瓶盖内盖)以及粉末涂料等产品。

#### **Applications**

LDPE Injection-molding grade is principally used for producing civil detonators, pipes, plates, fruit net bags, traffic guardrails, small-sized injection-molding products (the inner part of a bottle cup) and powdered coating.

# 产品包装及贮运要求

产品采用重包装袋 (FFS) 包装,净重25Kg/袋。

产品应存放在通风、干燥的仓库内,远离火源,防止阳光直接照射,不得露天堆放。产品运输时不得在阳光下曝晒或雨淋,不得与沙土、碎金属、煤炭、玻璃等混合装运,更不可与有毒物质、腐蚀性和易燃物品混装。

#### Package, Storage and Transportation

The resin is packaged in polypropylene woven bags. The net weight is 25Kg/bag.

The resin should be stored in a drafty, dry warehouse and away from fire and direct sunlight. It should not be piled up in the open air. During transportation, the material should not be exposed to strong sunlight or rain and should not be transported together with sand, soil, scrap metal, coal or glass. Transportation together with toxic, corrosive and flammable substance is strictly prohibited.



# 主要产品牌号性能指标典型值(非保证值)

产品牌号 Grades	产品牌号 Grades		LD400	LD605	LD607
熔体流动速率 MFR	g/10min	2.0	25.0	6.0	7.5
密度 Density	g/cm <sup>3</sup>	0.920	0.921	0.922	0.921
拉伸强度 Tensile Strength	MPa≽	13	18	8	9
断裂伸长率 Elongation at break	%≽	500	-	100	400
产品认证 Certifications		食品卫生/FDA	食品卫生/FDA	食品卫生/FDA	食品卫生/FDA
生产企业 Manufacturers		燕山 Yanshan	燕山 Yanshan	燕山 Yanshan	燕山 Yanshan

# 涂覆料

# Coating Grade

#### 产品简介

中国石化低密度聚乙烯涂覆料产品具有轧扁性,水蒸气透过率低,热密封性良好,具有较宽的分子量分布和较高的支化度,作为涂覆料与基材粘接性好,适宜高速挤出涂覆。

#### Overview

Sinopec LDPE coating grade can be rolled flat with a low permeability to vapor. It is characterized by good thermal sealing property, broad molecular weight distribution, high degree of branching, good adhesive bonding when used as coating, and is suitable for high-speed extrusion coating.

#### 产品用途

低密度聚乙烯涂覆料产品主要用于纸、纸板、BOPP、BOPET、BOPA、铝箔等基材的挤出涂覆后包装食品、液体、粉末、药品、农用物资、化学品等产品,目前广泛应用于淋膜包装纸、碗、杯、编织袋涂覆,标签转贴膜,相纸膜,食品和药品软复合包装,乳品、饮料、液体无菌包装等中高端包装行业。

#### **Applications**

LDPE coating grade is mainly used for coating paper, paperboard, BOPP, BOPET, BOPA, aluminum foil and other base materials

to package food, liquids, powder, medicine, agricultural-use material and chemical products. The resin is currently widely used for package paper, bowls, cups and fabric bags and producing adhesive labels, photographic paper, soft packaging material for packing food and medicine and aseptic packages containing milk, beverage and liquid.

# 产品包装及贮运要求

产品采用重包装袋 (FFS) 包装, 净重25Kg/袋。

产品应存放在通风、干燥的仓库内,远离火源,防止阳光直接照射,不得露天堆放。产品运输时不得在阳光下曝晒或雨淋,不得与沙土、碎金属、煤炭、玻璃等混合装运,更不可与有毒物质、腐蚀性和易燃物品混装。

# Package, Storage and Transportation

The resin is packaged in polypropylene woven bags. The net weight is 25Kg/bag.

The resin should be stored in a drafty, dry warehouse and away from fire and direct sunlight. It should not be piled up in the open air. During transportation, the material should not be exposed to strong sunlight or rain and should not be transported together with sand, soil, scrap metal, coal or glass. Transportation together with toxic, corrosive and flammable substance is strictly prohibited.

# 主要产品牌号性能指标典型值(非保证值)

	牌号 ides	1C7A	1C7A-1	LF2700
熔体流动速率 MFR	g/10min	7.0	7.5	27.0
密度 Density	g/cm³	0.918	0.918	0.927
颗粒外观 appearance of particle	<b>↑</b> /Kg, ≤	20	20	10
熔胀比 extrusion swelling ratio		1.70	1.70	
产品认证 Certifications		食品卫生/FDA	食品卫生/FDA	ROHS和塑化剂检测
生产企业 Manufacturers		燕山 Yanshan	燕山 Yanshan	上海 Shanghai

# 花料

# **Artificial Flower Grade**

#### 产品简介

中国石化低密度聚乙烯花料熔体流动速率高,加工流动性优异,耐热性能及耐化学腐蚀性能好。

#### Overview

Sinopec LDPE artificial flower grade has the high melt flow rate, it leads to excellent flowability and processability and anti-chemical corrosion.

#### 产品用途

低密度聚乙烯花料产品主要应用于制造塑料花、盆景,目前除广泛用于制鞋、服饰、箱包、沙发、球类、汽车装饰等各个领域外,还应用于高速公路、铁路用隔离栅、市政建设护栏及化工设备防腐涂装等领域。随着中高档、高附加值超细纤维合成革和透气服装类合成革的技术发展,目前还应用于超纤合成革领域。

#### **Applications**

LDPE artificial flower grade is mainly used for artificial flowers and minia-scape. It can also be used for textiles coating in making shoes, clothes, cases and bags, sofa, balls and car ornaments. In addition, it can be used for melt coating in expressway and railway isolation fences, municipality-use guardrails and chemical equipment for anticorrosion purposes. With the development of technologies for making high and medium-end, high-value-added synthetic leather using ultra-fine fiber, LDPE artificial flower grade is now also being used in the production of ultra-fine fiber-derived synthetic leather.

# 产品包装及贮运要求

产品采用重包装袋 (FFS) 包装,净重25Kg/袋。

产品应存放在通风、干燥的仓库内,远离火源,防止阳光直接照射,不得露天堆放。产品运输时不得在阳光下曝晒或雨淋,不得与沙土、碎金属、煤炭、玻璃等混合装运,更不可与有毒物质、腐蚀性和易燃物品混装。

#### Package, Storage and Transportation

The resin is packaged in internally film-coated polypropylene woven bags. The net weight is 25Kg/bag.

The resin should be stored in a drafty, dry warehouse and away from fire and direct sunlight. It should not be piled up in the open air. During transportation, the material should not be exposed to strong sunlight or rain and should not be transported together with sand, soil, scrap metal, coal or glass. Transportation together with toxic, corrosive and flammable substance is strictly prohibited.





# 主要产品牌号性能指标典型值(非保证值)

	牌号 des	1I50A	1160A	868-000
熔体流动速率 MFR	g/10min	50.0	55	50.0
密 度 Density	g/cm³	0.923	0.917	0.921
拉伸强度 Tensile Strength	MPa≽	6	6	8
断裂伸长率 Elongation at break	%≽	_	_	50
产品 Certific	认证 cations	食品卫生/FDA	EDA 食品卫生/FDA FDA/ROHS/P	
生产 Manufa	企业 acturers	燕山 Yanshan	燕山 Yanshan	茂名 Maoming

# 电缆料

# Wire & Cable Grade

# 产品简介

中国石化低密度聚乙烯电缆基料产品通过控制分子结构,使 其密度和熔体流动速率非常适宜做为电缆基料,产品具有较高的介电强度和体积电阻率,较低的介质损耗角正切值和介电常数。

#### Overview

Sinopec LDPE wire & cable grade has a density and melt flow rate very suitable for the material being used as cable base material. This is achieved by controlling its molecular structure. The resin has high dielectric strength and volume resistivity, low dielectric loss tangent and dielectric constant.

# 产品用途

低密度聚乙烯电缆基料产品主要用于生产高压化学可交联聚 乙烯绝缘料和中低压硅烷可交联聚乙烯绝缘料的基础料。

#### **Applications**

LDPE wire & cable grade is mainly used for producing the base materials for high-voltage chemical crosslinking polyethylene insulating material and low and medium-voltage silane crosslinking polyethylene insulating material.

# 产品包装及贮运要求

产品采用重包装袋 (FFS) 包装,净重25Kg/袋。

产品应存放在通风、干燥的仓库内,远离火源,防止阳光直接照射,不得露天堆放。产品运输时不得在阳光下曝晒或雨淋,不得与沙土、碎金属、煤炭、玻璃等混合装运,更不可与有毒物质、腐蚀性和易燃物品混装。

#### Package, Storage and Transportation

The resin is packaged in polypropylene woven bags. The net weight is 25Kg/bag.



产品牌号 Grades			LD200BW	DJ200A	DJ210	QLT17	2220H	2220HEC
熔体流动速率 MFR	g/10min	2.1	2.3	2.0	2.1	2.1	2.0	2.0
密 度 Density	g/cm <sup>3</sup>	0.923	0.922	0.918	0.920	0.920	0.923	0.92
拉伸强度 Tensile Strength	MPa≽	11	11	11	9.6	12	10	10
相对电容率(介电常数) Dielectric constant	ε(50Hz)	2.5	报告	-	2.35	2.3	2.0	3.0
介电损耗角(介质损耗角正切) Dielectric Loss Tangent	(×10 <sup>-4</sup> )	2.5	报告	2.3	2	-	-	3.0
产品认证 Certifications		食品卫生/ FDA	-	-	_	-	-	-
生产企业 Manufacturers		燕山 Yanshan	燕山 Yanshan	上海 Shanghai	上海 Shanghai	齐鲁 Qilu	扬巴 BASF-YPC	扬巴 BASF-YPC

# 乙烯一乙酸乙烯酯共聚物

# Ethylene Vinyl Acetate (EVA)



#### 产品简介

中国石化乙烯醋酸乙烯酯共聚物是由乙烯和醋酸乙烯酯 (VA)在引发剂存在下经高压本体聚合的方法,由自由基聚 合而得到的热塑性共聚树脂,其性能随着乙酸乙烯酯在大分 子中所占比例不同,表现出很大的差异,并可分别适应多种 用途的需要。

#### Overview

Sinopec EVA is a thermoplastic copolymer manufactured through the free radical polymerization of ethylene and vinyl acetate in the presence of initiating agents using the high-pressure bulk polymerization process. EVA's properties vary dramatically from one product to another depending on the content of vinyl acetate in the macromolecule. EVAs with different properties are used for different purposes.

#### 产品用途

乙烯醋酸乙烯酯共聚物可采用注塑、挤出、吹塑、压延和 发泡成型等方法进行加工,主要应用于包装材料、农用薄 膜、注塑制品、电缆材料、泡沫塑料、母料载体、共混增韧 材料、阻尼隔音材料等方面,还可以用于制作热熔粘合剂、 地毯背衬、蜡基涂层、鞋底,中空成型可用于制作可伸缩软 管、微灌管及其它软管。

# 主要产品牌号性能指标典型值(非保证值)及用途

Grades, Typical Values (Not Warranted Values) and Applications

#### **Applications**

EVA can be processed by many different methods, such as injection molding, extrusion molding, blow molding, calendering and foaming. It is principally used in the production of packaging material, agricultural film, injection-molded products, cable material, foamed plastics, master batch carriers, blending toughening material and damping soundproof material. It can also be used in the production of hot melt adhesive, carpet backing, wax-based coatings and shoe soles. Through hollow molding, EVA can be used for making expandable hoses, micro-irrigation tubes and other types of flexible hoses.

#### 产品包装及贮运要求

产品采用牛皮纸包装袋包装,净重25Kg/袋。

产品应存放在通风、干燥的仓库内,远离火源,防止阳光直接照射,不得露天堆放。产品运输时不得在阳光下曝晒或雨淋,不得与沙土、碎金属、煤炭、玻璃等混合装运,更不可与有毒物质、腐蚀性和易燃物品混装。

# Package, Storage and Transportation

The resin is packaged in brown paper bags and the net weight is 25Kg/bag.

# 主要产品牌号性能指标典型值(非保证值)

产品牌号 Grades		V4110F	V4110J	V5110J	V5110K	V6110M
熔体流动速率 MFR	g/10min	0.8	2.5	2.7	4.0	6.0
VA含量 VA Content	%	14.0	14.0	18.0	23.0	26.5
熔融温度 Melt Temperature	°C	93	93	83	80	77
维卡软化温度 Vicat softening Point	°C	72	66	60	46	42
雾度 Haze	%≤	5	-	-		
拉伸强度 Tensile Strength	MPa≽	20	-	-	10.5	11.5
断裂伸长率 Elongation at break	%≽	500	-	-	650	700
主要用途 Applications		通用膜、大棚膜 General Purpose Film, Greenhouse Film	发泡、软管 Foaming, Flexible Hose	注塑、发泡 Injection Molding, Foaming	发泡 Foaming	电缆屏蔽料 Cable screening
生产企业 Manufacture	生产企业 Manufacturer		扬巴 BASF-YPC	扬巴 BASF-YPC	扬巴 BASF-YPC	扬巴 BASF-YPC

产品牌号 Grades		14F1	9F1	24J6	18J3	18C4
熔体流动速率 MFR	g/10min	0.8	1.0	5.0	4.0	4.0
VA含量 VA Content	%	14	8.5	24	18	18
熔融温度 Melt Temperature	°C	95	100	报告	报告	报告
维卡软化温度 Vicat softening Point	°C		77	_	_	_
雾度 Haze	%≤	8	13	_	_	_
拉伸强度 Tensile Strength	MPa≽	12		_	_	12
断裂伸长率 Elongation at break	%≽	500		_	_	500
主要用途 Applications		通用膜、大棚膜	大棚膜	发泡	注塑、发泡	电缆屏蔽料
生产企业 Manufactu		燕山 Yanshan	燕山 Yanshan	燕山 Yanshan	燕山 Yanshan	燕山 Yanshan

# 高密度聚乙烯 (HDPE)

# High-density Polyethylene (HDPE)

高密度聚乙烯是一种由乙烯与少量α-烯烃单体共聚而成的高结晶非极性合成树脂,是在较低压力下合成,故又称低压聚乙烯。其分子结构主要为线型结构,分子中支链少,结晶度高,密度大,具有较高的使用温度、硬度和机械强度,耐化学性能好。

中国石化高密度聚乙烯类别齐全、牌号众多,能够提供薄膜料、中空料、拉丝料、注塑料、管材料、电缆料、氯化聚乙烯用基础树脂等产品。

HDPE is a highly crystalline non-polar thermoplastic resin produced through the copolymerization of ethylene and a small amount of  $\alpha$ -olefin monomer. HDPE is synthesized under low pressure and is therefore also called low-pressure polyethylene. HDPE is mainly a linear molecular structure and has little branching. It has a high degree of crystallization and high density. It can withstand high temperatures and has good rigidity and mechanical strength and anti-chemical corrosion.

Sinopec produces a full grade of HDPE, which cover all fields of HDPE applications, including film, blow-molding, extrusion molding, injection molding, pipes, wire & cable and base material for producing chlorinated polyethylene.

#### 主要用途

高密度聚乙烯可应用于多种塑料成型方法。中空吹塑法可用于制作各种瓶、罐及工业用槽、桶等容器;注塑成型制作各种盆、桶、篮、筐等日用盛器、日用杂品和家具等;挤出成型制作各种管材、捆扎带以及纤维、单丝等;还可用于制作电线电缆的包覆材料和合成纸;加入大量无机填料后,还可以制作钙塑包装箱、家具和门窗等,以代替木材和硬纸板。

# **Applications**

HDPE is suitable for many plastic molding methods. Blow molding can be used for making various types of bottles, cans and industrial tanks and barrels. Injection molding is used for making various containers and goods of daily use, such as basins, barrels and baskets and furniture. Extrusion molding is used for making pipes, strapping tapes, fibers and single filaments and can also be used for making wires & cables covering materials and synthetic paper. After a large amount of inorganic filler is added, HDPE can also be used as an alternative to timber and cardboards for making calcium plastic packing containers, furniture, doors and windows.

# 主要生产企业及工艺列表

Manufacturers and Processes

生产企业	所在地	产能 (万吨/年)	工艺技术		· / · / / /		
Manufacturers	Locations	Design Capacity (10,000 Tons/a)	Processes	质量管理体系 Quality Management system	GB/T 19001-2000  GB/T 19001-2000  GB/T 19001-2000  GB/T 24001-2001  GB/T 28001-2001		
燕山分公司 Yanshan Petrochemical	北京 Beijing	14	日本三井油化淤浆法工艺 Slurry Process of Japan Mitsui Petrochemical Industries	ISO 9001	GB/T 19001-2000		
中沙石化 SINOPEC SABIC TianJin Petrochemical Company	天津 Tianjin	30	INEOS公司INNOVENES工艺 INNOVENES Process of INEOS	-	-		
齐鲁分公司 Qilu Petrochemical	淄博 Zibo	14	美国联碳公司(现Univation)低压气相流化床 工艺 Low-pressure Gas-phase Fluidized bed Process of US Univation	ISO 9001	GB/T 19001-2000		
上海石化 Shanghai Petrochemical	上海 Shanghai	25	北欧化工公司的"北星双峰"PE工艺 Borealis A/S"Borstar Bimodel" PE Process	ISO 9001	GB/T 19001-2000 GB/T 24001-2004 GB/T 28001-2001		
扬子石化 Yangzi Petrochemical	南京 Nanjing	17	日本三井油化淤浆法工艺 Slurry Process of Japan Mitsui Petrochemical Industries	ISO 9001	GB/T28001-2001 GB/T24001-2004		
福建联合石化 Fujian Refining & Petrochemical Company Limited	泉州 Quanzhou	40	美国Univation公司低压气相流化床工艺 Low-pressure Gas-phase Fluidized bed Process of US Univation	-	-		
茂名分公司 Maoming Petrochemical	茂名 Maoming	35	美国CPC公司的环管淤浆法工艺 Loop Slurry Process of US CPC	ISO 9001	GB/T 19001-2000		
中韩石化	武汉 Wuhan	30	英国INEOS公司环管淤浆法工艺 Loop Slurry Process of UK INEOS	ISO 9001	GB/T 19001-2000		

# 薄膜料

#### Film Grade

# 产品简介

中国石化高密度聚乙烯薄膜料具有卓越的物理性能和良好的加工性能,较高的机械强度,良好的着色性、可印刷性、密封性,具有防潮、防油、防化学腐蚀和高速加工性能等特点。

#### Overview

Sinopec HDPE film grade has excellent physical properties, good processability, high mechanical strength and good stainability, printability and sealability. The resin is resistant to moisture, oil and chemical corrosion and has excellent high-speed processing properties.

# 产品用途

高密度聚乙烯薄膜料产品被广泛用于生产背心袋、购物袋、食品袋、垃圾袋、包装袋、工业用衬里、多层结构薄膜等,各种饮料、药品包装以及热灌装包装、保鲜包装等方面的应用也逐渐增多,此外在水利工程中还可以用于防渗膜的制造。

### **Applications**

HDPE film grade is widely used in the production of T-shirt bags, shopping bags, food bags, garbage bags, packaging bags, industrial lining and multilayer film. In recent years, the resin has been increasingly used in beverage and medicine packaging, hot filling packaging and fresh produce packaging. The resin can also be used in the production of anti-seepage film used in hydraulic engineering.

# 产品包装及贮运要求

产品采用重包装袋(FFS)包装、牛皮纸包装袋或聚乙烯复合薄膜包装袋包装,净重25Kg/袋。

产品应存放在通风、干燥的仓库内,远离火源,防止阳光直接照射,不得露天堆放。产品运输时不得在阳光下曝晒或雨淋,不得与沙土、碎金属、煤炭、玻璃等混合装运,更不可与有毒物质、腐蚀性和易燃物品混装。

# Package, Storage and Transportation

The resin is packaged in internally film-coated polypropylene woven bags, brown paper bags or laminated polyethylene film bags. The net weight is 25Kg/bag.





# 主要产品牌号性能指标典型值 (非保证值)

	产品牌号 Grades		6098	7000F	7700F	DGDA6097
熔体流 MF		g/10min	11.0	0.23	0.3	10.0
密 Den		g/cm <sup>3</sup>	0.950	0.951	0.951	0.948
拉伸断 Tensile Stren		MPa≽	23	24	23	15
	断裂伸长率    %≥ Elongation at break		600	550	600	500
鱼眼	0.8mm,个	-/1520cm <sup>2</sup>	2.0	1.5	2.0	4
pcs/1520cm <sup>2</sup>	Fish eyes , pcs/1520cm² 0.4mm , 个/1520cm		15	15	20	25
产品认证 Certifications		FDA/ROHS	食品卫生/ROHS	_	_	
	生产企业 Manufacturers		齐鲁 Qilu	扬子 Yangzi	扬子 Yangzi	福建联合 FREP

产品牌号 Grades		MH602	TR144	J44-20	J50-08
熔体流动速率 MFR	g/10min	6.0	0.19	20(HLMI)	6.5(HLMI)
密度 Density	g/cm <sup>3</sup>	0.946	0.946	0.944	0.950
拉伸屈服强度	纵向,MD MPa≽	48	26	25	30
Tensile Strength at yield	横向,TD MPa≽	37	25	23	27
断裂伸长率	纵向, MD %≥	280	600	_	_
Elongation at break	横向,TD %≥	240	500	_	_
断裂屈服强度	纵向, MD %≥	_	_	48	60
Fracture strength at yield.	横向,TD %≥	_	_	38	50
撕裂强度	纵向, MD N≥	0.08	26(g)	_	_
Tearing Strength	横向,TD N≥	0.4	410(g)	_	_
落标冲击强度 Fall darts impact strength	g≽	_	_	90	300
产品认证 Certifications		FDA/ROHS	食品卫生ROHS/FDA/ PAHS	_	_
生产企业 Manufacturers		上海 Shanghai	茂名 Maoming	中沙 SSTPC	中沙、中韩石化 SSTPC、

# 中空料

# **Blow Molding Grade**

#### 产品简介

中国石化高密度聚乙烯中空料密度较大,模量高,刚性、韧性好,耐环境应力开裂性能良好,加工性能优异,适用于中空吹塑中型或大型装运液体的容器。

#### Overview

Sinopec HDPE blow molding grade features high density, modulus and rigidity, good environmental stress crack resistanse and excellent processability. The resin is suitable for making large and medium-sized containers holding liquids by blow-molding.

#### 产品用途

高密度聚乙烯中空料产品可以用于中空吹塑牛奶瓶、果汁瓶、化妆品瓶、人造黄油罐、齿轮油桶、汽车用润滑油桶等小型中空容器,也可用于中空吹塑IBC集装桶、大型玩具、漂浮物、包装桶等大中型容器。

# **Applications**

HDPE blow-molding grade can be used for producing small-sized containers such as milk bottles, juice bottles, cosmetics bottles, artificial butter cans, gear oil barrels and auto lubricant barrels. It can also be used in the production of intermediate bulk-containers(IBC), large toys, floating matters and large and medium-sized containers such as packaging-use barrels.

#### 产品包装及贮运要求

产品采用重包装袋(FFS)包装、牛皮纸包装袋或聚乙烯复合薄膜包装袋包装,净重25Kg/袋。

产品应存放在通风、干燥的仓库内,远离火源,防止阳光直接照射,不得露天堆放。产品运输时不得在阳光下曝晒或雨淋,不得与沙土、碎金属、煤炭、玻璃等混合装运,更不可与有毒物质、腐蚀性和易燃物品混装。

#### Package, Storage and Transportation

The resin is packaged in internally film-coated polypropylene woven bags, brown paper bags or laminated polyethylene film bags. The net weight is 25Kg/bag.









# 主要产品牌号性能指标典型值 (非保证值)

产品牌号 Grades		5200B	1158	1158P	HD6007XA	HD5502XA	HM5411EA	5301B
熔体流动速率 MFR	g/10min	0.3	2.1	2.4	0.6	0.2	10(HLMI)	0.7
密度 Density	g/cm <sup>3</sup>	0.960	0.953	0.950	0.962	0.952	0.952	0.960
灰分 Ash	%≤	0.03	_	_	_	_	_	_
拉伸强度 Tensile Strength	MPa≽	23	24	20	_	_	_	25
拉伸屈服强度 Tensile Strength at yield	MPa≽			_	30.5	26	26	_
断裂伸长率 Elongation at break	%≽	800	600	300	300	300	300	500
弯曲模量 Flexural Modulus	MPa	_	_	_	1700	1050	1100	_
简支梁缺口冲击强度 Charpy notched impact strength	KJ/m <sup>2</sup> ≽	18	32	28	_	30	_	40
冲击脆化温度 Impact Brittleness temperature	°C €	-70	_	_	_	_	_	_
产品认证 Certification		食品卫生/FDA	_	_	_	_	_	食品卫生/ ROHS
生产企业 Manufacture	rs	燕山 Yanshan	齐鲁 Qilu	齐鲁 Qilu	中沙 SSTPC	中沙 SSTPC	中沙 SSTPC	扬子 Yangzi

产品牌号 Grades		HHM 5502LW	HHM 5502ST	HXM 50100	HXB 4505M	TR-571M	TR-580M	HD5502S	HM4560UA
熔体流动速率 MFR	g/10min	0.3	0.35	(HLMI) 9.8(21.6kg)	6.0 (21.6kg)	3.0 (21.6kg)	6.0 (21.6kg)	0.2	6.8 (21.6kg)
密度 Density	g/cm³	0.955	0.955	0.9475	0.945	0.953	0.945	0.954	0.947
灰分 Ash	%≤	0.1	0.1	0.1	0.1	_	0.1		
拉伸强度 Tensile Strength at yield	MPa≽	20	26	22	20	27	20	26	_
断裂伸长率 Elongation at break	%≽	400	500	800	1100	_	600	300	_
简支梁缺口冲击强度	KJ/m²≽	16	16	16	16	50	_	_	_
冲击脆化温度 Impact Brittleness Temperature	°C ≤	-75	-75	_	_	_	-70	_	_
产品认证 Certification		食品卫生 FDA/ ROHS/ PAHS	FDA/ ROHS	FDA/ ROHS	FDA/ ROHS	_	_	_	_
生产企业 Manufacture		茂名 Maoming	茂名 Maoming	茂名 Maoming	茂名 Maoming	茂名 Maoming	茂名 Maoming	中韩石化	中韩石化

# 拉丝料

# Filament Grade

# 产品简介

中国石化高密度聚乙烯拉丝料具有良好的耐热性、耐寒性、耐磨性、耐化学腐蚀性以及优异的机械性能,适用挤塑、吹塑等加工成型方式。

#### Overview

Sinopec HDPE filament grade has strong endurance to heat, cold, abrasion and chemical corrosion and has excellent mechanical properties, suitable for extrusion and blow molding.

#### 产品用途

高密度聚乙烯拉丝料适用于制作包装膜、网、绳缆及小中空 容器等。

# Application

The HDPE filament grade is suitable for making packaging film, nets, ropes and small and medium-sized containers.



# 产品包装及贮运要求

产品采用重包装袋(FFS)包装、牛皮纸包装袋或聚乙烯复合薄膜包装袋包装,净重25Kg/袋。

产品应存放在通风、干燥的仓库内,远离火源,防止阳光直接照射,不得露天堆放。产品运输时不得在阳光下曝晒或雨淋,不得与沙土、碎金属、煤炭、玻璃等混合装运,更不可与有毒物质、腐蚀性和易燃物品混装。

#### Package, Storage and Transportation

The resin is packaged in internally film-coated polypropylene woven bags, brown paper bags or laminated polyethylene film bags. The net weight is 25Kg/bag.

The resin should be stored in a drafty, dry warehouse and away from fire and direct sunlight. It should not be piled up in the open air. During transportation, the material should not be exposed to strong sunlight or rain and should not be transported together with sand, soil, scrap metal, coal or glass. Transportation together with toxic, corrosive and flammable substance is strictly prohibited.



# 主要产品牌号性能指标典型值(非保证值)

* *	,	ŕ					
产品牌号 Grades		5000S	5000S	YLPE-5001	DGDA6094	A4009MFN1325	A5006FN1280
熔体流动速率 MFR	g/10min	1.0	1.0	1.0	1.0	0.9	0.6
密度 Density	g/cm <sup>3</sup>	0.951	0. 951	0.950	0.950	0.960	0.944
灰分 Ash	%≤	0.02	_	_	_	_	_
表观动态粘度 Apparent dynamic viscosity	Pa.S	_	_	_	_	1700	2180
拉伸强度 Tensile Strength	MPa≽	25	22	22	28	_	_
断裂伸长率 Elongation at break	%≽	800	500	750	600	_	_
产品认证 Certifications		食品卫生 /FDA	食品卫生/ROHS	_	_	_	_
生产企业 Manufacturers		燕山 Yanshan	扬子 Yangzi	扬子 Yangzi	福建联合 FREP	中沙、中韩石化 SSTPC	中沙 SSTPC

# 注塑料

# Injection Molding Grade

#### 产品简介

中国石化高密度聚乙烯注塑料具有良好的刚、韧均衡性,抗冲击性能好,耐低温性和耐环境应力开裂性优异。产品的硬度高、耐磨损性能好、加工性能优异。

#### Overview

Sinopec HDPE injection molding grade has good balance of rigidity and toughness, good impact resistance and excellent of low temperatures resistance and good environmental stress crack resistanse. The resin has good rigidity and abrasion resistance, and good processability.

#### 产品用途

高密度聚乙烯注塑料产品用于制作啤酒箱、饮料箱、食品箱、蔬菜箱、禽蛋箱等周转箱,也可用于制作塑料托盘、贮物容器、家用器具、日用杂品以及薄壁食品容器等,还可用于制作工业桶、垃圾箱、玩具等,此外可使用挤出一模压法和注塑成型法生产灌装纯净水、矿泉水、茶饮料、果汁饮料等瓶用瓶盖。

#### **Application**

HDPE injection-molding grade is used for making reusable containers, such as beer cases, beverage cases, food cases, vegetable cases and egg cases and can also be used for making plastic trays, goods containers, home appliances, daily goods use and thin-wall food containers. It can also be used in the production of industrial-use barrels, garbage bins and toys. Through the extrusion and compression molding process and injection molding, it can be used to produce the caps of purified water, mineral water, tea beverage and juice beverage bottles.

#### 产品包装及贮运要求

产品采用重包装袋(FFS)包装、牛皮纸包装袋或聚乙烯复合薄膜包装袋包装,净重25Kg/袋。

产品应存放在通风、干燥的仓库内,远离火源,防止阳光直接照射,不得露天堆放。产品运输时不得在阳光下曝晒或雨淋,不得与沙土、碎金属、煤炭、玻璃等混合装运,更不可与有毒物质、腐蚀性和易燃物品混装。

#### Package, Storage and Transportation

The resin is packaged in internally film-coated polypropylene woven bags, brown paper bags or laminated polyethylene film bags. The net weight is 25Kg/bag.











主要产品牌号性能指标典型值 (非保证值)

产品牌号 Grades		3000JE	3300J	DMDA8008	DMDA8916	DMDA8920	T50-2000	T60-800	T50-200-119
熔体流动速率 MFR	g/10min	2.2	2.6	7.5	16	20	20.0	8.4	2.2
密度 Density	g/cm <sup>3</sup>	0.957	0.956	0.956	0.954	0.954	0.953	0.961	0.953
拉伸屈服强度 Tensile Strength at yield	MPa≽	26.5	26.5	25	22	10	26.9	29.6	26.9
断裂伸长率 Elongation at break	%≽	600	600	200	90	90	_	_	_
弯曲模量 Flexural Modulus	MPa≽	1000	950	_	_	_	1276	1590	1276
维卡软化温度 Vicat softening temperature	°C	127	128	-60	-60	_	123	128	131
产品认证 Certifications		食品卫生/ FDA	食品卫生/ FDA	_	_	_	_	_	_
生产企业 Manufacturers		燕山 Yanshan	燕山 Yanshan	福建联合、 广州 FREP、 Guangzhou	福建联合 FREP	福建联合 FREP	中沙 SSTPC	中沙、中韩 石化 SSTPC	中沙 SSTPC

# 管材料

# Pipe Grade

### 产品简介

中国石化高密度聚乙烯管材料分子量呈宽或双峰分布,具有良好的抗蠕变性和刚韧均衡性,突出的长期使用性能及加工低垂流性,所生产的管材制品具有优良的强度、刚性和冲击性能及优异的抗快速和慢速裂纹扩展性能。

#### Overview

Sinopec HDPE pipe grade has broad or bimodal distribution of molecular weight. It has strong creep resistance and good balance of rigidity and toughness. It is very durable and has low sag when being processed. Pipes produced using this resin have good strength, rigidity and impact resistance and excellent property of SCG and RCP.







# 产品用途

高密度聚乙烯管材料产品可应用于压力管道领域,如承压水管与燃气管道及各种工业用管领域,还可以应用于非压力管道领域,如双壁波纹管、中空壁缠绕管、硅心管、农用灌溉管、铝塑复合管等。此外,还应用于反应挤出(硅烷交联方法)生产冷热水用交联聚乙烯(PEX)管材的生产。

#### **Applications**

HDPE pipe grade can be used in the production of pressure pipes, such as pressurized water pipes, fuel gas pipelines and other industrial pipes. It can also be used for making non-pressure pipes such as double-wall corrugated pipes, hollow-wall winding pipes, silicon-core pipes, agricultural irrigation pipes and aluminum-plastics compound pipes. In addition, through reactive extrusion (silane cross-linking), it can be used for producing crosslinked polyethylene pipes (PEX) for supplying cold and hot water.

# 产品包装及贮运要求

产品采用重包装袋(FFS)包装、牛皮纸包装袋或聚乙烯复合薄膜包装袋包装,净重25Kg/袋。

产品应存放在通风、干燥的仓库内,远离火源,防止阳光直接照射,不得露天堆放。产品运输时不得在阳光下曝晒或雨淋,不得与沙土、碎金属、煤炭、玻璃等混合装运,更不可与有毒物质、腐蚀性和易燃物品混装。

#### Package, Storage and Transportation

The resin is packaged in internally film-coated polypropylene woven bags, brown paper bags or laminated polyethylene film bags. The net weight is 25Kg/bag.

# 主要产品牌号性能指标典型值(非保证值)

产品牌 Grade		YGH041	YGH041T (PE100)	YGH051T (PE80)	YGM091T (PE80)	PN049-030-122	PN043-090-122
熔体流动速率 MFR	g/10min	0.25	0.3	0.6	0.8	0.3(MI5)	0.9(MI5)
密度 Density	g/cm <sup>3</sup>	0.950	0.959	0.956	0.951	0.949	0.940
拉伸屈服强度 Tensile Strength at yield	MPa≽	19	20	19	17	24	22
拉伸屈服应变 Tensile Strain at yield	%≽		7	8	8	_	
拉伸弹性模量 Tensile Modulus	MPa≽	860	860	860	500	1100	1000
断裂伸长率 Elongation at break	% ≽ (23°C 50mm/分)	580	_	_	_	300	600
产品认证 Certifications		_	SCG/RCP	SCG/RCP	SCG/RCP	_	
生产企 Manufact		上海 Shanghai	上海 Shanghai	上海 Shanghai	上海 Shanghai	中沙 SSTPC	中沙 SSTPC

产品牌 Grade	_	6100M	6380M	7600M	2300XM	K44-08-122	DGDB2480
熔体流动速率 MFR	g/10min	0.13	0.1	0.04	5.5	8.75(HLMI)	12.0
密度 Density	g/cm <sup>3</sup>	0.954	0.949	0.948	0.949	0.944	0.946
拉伸屈服强度 Tensile Strength at yield	MPa≽	26	22	22.1	22.8	22	19
拉伸断裂应变 Tensile Strain at break	%≽	750	800	726	_	800	_
弯曲弹性模量 Flexural Modulus	MPa≽	900	850	1000	_	810(拉伸)	900
产品认证 Certifications		食品卫生/FDA	食品卫生 SCG/RCP	食品卫生 SCG/RCP	食品卫生	_	_
生产企 Manufact		燕山 Yanshan	燕山 Yanshan	燕山 Yanshan	燕山 Yanshan	中沙 SSTPC	福建联合 FREP

产品牌号 Grades		QHM22F	2480	2480H	YEM-4803T	YEM-4902T	TR-480M	PN049- 030-122
熔体流动速率 MFR	g/10min	11.4	12.5	10.0	0.30	0.23	0.50	0.3
密度 Density	g/cm <sup>3</sup>	0.937	0.945	0.943	0.951	0.951	0.944	0.949
拉伸屈服强度 Tensile Strength at yield	MPa≽	20.2	21	19	24	24	20	23.5
拉伸断裂应变 Tensile Strain at break	%≽	713	500	500	_	300	350	664
弯曲弹性模量 Flexural Modulus	MPa≽	_	_	_	720	730	800	_
产品认 Certificat		_	_	SCG/RCP	SCG/RCP	SCG/RCP	食品卫生	_
生产企 Manufact		齐鲁 Qilu	齐鲁 Qilu	齐鲁 Qilu	扬子 Yangzi	扬子 Yangzi	茂名 Maoming	中韩石化

# 电缆料

# Wire & Cable Grade

#### 产品简介

中国石化高密度聚乙烯电缆料具有优异的力学性能和耐磨性,良好的耐环境应力开裂和耐热应力开裂性能,电绝缘性能优异,适用于高频载波电缆,不易发生语音的串扰和损耗,加工性能良好。

#### Overview

Sinopec HDPE wire & cable grade has excellent mechanical and abrasion resistance properties. It has a strong ability to environment stress crack resistance and thermal stress crack resistance. It also has excellent insulating properties and processability, it is especially suitable for making high-frequency carrier cables, which can effectively avoid crosstalk interference and loss.

# 产品用途

高密度聚乙烯电缆料产品主要用于高速挤出通讯电缆护套。

#### **Applications**

HDPE wire & cable grade is mainly used for producing communication cable jacket through fast-extrusion methods.

# 产品包装及贮运要求

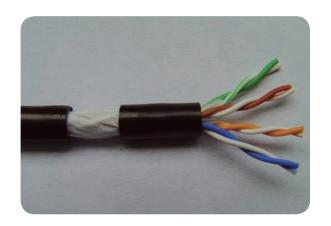
产品采用重包装袋(FFS)包装、牛皮纸包装袋或聚乙烯复合薄膜包装袋包装,净重25Kg/袋。

产品应存放在通风、干燥的仓库内,远离火源,防止阳光直接照射,不得露天堆放。产品运输时不得在阳光下曝晒或雨淋,不得与沙土、碎金属、煤炭、玻璃等混合装运,更不可与有毒物质、腐蚀性和易燃物品混装。

#### Package, Storage and Transportation

The resin is packaged in internally film-coated polypropylene woven bags, brown paper bags or laminated polyethylene film bags. The net weight is 25Kg/bag.







# 主要产品牌号性能指标典型值 (非保证值)

产品牌号 Grades		QHJ01	BPD4020	PC4014	K44-15-122
熔体流动速率 MFR	g/10min	0.7	0.2	0.5	12.5(HLMI)
密度 Density	g/cm <sup>3</sup>	0.945	0.939	0.952	0.944
水含量 Moisture Content	mg/kg≤	_	_	_	_
拉伸强度 Tensile Strength	MPa≽	19	18	26	22.8
断裂伸长率 Elongation at break	%≽	500	600	500	800
耐环境应力开裂 Environmental Stress Cracking Resistance	F50≽	_	_	_	_
介电常数 Dielectric Constant	_	_	_	_	_
炭黑分散性 Distribution of Pigment or Carbonblack	级 Grade	_	_	_	_
炭黑含量 Carbon Black Content	wt%	_	_	_	_
邵氏硬度 shore hardness D	(D型≥	_	_	_	_
弯曲弹性模量 Flexural Modulus	MPa≽	_	_	_	_
产品认证 Certifications		ROHS		_	_
生产企业 Manufacturer	rs .	齐鲁 Qilu	中沙 SSTPC	中沙 SSTPC	中沙 SSTPC

# 土工膜

# Geomembrane

#### 产品简介

高密度聚乙烯土工膜是一种新型防渗透材料,具有很高的防 渗系数,良好的耐热性、耐寒性和抗老化性,很强的抗拉强 度与断裂伸长率,很好的化学稳定性能,能够广泛应用于垃 圾填埋场、污水处理池、人工湖、储油池、水库池塘等各种 防渗透处理工程。

#### Introduction

HDPE geomembrane is a new penetration-proof resin, with very high penetration-proof co-efficient, good resistance to heat, coldness and aging, strong tensile strength, elongation at break, excellent chemical stability, widely applied for landfills, waste water treatment pits, man-made lakes, oil storage pits, reservoirs and ponds, etc.

#### 产品用途

主要用于吹制土工膜系列产品。

# Applications:

Mainly used to make blow molding geomembrane products.



# 主要产品牌号性能指标标称值

Grades and Typical Values (Not Warranted Values)

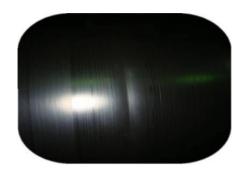
# 产品包装及贮运要求

产品采用重包装袋(FFS)包装、牛皮纸包装袋或聚乙烯复合薄膜包装袋包装,净重25Kg/袋。

产品应存放在通风、干燥的仓库内,远离火源,防止阳光直接照射,不得露天堆放。产品运输时不得在阳光下曝晒或雨淋,不得与沙土、碎金属、煤炭、玻璃等混合装运,更不可与有毒物质、腐蚀性和易燃物品混装。

#### Package, Storage and Transportation

The resin is packaged in internally film-coated polypropylene woven bags, brown paper bags or laminated polyethylene film bags. The net weight is 25Kg/bag.



	牌号 ides	TR400N		
熔体流动速率 MFR	g/10min	11.6(21.6kg)		
密度 Density	g/cm3	0.939		
拉伸屈服强度 Tensile Strength at yield	MPa≥	20		
断裂伸长率 Elongation at break	%≥	799		
	认证 cations	_		
·	企业 acturers	茂名 Maoming		

# 氯化聚乙烯用基础树脂

# Base Resin for Chlorinated Polyethylene

#### 产品简介

中国石化氯化聚乙烯用基础树脂产品粒径分布均匀,适用于化学改性生产氯化聚乙烯产品。

#### Overview

Sinopec HDPE base resin for chlorinated polyethylene has even particle size distribution. It is suitable for the production of chlorinated polyethylene products through chemical modification.

#### 产品用途

氯化聚乙烯用基础树脂产品主要应用于生产氯化聚乙烯树脂。作为塑料和橡胶的优良改性剂或增塑剂,氯化聚乙烯在塑料门窗、PVC管材与板材、防水卷材、防腐涂料、电线电缆、磁性材料、阻燃胶管、胶带以及ABS改性等工业领域具有广泛的应用。

#### **Applications**

Base resin for chlorinated polyethylene (CPE) is principally used in the production of chlorinated polyethylene resin. As an excellent modifier and plasticizer to plastics and rubber, chlorinated polyethylene is widely used in the production of plastic doors and windows, PVC pipes and sheets, waterproof coiled material, anticorrosion coating, wires and cables, magnetic material, flame-retardant rubber hoses, tapes and modification ABS.

# 主要产品牌号性能指标典型值(非保证值)及用途

Grades, Typical Values (Not Warranted Values) and Applications

# 产品包装及贮运要求

产品采用重包装袋(FFS)包装、牛皮纸包装袋或聚乙烯复合薄膜包装袋包装,净重25Kg/袋。

产品应存放在通风、干燥的仓库内,远离火源,防止阳光直接照射,不得露天堆放。产品运输时不得在阳光下曝晒或雨淋,不得与沙土、碎金属、煤炭、玻璃等混合装运,更不可与有毒物质、腐蚀性和易燃物品混装。

# Package, Storage and Transportation

The resin is packaged in internally film-coated polypropylene woven bags, brown paper bags or laminated polyethylene film bags. The net weight is 25Kg/bag.



产品 Gra	牌号 ade	YEC-5505T	6800CP		
熔体流动速率 MFR	g/10min	0.5	0.5		
密度 Density	g/cm³	0.950	0.950		
堆积密度 Apparent Bulk Density	g/cm³	0.3	_		
熔融温度 MeltingTemperature	°C	130	_		
	用途 ations	氯化聚乙烯基料 Base Resin of Chlorinated Polyethylene	氯化聚乙烯基料 Base Resin of Chlorinated Polyethylene		
	企业 acturer	扬子 燕山 Yangzi Yanshan			

# 线型低密度聚乙烯 (LLDPE)

# Linear Low-density Polyethylene (LLDPE)

线型低密度聚乙烯是由乙烯与高级  $\alpha$  -烯烃(如丁烯-1、己烯-1) 在低压下聚合而获得的合成树脂,是含短支链的中低密度聚乙烯,产品分子量分布较窄。

Linear low-density polyethylene (LLDPE) is a copolymer produced by polymerization of ethylene and  $\alpha$ -olefin (such as butene-1, hexene-1) at low pressure. It is low and medium density polyethylene with short chains branching. LLDPE has a narrow molecular weight distribution.

#### 主要用途

主要用于制作薄膜、管材、注塑成型制品、中空吹塑容器、旋转成型制品及电线电缆包覆材料等。

中国石化线型低密度聚乙烯产品是采用美国Univation公司的 Unipol流化床工艺,是以乙烯和 $\alpha$ -烯烃为单体在催化剂作用下进行聚合反应制得,具有较高的拉伸强度、冲击强度,优异的耐穿刺性及耐低温冲击性能。

Sinopec LLDPE is manufactured by polymerization of ethylene and  $\alpha$  -olefin monomers in the presence of catalysts using UCC's Unipol fluidized-bed technology. The product has strong tensile and impact strength and excellent properties to resist puncture and impact at low temperatures.

#### Main Applications

LLDPE is mainly used for making film, pipes, injection-molding products, blow-molding containers, rotationally-molding products and wire & cable covering material.

# 主要生产企业及工艺列表

Manufacturers and Processes

生产企业	所在地	产能 (万吨/年)	工艺技术		认证 cations
生广证业 Manufacturers	加住地 Locations	Design Capacity (10,000 Tons/a)	上乙tx木 Processes	质量管理体系 Quality Management System	HSE管理体系 HSE Management System
天津分公司 Tianjin Petrochemical	天津 Tianjin	12	Univation公司的Unipol流化床工艺 Unipol fluidized bed Process of Univation	ISO9001	GB/T19001-2000
中沙石化 SINOPEC SABIC TianJin Petrochemical Company	天津 Tianjin	30	中国石化气相法聚乙烯工艺技术 Gas-phase PolyethyleneProcess of Sinopec	_	_
中原石化 Zhongyuan Petrochemical	濮阳 Puyang	24	Univation公司的Unipol流化床工艺 Unipol fluidized bed Process of Univation	ISO9001	GB/T19001-2000
齐鲁分公司 Qilu Petrochemical	淄博 Zibo	12	Univation公司的Unipol流化床工艺 Unipol fluidized bed Process of Univation	ISO9001	GB/T19001-2000
扬子石化 Yangzi Petrochemical	南京 Nanjing	20	Univation公司的Unipol流化床工艺 Unipol fluidized bed Process of Univation	ISO9001	GB/T19001-2000
镇海炼化 Zhenhai Refining and Chemical Company	宁波 Ningbo	45	Univation公司的Unipol流化床工艺 Unipol fluidized bed Process of Univation	ISO9001	GB/T19001-2000
福建联合石化 Fujian Refining & Petrochemical Company Limited	泉州 Quanzhou	40	Univation公司低压气相流化床工艺 Low-pressure Gas-phase Fluidized bed Process of US Univation	_	_
广州分公司 Guangzhou Petrochemical	广州 Guangzhou	20	Univation公司的Unipol流化床工艺 Unipol fluidized bed Process of Univation	ISO9001	GB/T19001-2000
茂名分公司 Maoming Petrochemical	茂名 Maoming	20	Univation公司的Unipol流化床工艺 Unipol fluidized bed Process of Univation	ISO9001	GB/T19001-2000
中韩石化	武汉 Wuhan	30	中国石化气相法聚乙烯工艺技术 Gas-phase PolyethyleneProcess of Sinopec	_	_

# 薄膜料

# Film Grade

中国石化线型低密度聚乙烯薄膜料为无毒、无味、无臭的白色颗粒,具有强度高、韧性好、刚性强、耐热、耐寒等优点,有良好的耐环境应力开裂、耐冲击、耐撕裂性能及抗穿刺性能,加工性能优良,薄膜制品的透明性和耐老化性能优异,并可耐酸、碱和有机溶剂。

Sinopec LLDPE film grade is white, nontoxic, tasteless and odorless, supplied in pellets. It has high tensile strength, toughness and rigidity and is resistant to heat and cold. It has good environmental stress crack resistance and impact and puncture resistance and has good processability. Films made from it have excellent transparence and good aging resistance, acids, alkali and organic solvents.

# 产品用途

线型低密度聚乙烯薄膜料产品用于制作薄膜制品,如各种农膜、地膜、日用包装袋,垃圾袋,也可用于容器衬里、涂层、农用小口径排水管材等。

# **Applications**

LLDPE film grade can be used to make films such as agricultural film and mulching film, packaging bags of daily use, garbage bags, container lining, coatings and agricultural small-caliber drainage pipes.



# 产品包装及贮运要求

产品采用重包装袋 (FFS) 包装,净重25Kg/袋。

产品应存放在通风、干燥的仓库内,远离火源,防止阳光直接照射,不得露天堆放。产品运输时不得在阳光下曝晒或雨淋,不得与沙土、碎金属、煤炭、玻璃等混合装运,更不可与有毒物质、腐蚀性和易燃物品混装。

#### Package, Storage and Transportation

The resin is packaged in internally film-coated polypropylene woven bags. The net weight is 25Kg/bag.



# 主要产品牌号性能指标典型值(非保证值)

产品牌号 Grades		7050	9050K	9020	9030	DFDA- 6010	TJVL- 1210	7042	1802	7042
熔体流动速率 MFR	g/10min	2.0	1.9	1.9	20	0.95	1.0	2.0	2.0	2.0
密度 Density	g/cm <sup>3</sup>	0.923	0.920	0.922	0.919	0.921	0.910	0.920	0.920	0.918
拉伸屈服强度 Tensile Strength at yield	MPa≽	8	8.3	8.3	9	10.8	7.8	10	10	7.0
拉伸断裂强度 Tensile Strength at break	MPa≽	12	12	12	20	29.0	28.4	16	_	_
断裂伸长率 Elongation at break	%≽	500	500	500	_	_	846	750	750	200
雾度 Haze	%≤	14	17	_	_	_	15	12	12	_
鱼眼(个/1520cm²) Fish Eyes	0.8mm≤	8	2	2	4	13	_	2	2	8
pcs/1520cm <sup>2</sup>	0.4mm≤	40	15	15	25	_	_	10	10	40
产品认证 Certification	s	_	_	_	_	_	_	食品卫生/ ROHS	食品卫生/ ROHS	食品卫生/ ROHS/FDA
生产企业 Manufacture	rs	中原 Zhongyuan	中原 Zhongyuan	天津 Tianjin	天津 Tianjin	天津 Tianjin	天津 Tianjin	扬子 Yangzi	扬子 Yangzi	镇海 Zhenhai

产品牌号 Grades		7050	7042	QHM23F	7042	MLPE8250	2001T	2001	7042
熔体流动速率 MFR	g/10min	2.0	2.0	2.0	2.0	50	1.9	2.0	2.0
密度 Density	g/cm <sup>3</sup>	0.921	0.920	0.918	0.920	0.926	0.920	0.920	0.918
拉伸屈服强度 Tensile Strength at yield	MPa≽	7.0	8.3	7.0	8	_	8	8	8
拉伸断裂强度 Tensile Strength at break	MPa≽	_	12	12	12	_	12	12	12
断裂伸长率 Elongation at break	%≥	200	500	300	_	_	500	500	500
雾度 Haze	%≤	_	_	_	15	_	16	20	25
鱼眼(个/1520cm²) Fish Eyes	0.8mm≤	8	_	_	_	_	2	2	4
pcs/1520cm <sup>2</sup>	0.4mm≤	40	_	_	_	_	15	15	25
产品认证 Certifications		FDA/ROHS	FDA	_	_	_	FDA	FDA/ROHS	_
生产企业 Manufacturers		镇海 Zhenhai	齐鲁、中原 Qilu、Zhongyuan	齐鲁 Qilu	茂名 Maoming	茂名 Maoming	广州 Guangzhou	广州 Guangzhou	福建联合 FREP

产品牌号 Grades		7050	QLLP01	9085	1801	7047	7050H	EGF-35B	EGF-34
熔体流动速率 MFR	g/10min	2.0	1.0	0.7	1.0	1.0	2.0	2.0	1.0
密度 Density	g/cm <sup>3</sup>	0.922	0.920	0.920	0.918	0.918	0.921	0.918	0.918
拉伸屈服强度 Tensile Strength at yield	MPa≽	8	7	8.3	8	_	7.0	10	9
拉伸断裂强度 Tensile Strength at break	MPa≽	12	15	17	_	_	_	17	19
断裂伸长率 Elongation at break	%≽	500	500	500	650	_	200	760	600
雾度 Haze	%≤	30	_	_	14	_	13.5	_	_
鱼眼(个/1520cm²) Fish Eyes	0.8mm≤	4	_	8	8	8	4	_	_
pcs/1520cm <sup>2</sup>	0.4mm≤	25	_	40	40	40	20	_	_
产品认证 Certifications		_	_	_	食品卫生/ ROHS	ROHS/ FDA	_	_	_
生产企业 Manufacturers		福建联合 FREP	齐鲁 Qilu	天津 Tianjin	扬子 Yangzi	镇海 Zhenhai	扬子、镇海 Yangzi, Zhenhai	中韩石化	中韩石化

## 注塑料

#### Injection Molding Grade

#### 产品简介

中国石化线型低密度聚乙烯注塑料为无毒、无味、无臭的白色颗粒,具有流动性好、强度高、韧性好等优点。

#### Overview

Sinopec LLDPE injection-molding grade is white, nontoxic, tasteless and odorless, supplied in pellets. characterized by good fluidity, high tensile strength and toughness.

#### 产品用途

线型低密度聚乙烯注塑料产品主要用于制作塑料桶、塑料周 转箱及大件注塑等日用制品,还可用于制作色母粒及其它功 能母粒料。

#### **Applications**

LLDPE injection-molding grade is principally used for making household articles, such as plastic barrels, reusable plastic containers and large injection-molded. It can also be used to make color master batches and other functioning master batches.

#### 产品包装及贮运要求

产品采用重包装袋 (FFS) 包装,净重25Kg/袋。

产品应存放在通风、干燥的仓库内,远离火源,防止阳光直接照射,不得露天堆放。产品运输时不得在阳光下曝晒或雨淋,不得与沙土、碎金属、煤炭、玻璃等混合装运,更不可与有毒物质、腐蚀性和易燃物品混装。

#### Package, Storage and Transportation

The resin is packaged in internally film-coated polypropylene woven bags. The net weight is 25Kg/bag.

The resin should be stored in a drafty, dry warehouse and away from fire and direct sunlight. It should not be piled up in the open air. During transportation, the material should not be exposed to strong sunlight or rain and should not be transported together with sand, soil, scrap metal, coal or glass. Transportation together with toxic, corrosive and flammable substance is strictly prohibited.



#### 主要产品牌号性能指标典型值(非保证值)

Grades and Typical Values (Not Warranted Values)

产品牌号 Grades		7144	7144	8916	8916	8320	8320	2020	EGM-18H	YLJ-2520	TJZS- 2650
熔体流动速率 MFR	g/10min	20	20	16	16	20	20	19	20	20	50
密度 Density	g/cm <sup>3</sup>	0.926	0.924	0.954	0.954	0.924	0.924	0.920	0.954	0.925	0.926
拉伸屈服强度 Tensile Strength at yield	MPa≽	12	12	24	20	7	10	9	26	9.0	8.6
拉伸断裂强度 Tensile Strength at break	MPa≽	_	8	_	8	_	4	6	14	-	-
拉伸断裂应变 Tensile Strain at break	%≽	_	300	_	100	200	50	-	180	500	-
脆化温度 (F50) Brittleness Temperature (F50)	°C ≤	-70	-60	-70	-70	_	-60	_	-75	-	-
产品认证 Certifications		食品卫生/ FDA/ROHS/ PAHS	FDA/ ROHS/ PAHS	食品卫生/ FDA/ROHS/ PAHS	_	_	食品卫生/ FDA/ROHS	_	_	-	-
生产企业 Manufacturers		茂名 Maoming	广州 Guangzhou	茂名 Maoming	广州 Guangzhou	福建联合 FREP	镇海 Zhenhai	广州 Guangzho	中韩石化	扬子 Yangzi	天津 Tianjin

## 滚塑料

#### **Rotomolding Grade**

#### 产品简介

中国石化线型低密度聚乙烯滚塑料为无毒、无味、无臭的白色颗粒,加工性能优良,具有强度高、韧性好、热稳定性好的优点,并且有良好的耐环境应力开裂性能和耐低温冲击性能,制品翘曲较小。

#### Overview

Sinopec LLDPE rotomolding grade is white, nontoxic, tasteless and odorless, supplied in pellets. It has excellent processability and high tensile strength, toughness and thermal stability. In addition, it has good environmental stress crack resistance(ESCR), impact resistance at low temperatures and low warpage.

#### 产品用途

线型低密度聚乙烯滚塑料产品主要应用于制作滚塑成型制品,用于制造大型户外玩具、储罐、隔离路障等。

#### **Applications**

LLDPE rotomolding grade is mainly used for making rotomolded products, large-sized outdoor toys, storage tanks, roadblocks, etc.



#### 主要产品牌号性能指标典型值(非保证值)

Grades and Typical Values (Not Warranted Values)

#### 产品包装及贮运要求

产品采用重包装袋 (FFS) 包装, 净重25Kg/袋。

产品应存放在通风、干燥的仓库内,远离火源,防止阳光直接照射,不得露天堆放。产品运输时不得在阳光下曝晒或雨淋,不得与沙土、碎金属、煤炭、玻璃等混合装运,更不可与有毒物质、腐蚀性和易燃物品混装。

#### Package, Storage and Transportation

The resin is packaged in internally film-coated polypropylene woven bags. The net weight is 25Kg/bag.



产品牌号 Grade		7149U	7151U	MLPE-8060	T35-300	RMA740
熔体流动速率 MFR	g/10min	4.0	5.1	5.0	3.0	3.8
密度 Density	g/cm <sup>3</sup>	0.934	0.935	0.936	0.935	0.938
拉伸屈服强度 Tensile Strength at yield	MPa≽	12	15.5	10	14.5	19.0
弯曲模量 Flexural Modulus	MPa≽		_		448	490
拉伸断裂强度 Tensile Strength at break	MPa≽	10	_	_		
耐环境应力开裂 Environmental Stress Cracking Resistance	h≽	150	_	_		
维卡软化温度 Vicat Softening Point	°C		_		117	117
产品认证 Certifications	FDA	_				
生产企业 Manufacturers	齐鲁 Qilu	齐鲁 Qilu	茂名 Maoming	中沙 SSTPC	中沙 SSTPC	

## POLYPROPYLENE(PP)

## 聚丙烯 (PP)

P39~P60

#### ● 薄膜料

#### 41 取向拉伸料

#### 43 | 流延膜料

#### • 注塑料

#### 45 | 抗冲共聚料

50 | 无规共聚料

52|均聚料

● 54 | 管材料

• 55 | 纤维料

● 57 | 拉丝料

● 58 | 涂覆料

● 59 | 发泡料

● 60 | 粉料

#### Film Grade

41 | Orientation Stretching Polypropylen (OPP)

43 | Casting Polypropylene (CPP)

#### Injection Molding Grade

45 | Impact Copolymer

50 | Random Copolymer

52 | Homopolymer

54 | Pipe Grade

55 | Fiber Grade

57 | Yarn Grade

58 | Coating Grade

59 | Foaming Grade

60 | Powder Grade

### 聚丙烯 (PP)

#### Polypropylene (PP)

聚丙烯是以丙烯( $CH_3$ — $CH=CH_2$ )为单体, $H_2$ 为分子量调节剂,通过聚合反应得到的合成树脂,存在等规、无规和间规三种不同立体结构。

聚丙烯不含极性基团,具有优良的电绝缘性能,吸水率小于 0.01%; 为半结晶性聚合物,具有优良的化学稳定性,除强氧化剂外,对大多数化学药品都是稳定的,无机酸、碱、盐的溶液对聚丙烯几乎无破坏作用。

聚丙烯具有优异的延展性、抗弯曲疲劳性能和耐热性能,比重轻,聚丙烯熔点在165℃左右,抗张强度和表面硬度较高,连续使用温度可达120℃,耐环境应力开裂性能好。中国石化是中国最大的聚丙烯树脂生产商,产能占国内产能的45%,目前拥有29套连续法聚丙烯生产装置(包括在建装置),分别采用日本三井的HYPOL工艺、Amoco公司的气相法工艺、Basell的Spheripol与Spherizone工艺、Novolen气相法工艺等。中国石化自行开发了国产第二代环管工艺聚丙烯生产技术,拥有雄厚的科研开发实力。

Polypropylene is a synthetic resin made by polymerization of propylene (CH<sub>3</sub>—CH=CH<sub>2</sub>) with H2 as the molecular weight modifier. There are three stereomers of PP – isotactic, atactic and syndiotactic.

PP contains no polar groups and has excellent electrical insulation properties. Its water absorption rate is less than 0.01%. PP is a semi-crystalline polymer with good chemical stability. It is stable to most chemical except strong oxidizers. Inorganic acid, alkali and salt solutions have almost no damaging effect on PP.

PP has good heat resistance and low density. Its melting point is at around 165°C. It has high tensile strength and surface hardness and good environmental stress crack resistance. It can withstand 120°C continuously.

Sinopec is the largest PP producer in China, Its PP capacity accounted for 45% of the country's total capacity. The company currently has 29 PP plants by the continuous process (including those under construction). Technologies used by these units include Mitsui Chemical's HYPOL process, Amoco's gas phase process, Basell's Spheripol and Spherizone process and Novolen's gas phase process. With its strong scientific research capability, Sinopec has independently developed a second-generation loop-process for PP production.

#### 主要用途

聚丙烯用途广泛多样,可用注塑、挤塑、吹塑和中空成型等 方法进行加工,广泛应用于纺织、包装、家电、汽车和建筑 等行业。

中国石化采用不同工艺技术的装置可生产出各具特色的均聚、无规共聚和抗冲共聚聚丙烯产品,用于生产BOPP薄膜、CPP薄膜、纤维、管材、涂覆、拉丝和各种注塑产品,满足客户的不同需求。

#### **Applications**

PP has a variety of applications. It is suitable for multiple processing methods such as injection molding, extrusion molding and blow molding and is widely used in the textile, packaging, electrical household appliances, automobile and real estate industries.

Sinopec PP plants have varied technologies to produce homopolymer, random copolymer and impact copolymer PP with distinct properties. These products include BOPP film, CPP film, fiber, pipe, coating, yarn and injection-molding products.

#### 主要生产企业及工艺列表 Manufacturers and Processes

生产企业	所在地	产能 (万吨/年)	工艺技术		企业认证 Certification	
Manufacturers	Locations	Design Capacity (10,000 Tons/a)	Processes	质量管理体系 Qualification Management System	环境管理体系 Environment	职业健康管理体系 HSE Management Syste
燕山分公司 Yanshan Petrochemical	北京 Beijing	5	国内设计金式液·气本体法 Domestic Designed Caldron Gas-Liquid Bulk Process	ISO 9001:2000	ISO 14000	GB/T 28001-2001
	-, 0	32	Amoco			
齐鲁分公司 Qilu Petrochemical	淄博 Zibo	7	海蒙特环管工艺 Loop Process of Himont	ISO 9000	ISO 14000	
		6	海蒙特环管工艺 Loop Process of Himont			
中原石化 Zhongyuan Petrochemical	濮阳 Puyang	10	国产第二代环管工艺技术 Second Generation Domestic Loop Process	_	_	_
天津分公司 Tianjin Petrochemical	天津 Tianjin	6	海蒙特环管工艺 Loop Process of Himont	_	_	_
中沙石化 SINOPEC SABIC TianJin Petrochemical Company	天津 Tianjin	45	巴塞尔多区循环工艺 Spherizone Process of Basell	_	_	_
济南分公司 Ji <sup>′</sup> nan Petrochemical	济南 Ji <sup>′</sup> nan	10	海蒙特环管工艺 Loop Process of Himont	_	_	_
洛阳石化 Luoyang Petrochemical	洛阳 Luoyang	10	三井HYPOL工艺 HYPOL Process of Japan Mitsui Petrochemical Industries	-	_	-
上海石化 Shanghai Petrochemical	上海 Shanghai	40	国产第二代环管工艺技术 Second Generation Domestic Loop Process	ISO 9001:2000	GB/T 24001-2004	GB/T 28001-2001
扬子石化 Yangzi Petrochemical	南京 Nanjing	16	三井HYPOL 工艺 HYPOL Process of Japan Mitsui Petrochemical Industries	ISO 9001:2000	ISO 14000	GB/T 28001-2001
		20	Amoco			
镇海炼化	宁波	20	国产第二代环管工艺技术 Second Generation Domestic Loop Process	100,0000	CD/T 04001 0004	CR/T 00001 0001
Zhenhai Refinery	Ningbo	30	国产第二代环管工艺技术 Second Generation Domestic Loop Process	ISO 9000	GB/T 24001-2004	GB/T 28001-2001
九江分公司 Jiujiang Petrochemical	九江 Jiujiang	11	海蒙特环管工艺 Loop Process of Himont	ISO 9000	_	_
上海赛科 Shanghai Secco	上海 Shanghai	25	Amoco	-	_	-
广州分公司 Guangzhou Petrochemical	广州 Guangzhou	14	三井HYPOL工艺 HYPOL Process of Japan Mitsui Petrochemical Industries	ISO 9000	_	_
J	, and the second	20	日本JPP HORIZONE工艺			
茂名分公司	茂名	47	海蒙特环管工艺 Loop Process of Himont	ISO 9001:2000	ISO 14000	ISO1800
Maoming Petrochemical	Maoming	20	INEOS工艺	100 0001.2000	100 14000	1001000
荆门分公司 Jingmen Petrochemical	荆门 Jingmen	12	海蒙特环管工艺 Loop Process of Himont	ISO 9002	_	_
长岭分公司 Changling Petrochemical	岳阳 Yueyang	12.5	海蒙特环管工艺 Loop Process of Himont	ISO 9000	_	-
武汉分公司 Wuhan Petrochemical	武汉 Wuhan	13.5	海蒙特环管工艺 Loop Process of Himont	ISO 9000	_	_
青岛炼化 Qingdao Refinery	青岛 Qingdao	20	国产第二代环管工艺技术 Second Generation Domestic Loop Process	_	_	_
海南炼化 Hainan Refinery	海口 Haikou	20	国产第二代环管工艺技术 Second Generation Domestic Loop Process	_	_	-
湛江东兴 Zhanjiang Dongxing Refinery	湛江 Zhanjiang	14	国产第二代环管工艺技术 Second Generation Domestic Loop Process	ISO 9001:2008	-	ISO1800
福建炼化 Fujian Refining and Chemical Company	泉州Quanzhou	12	海蒙特环管工艺 Loop Process of Himont	ISO 9000	ISO 14000	-
福建联合石化 ujian Refining & Petrochemical Company Limited	泉州Quanzhou	40	诺沃伦工艺技术 Process of Novolen	-	_	_
Company Limited			国产第二代环管工艺技术			
北海炼化 Beihai Refinery	北海 Beihai	14	Second Generation Domestic	_	_	
北海炼化		20		ISO 9000	GB/T 24001-2004	GB/T 28001-2001

## 薄膜料一取向拉伸料

#### Film Grade - Orientation Stretching Polypropylen (OPP)

#### 产品简介

中国石化是国内取向拉伸聚丙烯(OPP)树脂的最大供应商,在OPP的理论研究方面取得了重大突破,从聚丙烯分子结构设计和控制入手,解决了拉伸稳定性、热稳定性等关键技术问题,全面提高了中国石化OPP专用料的产品质量,在BOPP薄膜生产时线速度可达到400米/分钟以上。

#### Overview

Sinopec is the largest OPP resin supplier in China. The company has made a breakthrough in the theoretical research on OPP.Starting with the design and control of the molecular structureof polypropylene, Sinopec has overcome a series of technicalchallenges such as tensile and thermal stability and significantlyimproved the quality of its OPP resin. The BOPPlinear velocity could exceed 400 meters per minute during film processing.

#### 产品用途

OPP料主要应用于具有高挺度、高透明性能的内外层包装薄膜领域,也广泛用于生产印刷复合用平膜、消光膜、珠光膜、合成纸和烟膜等产品,通常用来制作商标印刷、印刷复合、食品饮料包装、香烟包装和胶粘带等。

#### **Applications**

OPP is mainly used in the production of high-stiffness, hightransparence packaging film. It is also widely used in the production of printing and laminated film, Matt film, pearlized film, synthetic paper, cigarette film, etc.

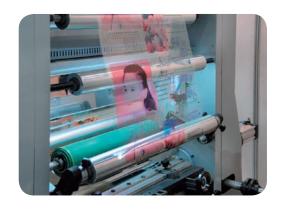
#### 产品包装及贮运要求

产品采用重包装袋 (FFS) 包装、FFS薄膜袋或集装袋包装,净重25Kg/袋或700Kg/袋。

产品应存放在通风、干燥的仓库内,远离火源,防止阳光直接照射,不得露天堆放。产品运输时不得在阳光下曝晒或雨淋,不得与沙土、碎金属、煤炭、玻璃等混合装运,更不可与有毒物质、腐蚀性和易燃物品混装。

#### Packages, Storage and Transportation

The resin is packaged in internally film-coated polypropylene woven bags, FFS bags or container bags and the net weight is 25Kg/bag or 700Kg/bag.





产品牌号 Grades		F5006	F5606	K5806Y	K5809Y	F280T	F280SO	HP525J	PPH-F03D (T36F)	PPH-F03G (T38F)
熔体流动速率 MFR	g/10min	6.0	6.0	7.5	6.8	3	2.9	3.0	2.8	3.2
拉伸屈服强度 Tensile Strength at yield	MPa	20.8	19.7	20.1	21.0	29	30	33	28	28
悬臂梁缺口 冲击强度 Notched Izod impact Strength	(23°C , J/ m)	_	-	-	_	25	30	-	-	_
等规指数 Isotactic Index	%	_	_	_	_	97	95.5	_	95	95
弯曲模量 Flexural Modulus	MPa	627	550	_	_					
起始热封温度 Origination Heat Seal temperature	°C	113	113	_	_					
灰分 Ash	%	_	_	_	_	0.025	0.03	_	0.03	0.03
主要用途 Applications		POF、BOPP 三元热封层、 烟膜 POF、BOPP Ternary Heat Seal Layer Cigarette Film	POF三元热封 层 POF Ternary Heat Seal Layer	-	-	烟膜 Cigarette Film	超高速BOPP Super-high- speed BOPP	ВОРР	ВОРР	ВОРР
产品认证 Certifications		_	_	_	_	FDA	食品卫生/FDA	_	_	_
生产企业 Manufacturer	S	燕山 Yanshan	燕山 Yanshan	燕山 Yanshan	燕山 Yanshan	上海 Shanghai	上海 Shanghai	中沙 SSTPC	海南、荆门、九 江、中原、湛江 Hainan, Jingmen, Jiujiang, Zhongyuan, Zhanjiang	武汉、广州、湖南长 盛、湛江、北海、海 南、洛阳 Wuhan, Guangzhou, Hunan Changsheng, Zhanjiang, Beihai, Hainan, Luoyang

产品牌 <b>Gra</b> de		F280M	PPH-F03D (F280Z)	PPH-F03DB	PPH-F03D (F280Q)	PPH-F03D (F1002B)	F300M	F300D	PPR-FT03-S	1104K
熔体流动速率MFR	g/10min	2.8	2.8	2.8	2.8	2.8	3.0	3.0	3.1	3.0
拉伸屈服强度 Tensile Strength at yield	MPa	31	33	30	33	30	30	30	_	28
悬臂梁缺口 冲击强度 Notched Izod impact Strength	(23°C , J/m)	33	30	-	30	_	40	_	_	-
等规指数 Isotactic Index	%	98	97	97	97	95	94	96	_	94.5
灰分 Ash	%	0.02	0.02	0.02	0.02	0.03	0.02	0.03	_	0.1
主要用 Applicati		高速高挺度BOPP High-speed and stiffness BOPP	高速BOPP High-speed BOPP	高性能BOPP High performance BOPP	高速BOPP High-speed BOPP	高速超薄BOPP High-Speed and Super-Thin BOPP	高速BOPP High-speed BOPP	高速BOPP High-speed BOPP	高速高挺度 BOPP High-speed and stiffness BOPP	高速BOPP High-speed BOPP
产品认 Certificat	_	FDA/ROHS	食品卫生 FAD/ROHS	_	_	食品卫生/ROHS	FDA/ROHS	_	_	_
生产企 Manufact		茂名 Maoming	镇海 Zhenhai	镇海 Zhenhai	青岛 Qingdao	扬子 Yangzi	茂名 Maoming	湛江 Zhanjiang	茂名 Maoming	福建联合 FREP

## 薄膜料-流延膜料

#### Film Grade – Casting Polypropylene (CPP)

#### 产品简介

中国石化聚丙烯流延膜料(CPP)已形成系列化,用于制造 CPP薄膜的表层与内层,薄膜具有透明度高、挺度好、热封 温度低、耐热、防潮、阻隔性好、印刷和复合适应性强、表 面光滑、耐蒸煮等特点,薄膜成型厚度均匀性好,各项性能 均衡性优异。

#### Overview

Sinopec casting polypropylene (CPP) film materials, are used in the surface and internal layers of CPP film. CPP films produced using these resin are characterized by high transparence, good stiffness, low heat sealing temperature, heat and moisture resistance, good barrier properties, available for printing and recombination adaptability, smooth surface and good steam boiling resistance. The films produced by CPP are homogeneous in thickness and have highly balanced properties.

#### 产品用途

聚丙烯流延膜料广泛用于生产复合薄膜的内层热封膜、真空镀铝用薄膜、高温蒸煮用薄膜、包装薄膜、消光膜和金属化膜等产品,通常用来做服装、文具、食品、药品、化妆品、纺织品等的包装材料。





#### **Applications**

CPP is widely used in the production of inner heat-sealing films of laminated films, films for use in vacuum aluminum coating, films for use in high-temperature steam and boiling, packaging films, matt film and metallized films. It is also widely used as the packing for clothing, stationery, food, medicine, cosmetics, textiles, etc.

#### 产品包装及贮运要求

产品采用重包装袋 (FFS) 包装、FFS薄膜袋或集装袋包装,净重25 Kg/袋或700 Kg/袋。

产品应存放在通风、干燥的仓库内,远离火源,防止阳光直接照射,不得露天堆放。产品运输时不得在阳光下曝晒或雨淋,不得与沙土、碎金属、煤炭、玻璃等混合装运,更不可与有毒物质、腐蚀性和易燃物品混装。

#### Packages, Storage and Transportation

The resin is packaged in internally film-coated polypropylene woven bags, FFS bags or container bags and the net weight is 25Kg/bag or 700Kg/bag.





产品牌号 Grades		F800E	F800E(DF)	FC801	FC801MX	CP800M	PPH-F06D	X37F	PPR- FT07-S
熔体流动速率 MFR	g/10min	8	8	8	8	8	6	7.8	7
拉伸屈服强度 Tensile Strength at yield	MPa	25	24.5	31	31	_	28	34	29
悬臂梁缺口冲击强度 Notched Izod impact Strength	(23°C , J/m)	17.6	17.6	25.5	32	_	_	_	_
弯曲模量 Flexural Modulus	MPa	820	820	1300	1300	1520	_	1100	1100
灰分 <b>Ash</b>	%	0.03	0.03	0.03	0.02	0.3	_	0.02	0.03
主要用途 Applications	;	二元热封层 Binary Heat Seal Layer	镀铝热封层 Aluminized Heat Seal Layer	CPP	镀铝CPP Aluminized CPP	镀铝CPP Aluminized CPP	镀铝CPP Aluminized CPP	二元热封层 Binary Heat Seal Layer	镀铝CPP Aluminized CPP
产品认证 Certifications	5	食品卫生/ FDA	FDA	FDA	食品卫生/ FDA	食品卫生 ROHS/FDA/ PAHS	_	_	_
生产企业 Manufacturer	'S	上海 Shanghai	上海 Shanghai	上海 Shanghai	上海 Shanghai	茂名 Maoming	洛阳 luoyang	海南 hainan	茂名 Maoming

产品牌号 Grades		F500EPS	F800EPS	C5608	C5908	HP510M	FH08-S	F08
熔体流动速率 MFR	g/10min	5	8	8	8	9	8	9
拉伸屈服强度 Tensile Strength at yield	MPa	实测	实测	21. 7	20. 1	34	32	30
悬臂梁缺口冲击强度 Notched Izod impact Strength	(23°C , J/m)	_	_	_	_	_	_	_
弯曲模量 Flexural Modulus	%	_	_	690	570	1500	_	_
雾度 Haze	%≤	2.2	2.2	1.0	0.8	_	_	_
起始热封温度 Origination Heat Seal temperature	°C	_	_	113	113	_	_	_
灰分 <b>As</b> h	%	_	_	_	_	_	0.02	0.03
主要用途 Applications		三元热封层 Ternary Heat Seal Layer	三元热封层 Ternary Heat Seal Layer	流延膜复合膜热 封层 CPP Heat Seal Layer	流延膜镀铝膜热 封层 Aluminized CPP Heat Seal Layer	流延膜 CPP	流延膜 CPP	流延膜 CPP
产品认证 Certifications		_	_	_	_	_	_	_
生产企业 Manufacturers		上海 Shanghai	上海 Shanghai	燕山 Yanshan	燕山 Yanshan	中沙 SSTPC	青岛 Qingdao	荆门 Jingmen

## 注塑料一抗冲共聚料

#### Injection Molding Grade-Impact Copolymer

#### 产品简介

中国石化是国内抗冲共聚聚丙烯的主要供应商,这种树脂是通过在半晶的丙烯均聚物基体中引入橡胶化的乙丙共聚物而产生的多相共聚物。产品具有高热变形温度、良好的耐划痕性以及低温抗冲击性和良好的刚韧平衡性,同时具有良好的流动性,制品成型周期短,成型加工性能优异。

#### Overview

Sinopec is the main supplier of PP impact copolymer in China. The resin is created by intruducing ethylene-propylene rubber inside semi-crystalline PP homopolymer matrix. It has high heat deformation temperature(HDT), good scratching resistance, good impact resistance at low temperature, good rigid-tough balance and good fluidity. Products made from this resin are characterized by fast processing and excellent processability.

#### 主要用途

抗冲共聚聚丙烯广泛用于制作汽车仪表板和内饰件、汽车保险杠、洗衣机内外件、蓄电池壳以及油箱等工业制品,也用于制作日杂用品,如瓶盖、厨具、家具、玩具、工具箱、旅游箱包以及各类包装容器等。

#### Main Applications

PP impact copolymer is widely used in the production of industrial products, such as dashboard, auto interior decorations, auto bumpers, interior and exterior parts of washing machine, accumulator containers and tanks. It can also be used to make household articles, such as bottle caps, cookware, furniture, toys, toolkits, travel cases, bags and various packaging containers.

#### 产品包装及贮运要求

产品采用重包装袋(FFS)包装、FFS薄膜袋包装,净重25 Kg/袋。

产品应存放在通风、干燥的仓库内,远离火源,防止阳光直接照射,不得露天堆放。产品运输时不得在阳光下曝晒或雨淋,不得与沙土、碎金属、煤炭、玻璃等混合装运,更不可与有毒物质、腐蚀性和易燃物品混装。

#### Packages, Storage and Transportation

The resin is packaged in internally film-coated polypropylene woven bags or FFS film bags. The net weight is 25Kg/bag.





产品牌号 Grades		K8003	K8303	K6712	K9026	K7760
熔体流动速率 MFR	g/10min	n 2.5 2.0		15.0	26.0	63.0
拉伸屈服强度 Tensile Strength at yield	MPa	23.5	23.5 23.5 26.9		18.0	25.0
悬臂梁缺口冲击强度	(23°C , KJ/m²)	_	_	9.2	53	7
Notched Izod impact Strength	otched Izod impact Strength (-20°C , KJ/m²		5.8	_	_	_
弯曲模量 Flexural Modulus	IMPa		1310	1450	850	1300
主要用途 Applications		负重部件、汽车 部件 Heavy Duty Parts, Automotive Parts	高抗冲器具、汽车 部件 High-impact, Devices, Automotive Parts	洗衣机底座、小家电 外壳、座椅 High-rigid, Washing Machines Bases, Shells of Small Household Appliances, Chairs	汽车部件 Automotive Parts	洗衣机料 Washing Machine barrel and parts
产品认证 Certifications		_	食品卫生/FDA/ ROHS/EN71	-	FDA/ROHS/EN71	食品卫生/FDA/ ROHS/EN71
生产企业 Manufacturers	3	燕山/赛科 Yanshan, Saike	燕山 Yanshan	燕山 Yanshan	燕山 Yanshan	燕山 Yanshan

产品牌号 Grades		K9820H	K9829H	K7726H	K7735H	K7760H	K7780	K7100
熔体流动速率 MFR	g/10min	19	27	29	40	60	80	110
橡胶相含量 Rubber component content	%	24	25	_	_	_	_	15.3
拉伸屈服强度 Tensile Strength at yield	MPa	22.3	21.8	26.5	25.7	27.5	28.1	24.2
简支梁缺口冲击强度	(23°C , J/m²)	53	49	12	11	9.9	8.4	7.2
Notched Izod impact Strength	(-20°C , KJ/m²)	12	9	6.2	6.1	5.0	3.8	3.7
弯曲模量 Flexural Modulus	MPa	1118	1029	1328	1355	1300	1399	1322
主要用途 Applications		高抗冲器具、 汽车、家电部件 High-impact Devices, Automotive and Household Appliances Parts	高抗冲器具、 汽车、家电部 件High-impact Devices, Automotive and Household Appliances Parts	洗衣机料 Washing Machine barrel and parts	洗衣机料 Washing Machine barrel and parts	洗衣机料 Washing Machine barrel and parts	高抗冲器具、 汽车、家电部件 High-impact Devices, Automotive and Household Appliances Parts	高抗冲器具、 汽车、家电部件 High-impact Devices, Automotive and Household Appliances Parts
产品认证 Certifications		_	_	食品卫生/ FDA/ ROHS/ EN71	_	食品卫生/ FDA/ ROHS/ EN71	_	_
生产企业 Manufacturers		燕山 Yanshan	燕山 Yanshan	燕山 Yanshan	燕山 Yanshan	燕山 Yanshan	燕山 Yanshan	燕山 Yanshan

产品牌 <sup>5</sup> Grades		EPS30R	EPS30RA	SP179	QPK10	QP73NK	EPS30R	M700R	M180R	M2600R
熔体流动速率 MFR	g/10min	1.5	2.5	10	10.8	8.3	1.5	7	1.8	26
拉伸屈服强度 Tensile Strength at yield	MPa	24	24	19	19.6	28	22	31	21.6	24.5
悬臂梁缺口冲击 强度	$(23^{\circ}C$ , KJ/ $m^2$ )	_	_	_	54.6	7.6	320 (J/m)	15	29.5	43
Notched Izodimpact Strength	(-20°C , KJ/m²)	4	5	7	10.8	3.5	45 (J/m)	_	_	27
弯曲模量 Flexural Modulus	MPa	950	750	700	960	1330	900	1100	900	1200
主要用证 Applicatio	_	负重部件、 汽车部件 Heavy Duty Parts, Automotive Parts	负重部件、 汽车部件 Heavy Duty Parts, Automotive Parts	汽车部件 Automotive Parts	抗菌抗冲 Bacteria- free, Impact		负重部件、 汽车部件 Heavy Duty Parts, Automotive Parts	汽车、 蓄电池壳 Shells of Automobiles and Cases Batteries	周转箱、 重包装 Transfer Cases, Heavy Duty	洗衣机内桶 Washing Machine Barrels
产品认ì Certificatio		ROHS	_	_	_	_	_	ROHS	食品卫生/ FDA/PAHS	ROHS
生产企\ Manufactu		齐鲁 Qilu	齐鲁 Qilu	齐鲁 Qilu	齐鲁 Qilu	齐鲁 Qilu	天津 Tianjin	上海 Shanghai	上海 Shanghai	上海 Shanghai

产品牌 Grade		EP200K	EP548R	EP300H	SP179	J842	2240S	2800J	K7926
熔体流动速率 MFR	g/10min	3.5	29	2	10	35	30	2.8-4.8	26
拉伸屈服强度 Tensile Strength at yield	MPa	22	27	25	19	24	22	18	25
悬臂梁缺口冲击 强度	(23°C , J/ m)	60	_	_	_	6	7	54	_
Notched Izod impact Strength	$(23^{\circ}C, kJ/m^2)$	_	8	10	_	_	_	_	11
弯曲模量 Flexural Modulus	MPa	950	1450	1000	800	1200	1050	830	1200
主要用 Applicati		食品、文 具、衬衫和 针织品包装 (高透明)	食品、化妆品、衣服和香烟包装 (密封性好,低热封温度)	食品、文具、 衬衫和针织品 包装(高透 明)	高抗冲器具、汽 车部件 High-impact, Devices, Automotive Parts	洗衣机料 Washing Machine barrel and parts	桶,箱子, 容器	行李箱, 玩具	普通用途、 家庭用品、 玩具、家电
产品认 Certificat	•—	_	_	_	_	_	_	_	
生产企 Manufacti		中沙 SSTPC	中沙 SSTPC	中沙 SSTPC	中沙 SSTPC	广州 Guangzhou	福建联合 FREP	福建联合 FREP	赛科 SECCO





产品牌 <b>G</b> rad		EPT30R	EPC30R-H	HHP4	PPB-MM35-S	PPB- MML28-S	EPS30R	HHP10	J-641
熔体流动速率 MFR	g/10min	3.5	9.0	28.0	37	30	1.8	35	15.0
拉伸屈服强度 Tensile Strength at yield	MPa	22	23	18	25	22	20	22	22
悬臂梁缺口 冲击强度 Notched Izod impact Strength	(23°C , J/m)	130	75	80	10	_	200	120	8
弯曲模量 Flexural Modulus	MPa	900	950	900	1200	1150	900	1100	1050
主要月 Applica		玩具制品、 蓄电池外壳 Toys, Shells of Storage Batteries	家用电器、 包装用品 Household Appliances, Packages	薄壁注塑制品 Thin Injection Molding Products	洗衣机内桶 Washing Machine Barrels	汽车部件 Automotive Parts	家用电器、 包装用品 Household Appliances, Packages	洗衣机内桶 Washing Machine Barrels	容器、杂品箱 Containers, Sundry Cases
产品) Certifica		食品卫生/ FDA/ROHS/ PAHS	食品卫生/ FDA/ROHS/ PAHS	ROHS/FDA	ROHS/FDA	ROHS/FDA	FDA	FDA/ROHS	FDA/ROHS/ PAHS
生产① Manufac		茂名 Maoming	茂名 Maoming	茂名 Maoming	茂名 Maoming	茂名 Maoming	茂名 Maoming	茂名 Maoming	广州 Guangzhou

产品炸 Grad		PPB-M02 (J340)	PPB-M02-V (K8003)	K9927	K9015	YPJ-1215C	PPB-M20-V (YPJ- 1220C)	YPJ-706	M180RI
熔体流动速率 MFR	g/10min	1.8	2.5	27	15	15	20	6.5	1.8
拉伸屈服强度 Tensile Strength at yield	MPa	25	21	18	14	22	18	20	25
简支梁缺口 冲击强度	(23°C, KJ/m²)	10	40	_	_	_	30	_	600
Notched Izod impact Strength	(-20°C, KJ/m²)	3	5	_	_	6	3.0	_	80
弯曲模量 Flexural Modulus	MPa	1000	900	800	600	1030	800	1000	900
主要月 Applica		玩具制品、蓄 电池外壳 Toys, Shells of Storage Batteries	玩具制品、蓄 电池外壳 Toys, Shells of Storage Batteries	洗衣机 内桶 Washing Machine Barrels	汽车部件 Automotive Parts	汽车部件 Automotive Parts	汽车部件 Automotive Parts	瓶盖 Bottle Lips	周转箱、 重包装 Transfer Boxes, Heavy Packages
产品\ Certifica		食品卫生/ ROHS	_	食品卫生/ FDA/PAHS	_	_	_	食品卫生/FDA	_
生产1 Manufac		扬子、镇海 Yangzi、 Zhenhai	扬子、镇海 Yangzi、 Zhenhai	扬子 Yangzi	扬子、茂名 Yangzi, Maoming	扬子 Yangzi	扬子 Yangzi	扬子 Yangzi	上海 Shanghai







产品牌 <b>G</b> rad		PPB-M09	M30RH	M50T	K7009	k7025	k7109	k7725	k7325
熔体流动速率 MFR	g/10min	9.2	30	53	8.5	25	8.5	25	25
拉伸屈服强度 Tensile Strength at yield	MPa	25.4	24.3	39.5	26	26	26	26	26
悬臂梁缺口 冲击强度 Notched Izod impact Strength	(23°C , J/m)	7.8	8.4	1.2	11	7.6	11	7.6	7.6
弯曲模量 Flexural Modulus	MPa	1120	1250	2160	1,220	1160	1220	1160	1160
主要月 Applica		_	_	_	汽车,工业用部件,板条箱,盒子,健康食品容器, 医用容器,汽车保险杠,电视后盖	器具、汽车 支柱&装饰 件、电视机 后盖	手套盒、热 水壶、微波 炉盖	器具、汽车 支柱&装饰 件、电视机 后盖	器具、汽车 支柱&装饰 件、电视机 后盖
产品\ Certifica		_	_	_	_	_	_	_	_
生产① Manufac		镇海 Zhenhai	镇海 Zhenhai	镇海 Zhenhai	中韩石化	广州 Guangzhou	广州 Guangzhou	广州 Guangzhou	广州 Guangzhou

产品版 <b>Gra</b> d		k7525	k8025	k8225	K7235	K8003	K8009	K8303	B7001
熔体流动速率 MFR	g/10min	25	25	25	35	2.5	8.5	2.5	0.65
拉伸屈服强度 Tensile Strength at yield	MPa	26	26	26	25	23	23	23	28
悬臂梁缺口 冲击强度 Notched Izod impact Strength	(23°C , J/m)	7.6	7.6	7.6	7.1	62	41	62	35
弯曲模量 Flexural Modulus	MPa	1160	1160	1160	1,130	1,030	1,030	1,030	1,350
主要月 Applica		器具、汽车 支柱&装饰 件、电视机 后盖	器具、汽车 支柱&装饰 件、电视机 后盖	器具、汽车 支柱&装饰 件、电视机 后盖	洗衣机 圆筒	重型部件	汽车,电器, 蓄电池箱,做 年糕炊具	容器,工业用部件	汽车,冰箱部 件,管材
产品\i Certifica		_	_	_	_	_	_	_	_
生产业 Manufac		广州 Guangzhou	广州 Guangzhou	广州 Guangzhou	中韩石化	中韩石化	中韩石化	中韩石化	中韩石化

	牌号 ides	NAX9	NAX6	NAC5C	NAC4	NAR6	NAR3	NBC02	NBX05 WS	NBC03 HRA
熔体流动速率 MFR	g/10min	0.5	2.5	3.3	7	2.2	9.5	23	45	32
拉伸屈服强度 Tensile Strength at yield	MPa	18	18	15	20	18	18	19	12	21
悬臂梁缺口 冲击强度 Notched Izod impact Strength	(23°C , J/m)	NB	NB	NB	18	NB	8	20	NB	12
弯曲模量 Flexural Modulus	MPa	NB	NB	7	2	2	2	6	30	5
	用途 ations	300	330	590	770	560	480	900	450	1,050
	认证 cations	替代 EPR	电线护套	无菌包装	缠绕膜	塑料装饰 板	包装膜	汽车内饰	汽车零件	汽车内 外部件
生产 Manufa	企业 acturers	中韩石 化、广州								

## 注塑料一无规共聚料

#### Injection Molding Grade-Random Copolymer

#### 产品简介

中国石化无规共聚聚丙烯是乙烯在丙烯链段中无规分布的共 聚物。具有良好的透明性、光泽度,耐热性和加工性能。

#### Overview

Sinopec PP random copolymer is a copolymer resulting from the random distribution of ethylene in propylene chain segment. The resin has good transparence, glossiness, heat resistance and processability.

#### 主要用途

无规共聚聚丙烯可广泛用于制作对透明性要求高的医用注射器和输液瓶、医用离心管、样品保存管等医疗器械,还用于 食品容器、文具、包装材料、家用储藏器等的生产。

#### **Applications**

PP random copolymer is widely used in the production of medical appliances with high transparence, such as medical syringes, medical infusion bottles, medical centrifuge tubes and sample tubes. It is used in the production of food containers, stationery, packaging materials and houseware.

#### 产品包装及贮运要求

产品采用重包装袋(FFS)包装、FFS薄膜袋包装,净重25 Kg/袋。

产品应存放在通风、干燥的仓库内,远离火源,防止阳光直接照射,不得露天堆放。产品运输时不得在阳光下曝晒或雨淋,不得与沙土、碎金属、煤炭、玻璃等混合装运,更不可与有毒物质、腐蚀性和易燃物品混装。

#### Package, Storage and Transportation

The resin is packaged in internally film-coated polypropylene woven bags or FFS film bags. The net weight is 25Kg/bag.





	产品牌· Grade		B4902	B4902A	B4908	K4818	K4912	B4808	T5015	B2025	QPT91N	QTP93N	HT9025NX	UT8012M	MT20
	流动速率 MFR	g/10min	2.2	1.8	8.9	22.4	12.3	11.1	6	1.8	33	12	25	11.4	19
Tensile	屈服强度 e Strength t yield	MPa	26.7	28.0	27.5	31.7	30.8	30.0	?	_	27	26	23	28	24
	臂梁缺口 击强度	(23°C , KJ/m²)	9.4	7.1	4.9	3.4	3.4	4.0	3.0	7.8	6	6	55	_	_
	thed Izod	(23°C, V型 缺口, J/m)	_	_	_	_	_	_	_	_	_	_	_	173.4	2.8
Fle	曲模量 exural odulus	GPa	0.9	0.96	1.1	1.1	1.0	1.2	1.2	0.9	1.05	_	0.8	1.0	0.8
	主要用: Applicati	_	医用输液 瓶 Medical Infusion Bottles	医用输液 瓶 Medical Infusion Bottles	医用输液 瓶 Medical Infusion Bottles	注射器针 套、医用塑 料瓶 Needle Covers of Syringes, Medical Plastic Bottles	注射器针 套、医用塑 料瓶 Needle Covers of Syringes, Medical Plastic Bottles	饮料包装瓶 和输液瓶 Drinks Package Bottles and Infusion Bottles	电子产品、 食品包装 Electronic application, Food Package	透明饮料 瓶 Drinks Bottles	?	?	高透明注塑 制品 Highly transparent Injection Molding	要儿奶	注射器针套 Needle Covers of Syringes
	产品认 <sup>*</sup> Certificati		_	_	_		FN71/医药丁	食品卫生/ FDA/ROHS/ EN71/医药卫 生	_	_	_	_	食品卫生/ FDA/ROHS	FDA	食品卫生
	生产企. Manufacti	_	燕山 Yanshan	燕山 Yanshan	燕山 Yanshan	燕山 Yanshan	燕山/赛科/ 茂名 Yanshan, SECCO, Maoming	燕山 Yanshan	天津 Tianjin	天津 Tianjin	齐鲁 Qilu	齐鲁 Qilu	茂名 Maoming	茂名 Maoming	中原 Zhongyuan

产品牌	_	PPR-MT18-S	PPR-	PPB-	GM800E	GM1600E	GM160E	GM750E	M250E	M800E	M1600E	M850B	M1500B
Grade 熔体流动速率	s		MT40-S	MT25-S	G0002	G10002	G	G7 G G Z	2002	000_			
APA MFR	g/10min	18	38	21	8.0	16.0	1.6	7.5	2.5	8.0	16.0	8	12
拉伸屈服强度 Tensile Strength at yield	MPa	32.7	26.4	29	26	25.5	28.5	26.5	27.0	26.0	25.5	28	26
悬臂梁缺口 冲击强度 Notched Izod impact Strength	<b>23</b> ℃, <b>V</b> 型缺口,J/m	_	_	_	35	25	70	35	40	35	25	3.5	3.5
弯曲模量 Flexural Modulus	GPa	1.29	0.99	-	0.95	0.95	0.85	0.85	0.90	0.95	1.00	1.00	1.00
主要用 Applicati	_	透明的食品药品外包装、家用透明注塑制品 Food&medicine Package, Household transparent Injection Molding	塑制品	家用透明注 塑制品 Household transparent Injection Molding	医用、注拉 吹、注塑 Medical, Injection, Drawing and Blowing, Injection Molding	医用、注拉 吹、注塑 Medical, Injection, Drawing and Blowing, Injection Molding	Dotties	医用、注拉 吹、注塑 Medical, Injection, Drawing and Blowing, Injection Molding	挤出、 热成型 Extruded, Thermal Molding	注拉吹、 注塑 Injection, Drawing and Blowing, Injection Molding	注塑 Injection Molding	厨房物品,食 品包装容器 等	厨房物品,食品包装容器,中空制品等
产品认 Certificat					_	FDA	FDA/ PAHS/ 医 药卫生	FDA/ PAHS/ 医 药卫生	_	食品卫 生/FDA/ ROHS	FDA/ PAHS/ 医 药卫生	-	-
生产企 Manufact		茂名 Maoming	茂名 Maoming	茂名 Maoming	上海 Shanghai	上海 Shanghai	上海 Shanghai	上海 Shanghai	上海 Shanghai	上海 Shanghai	上海 Shanghai	上海 Shanghai	上海 Shanghai

## 注塑料一均聚料

#### Injection Molding Grade-Homopolyer

#### 产品简介

中国石化均聚聚丙烯具有较高结晶度、高刚性、高强度、高模量,良好的耐热变形性,良好的耐划痕性和良好的流动性。还具有制品成型周期短的优点。

#### Overview

Sinopec PP homopolymer has higher crystallinity, high rigidity, high tensile strength, high modulus and good thermal distortion resistance. Products made from this resin are characterized by short processing time, good scratching resistance and fluidity.

#### 产品用途

均聚聚丙烯可广泛用于电水壶、电饭锅、电熨斗、取暖器、 电吹风、电烤面包器、电热干手器等小家电的生产。

#### **Applications**

PP homopolymer is widely used in the production of small electrical household appliances, such as electric kettles, electric utensils, electric irons, air heaters, electric hair dryers, electric toasters and electric hand dryers.

#### 产品包装及贮运要求

产品采用重包装袋(FFS)包装、FFS薄膜袋包装,净重25 Kg/袋。

产品应存放在通风、干燥的仓库内,远离火源,防止阳光直接照射,不得露天堆放。产品运输时不得在阳光下曝晒或雨淋,不得与沙土、碎金属、煤炭、玻璃等混合装运,更不可与有毒物质、腐蚀性和易燃物品混装。

#### Packages, Storage and Transportation

The resin is packaged in internally film-coated polypropylene woven bags or FFS film bags. The net weight is 25Kg/bag.





产品牌 <sup>-</sup> Grades		K1008	K1708	K1712	K1840	M12	CJS700	S980
熔体流动速率 MFR	g/10min	10.0	9.98	16.3	46	12	11.0	50
拉伸屈服强度 Tensile Strength at yield	MPa	35.0	37.6	39.4	39. 9	26	31	37.6
悬臂梁缺口 冲击强度 Notched Izod impact Strength	(23°C , KJ/m²)	2.0	3.4	2.7	2.0	3.0	1.5	2.2
弯曲模量 Flexural Modulus	MPa	1470	2082	2000	1740	1300	1200	1840
热变形温度 Heat Distortion Temperature	°C	_	_	_	_	_	_	_
等规指数 Isotactic Index	%	_	_	_	_	_	96	_
灰分 Ash	%	_	_	_	_	_	0.03	_
主要用) Applicatio	_	注塑 Injection Molding	小家电 Small Household Appliances	小家电 Small Household Appliances	快速注射成型 薄壁制品 High-speed Injection Molding Thin-wall Products	?	注塑 Injection Molding	注塑 Injection Molding
产品认i Certificatio		食品卫生/ FDA/ROHS/ EN71	食品卫生/ ROHS/EN71	食品卫生/ FDA/ROHS/ EN71	食品卫生/FDA	食品卫生	食品卫生/FDA/ ROHS	_
生产企 <u>.</u> Manufactu		燕山 Yanshan	燕山 Yanshan	燕山 Yanshan	燕山 Yanshan	天津 tianjin	广州 Guangzhou	广州 Guangzhou

产品牌· Grades		HC9006D	HC9012D	PPH-MM18	HP500N	HP532J	EH-01	K1013
熔体流动速率 MFR	g/10min	6	12.8	18	12	3.2	0.8	15
拉伸屈服强度 Tensile Strength at yield	MPa	31	38	29	35	35	34	35
悬臂梁缺口 冲击强度 Notched Izod impact Strength	(23°C , KJ/m²)	4.58	2.61	2.7	_	_	_	2.1 (23°C , KJ/m²)
弯曲模量 Flexural Modulus	MPa	1550	1900	1000	1550	1550	_	1500
热变形温度 Heat Distortion Temperature	°C	102	114	_	117	110	_	_
等规指数 Isotactic Index	%	98	_	_	_	_	98	_
灰分 Ash	%	0.029	0.033	_	_	_	0.021	_
主要用: Applicatio	_	?	?	透明注塑 transparent Injection Molding	食物容器、玩 具、花园设 备、花瓶	汽车零件、小 家电及用物品	格栅料	小型注塑件、 片材
产品认 <sup>·</sup> Certificati	-	_	_	_	_	_	_	
生产企. Manufactu		湛江 Zhanjiang	湛江 Zhanjiang	洛阳 luoyang	中沙 SSTPC	中沙 SSTPC	武汉 Wuhan	赛科 SECCO

产品牌 <sup>!</sup> Grades	_	HA840K	MM45-S	MM60-S	PPH-MM20-S	V30G
熔体流动速率 MFR	g/10min	3.5	45	65	20.6	16.0
拉伸屈服强度 Tensile Strength at yield	MPa	40	36	36	41	31.4
悬臂梁缺口 冲击强度 Notched Izod impact Strength	(23°C , J/ m)	_	1.8	1.8	_	20
弯曲模量 Flexural Modulus	MPa	2150	1700	1700	2100	1280
热变形温度 Heat Distortion Temperature	°C	125	110	110	121	87
等规指数 Isotactic Index	%	_	95	95	_	93
灰分 <b>A</b> sh	%	_	0.03	0.03	_	0.015
主要用i Applicatio	_	食品容器、饮料杯子	薄壁注塑(twim)	薄壁注塑(twim)	小型家用电器 small Household Appliances	注塑 Injection Molding
产品认ì Certificatio		_	食品卫生/FDA/GB/T	食品卫生/FDA/GB/T	_	_
生产企业 Manufactu		中沙 SSTPC	青岛 Qingdao	青岛 Qingdao	茂名 Maoming	镇海、海南、湛江、青岛 Shenhai,Hainan, Zhanjiang, Qingdao

产品牌 <sup>·</sup> Grades		1100N	M1200HS	MPHM-160	M02	M16
熔体流动速率 MFR	g/10min	12	12.0	16.0	17	1.8
拉伸屈服强度 Tensile Strength at yield	MPa	29	32.0	31.0	34	25
悬臂梁缺口 冲击强度 Notched Izod impact Strength	(23°C , J/ m)	2 (23°C , KJ/m²)	20	20	-	10
弯曲模量 Flexural Modulus	MPa	1000	1700	_	_	1000
热变形温度 Heat Distortion Temperature	°C	_	115	85	_	_
等规指数 Isotactic Index	%	96	98	94	_	_
灰分 Ash	%	_	0.04	0.02	_	_
主要用: Applicatio	_	注塑 Injection Molding	家用电器 Household Appliances	塑料玩具、包装容器 Plastic Toys, Containers and Packages	注塑 Injection Molding	注塑 Injection Molding
产品认 <sup>-</sup> Certificati		_	FDA/ROHS/RAHS	食品卫生/FDA/ ROHS/PAHS	_	_
生产企: Manufactu		福建联合 FREP	上海 Shanghai	茂名 Maoming	中原 zhongyuan	中原 zhongyuan

## 管材料

#### Pipe Grade

#### 产品简介

中国石化聚丙烯管材料是将少量乙烯在丙烯链段上共聚得到的共聚物,主要包括抗冲共聚聚丙烯 (PP-B) 和无规共聚聚丙烯 (PP-R)。产品具有良好的抗蠕变能力,优异的长期耐老化性能和抗冲击性能,高温下具有良好的耐抽提性。

#### Overview

Sinopec PP pipe grade is a copolymer produced by copolymerization of a small amount of ethylene in propylene chain segments. There are two main types of PP pipe grade-propylene impact copolymer (PP-B) and propylene random copolymer (PP-R). The resin has good creep resistance, excellent long-term aging resistance, impact resistance, and good extraction resistance at high temperatures.

#### 产品用途

聚丙烯管材料产品主要用于建筑物给水系统、采暖系统以及 化工管道系统的管材制造,制品具有质轻、耐腐蚀、不结 垢、使用寿命长、卫生性能好、保温节能、安装方便、连接 可靠等特点。

#### **Applications**

PP pipe grade is mainly used in the production of pipes used in building water supply systems, heating systems and chemical piping systems. Products made from this resin are characterized by light weight, corrosion resistance, fouling, long service life, good sanitation properties, thermal retardation, easy installation, reliable connection and recyclable processing scrap.

#### 产品包装及贮运要求

产品采用重包装袋(FFS)包装、FFS薄膜袋包装,净重25 Kg/袋。

产品应存放在通风、干燥的仓库内,远离火源,防止阳光直接照射,不得露天堆放。产品运输时不得在阳光下曝晒或雨淋,不得与沙土、碎金属、煤炭、玻璃等混合装运,更不可与有毒物质、腐蚀性和易燃物品混装。

#### Package, Storage and Transportation

The resin is packaged in internally film-coated polypropylene woven bags or FFS film bags. The net weight is 25Kg/bag.



产品 Gra		B8101	4220	PPR4400	BR4400	B1101	C180
熔体流动速率 MFR	g/10min	0.4	0.3	0.23	0.23	0.3	0.3
拉伸强度 Tensile strength at yield	MPa	23.5	24	24.3	24.3	28.8	22
断裂伸长率 Elongation at break	%	200	750	_	590	636	_
主要 Applic	,	冷水管材 Cold Water Pipes	冷、热水 管材 Cold and Hot Water Pipes	冷、热水管材, 工业管道系统 Cold and Hot Water Pipes, Industrial Piping System	冷、热水管材, 工业管道系统 Cold and Hot Water Pipes, Industrial Piping System	化工管道系统、 片材和 板材 Chemical Piping System, Sheets and Plates	冷水 管材 Cold Water Pipes
产品 Certific		食品卫生/饮用水 卫生/FDA	食品卫生/饮用水 卫生/FDA	食品卫生/饮用水 卫生/FDA	食品卫生/饮用水 卫生/FDA	FDA	食品卫生
生产 Manufa		燕山、茂名 Yanshan, Maoming	燕山 Yanshan	燕山 Yanshan	燕山 Yanshan	燕山 Yanshan	扬子 Yangzi

产品 Gra		YPR-503	PPB-E00-V (YPM- 2203T)	PPR-M00 (YPR-503)	YEM-4903T	H5416	QPR01	T4401
熔体流动速率 MFR	g/10min	0.3	0.35	0.35	0.3	0.2	0.21	0.3
拉伸强度 Tensile strength at yield	MPa	22	22	22	23	28	25	25
断裂伸长率 Elongation at break	%	_	_	_	_	_	_	_
	用途 ations	冷、热水管材 Cold and Hot Water Pipes	冷水管材 Cold Water Pipes	热水管材 Hot Water Pipes	PE100	冷、热水管 材,PPR80 Cold and Hot Water Pipes, PPR80	冷水管材 Cold Water Pipes	冷水管材 Cold Water Pipes
产品 Certific	认证 cations	食品卫生	_	_	_	_	_	_
生产 Manufa	企业 acturers	扬子 Yangzi	扬子 Yangzi	扬子 Yangzi	扬子 Yangzi	中沙 SSTPC	齐鲁 Qilu	茂名 Maoming

## 纤维料

#### Fiber Grade

#### 产品简介

中国石化是国内聚丙烯纤维料最大的供应商,产品具有灰分低、可纺性好等特点。

#### Overview

Sinopec is the largest PP fiber grade supplier in China. PP fiber grade by Sinopec is characterized by low ash content and good spinning properties.

#### 产品用途

聚丙烯纤维料产品广泛用于高速和超高速纺丝、纺粘无纺布等生产领域,用于生产膨体连续长丝(BCF)、细旦超细旦纤维、烟用丝束和超细无纺布等产品,其产品在装饰、医疗卫生材料、服装三大领域中具有广泛的用途。

#### **Applications**

PP fiber grade is widely used in the production of bulked continuous filament (BCF), fine and superfine staple fiber, cigarette filter tow and superfine non-woven fabric in high-speed and ultrahigh-speed spinning and spunbonded non-woven fabric production. It has a variety of applications in the decoration, medical sanitation martial and clothing production sectors.

#### 产品包装及贮运要求

产品采用重包装袋 (FFS) 包装、FFS薄膜袋或集装袋包装,净重25 Kg/袋或700 Kg/袋。

产品应存放在通风、干燥的仓库内,远离火源,防止阳光直接照射,不得露天堆放。产品运输时不得在阳光下曝晒或雨淋,不得与沙土、碎金属、煤炭、玻璃等混合装运,更不可与有毒物质、腐蚀性和易燃物品混装。

#### Package, Storage and Transportation

The resin is packaged in internally film-coated polypropylene woven bags, FFS bags or container bags and the net weight is 25Kg/bag or 700Kg/bag.





产品牌 Grade		Y2600T	Y1600	Y3700C	S700	S2040	YS835	YS830	PPH-M18	CS820
熔体流动速率 MFR	g/10min	26	16	37	14	36	34	29	18	23
拉伸屈服强度 Tensile Strength at yield	MPa	32.0	31.4	30.0	31	32	31	29	29	28
弯曲模量 Flexural Modulus	GPa	1.3	1.3	0.82	1.2	1.32	_		1.0	
等规指数 Isotactic Index	%	96	96	94.5	96	_	96	96	_	96
灰分 Ash	%	0.03	0.02	0.04	0.05	_	0.015	0.03	_	0.03
主要用 Applicati		烟用丝束 Filter Tows	长、短纤维 Long and Short Fibers	超细旦 纤维 Ultra-fine Staple Fibers	纺 <u>丝</u> Spinning	高速纺丝, 细旦短纤, 无纺布	纺 <u>丝</u> Spinning	纺 <u>丝</u> Spinning	纤维 Fibers	纤维、长丝、 无纺布Fibers, Filaments,Non- woven Clothing
产品认 Certificat		食品卫生	_	食品卫 生/ FDA/ ROHS	食品卫 生/ ROHS	_	_	_	_	FDA/ROHS
生产企 Manufacti		上海 Shanghai	上海 Shanghai	上海 Shanghai	扬子 Yangzi	赛科 Saike	洛阳 Luoyang	洛阳 Luoyang	洛阳 Luoyang	广州 Guangzhou

产品牌 Grade	_	PPH-Y40 (JNW-28)	PPH-YS35 (H30S)	PPH-Y24 (Z30S)	Y25	Z30S	PPH-Y40 (H30S)	PPH-Y45S	Z30S	Z30S
熔体流动速率 MFR	g/10min	40	35	25	28	26	37	45	25	25
拉伸屈服强度 Tensile Strength at yield	MPa	35	35	35	28.4	29	32	30	30	31
等规指数 Isotactic index	%	96	96	95	_	96	96	95	94	96
灰分 Ash	%	0.013	0.015	0.015	_	0.03	0.03	0.03	0.02	0.02
主要用 Applicati		无纺布,短纺, 低旦尼尔纤维 Non-woven Clothing, Short Fibers, Ultra-fine Staple Fibers	超细旦纤维 Ultra-fine Staple Fibers	高速纺丝、 BCF 膨体纱 Ultra-fine Staple Fibers, BCF Filament	纤维 Fibers	高速纺丝、 BCF 膨体纱 Ultra-fine Staple Fibers, BCF Filament	无纺布,短纺 Non-woven Clothing , Short Fibers	无纺布,短纺 Non-woven Clothing , Short Fibers		高速纺丝、 BCF 膨体纱 Ultra-fine Staple Fibers, BCF Filament
产品认 Certificati		_	_	_	_	_		_	FDA/ROHS	_
生产企 Manufactu		济南 Ji´nan	济南 Ji'nan	济南、青岛 Ji´nan, Qingdao	中原 Zhongyuan	镇海 Zhenhai	镇海、北海 Zhenhai, Beihai	北海 Beihai	茂名 Maoming	湛江、北 海、海南 Zhanjiang, Beihai, Hainan

## 拉丝料

#### Yarn Grade

#### 产品简介

中国石化聚丙烯拉丝料拉伸性能优异,加工性能好,主要用于生产塑料编织制品,制品具有不吸水、耐腐蚀、不霉变、耐摩擦、使用寿命长等特点。

#### Overview

Sinopec PP yarn grade has excellent tensile properties and good processability. It is principally used in the production of plastics woven products. Products made from this resin are water repellent, resistant to corrosion, mildewing, abrasion and have long service lives.

#### 产品用途

聚丙烯拉丝料产品广泛用于编织袋、(遮阳或覆盖用)彩条布、地毯背衬(基布)、集装袋、篷布和绳索的生产,制品主要用于粮食、化肥、水泥、糖、盐、工业用料和矿砂等的包装。

#### **Applications**

PP yarn grade is widely used in the production of woven bags, colored stripe cloth for sunlight shading or covering use, carpet backing (base fabric), container bags, tarpaulin and ropes. Products made from this resin are mainly used as packages for food, chemical fertilizer, cement, sugar, salt, industrial feedstock and ores.

#### 主要产品牌号性能指标典型值(非保证值)及用途

Grades, Typical Values (Not Warranted Values) and Applications

#### 产品包装及贮运要求

产品采用重包装袋(FFS)包装、FFS薄膜袋包装,净重25 Kg/袋。

产品应存放在通风、干燥的仓库内,远离火源,防止阳光直接照射,不得露天堆放。产品运输时不得在阳光下曝晒或雨淋,不得与沙土、碎金属、煤炭、玻璃等混合装运,更不可与有毒物质、腐蚀性和易燃物品混装。

#### Package, Storage and Transportation

The resin is packaged in internally film-coated polypropylene woven bags or FFS film bags. The net weight is 25Kg/bag.



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产品牌号 Grades		PPH-T03 (T30S)	T300	HP550J	PPH-T03-H (F401)	1080K/ T30S	S1003
熔体流动速率 MFR	g/10min	3	3	3.2	2.5	3.4	3
拉伸屈服应力 Tensile Strength at yield	MPa	30	31	34	30	29	30
拉伸断裂应力 Tensile Strength at broken	MPa	16	_	_	20	_	_
拉伸断裂标称应变 Stretching broken column nominal strain	%	150	_	_	300	_	_
等规指数 Isotactic Index	%	96	96	_	96	95	_
主要用途 Applications		挤出扁丝、片材 Extruded Flat Filaments, Sheets	挤出扁丝、片材 Extruded Filaments, Sheets	挤出扁丝、片材 Extruded Filaments, Sheets	挤出扁丝、片材 Extruded Filaments, Sheets	挤出扁丝 Extruded Filaments	挤出扁丝 Extruded Filaments
产品认证 Certifications		_	食品卫生/FDA/ ROHS	_	食品卫生/ ROHS	_	_
生产企业 Manufacturers		天津、齐鲁、济南、青岛、武汉、荆门、长岭、中原、九江、镇海、茂名、湛江、海南、北海、洛阳Tianjin, Qilu, Ji'nan,Qingdao, Wuhan, Jingmen, Changling, Zhongyuan, Jiujiang, Zhenhai, Maoming, Zhanjiang, Hainan, Beihai, Luoyang	上海 Shanghai	中沙 SSTPC	扬子、广州 Yangzi, Guangzhou	福建联合/ 福炼 FREP/ Fulian	茂名、赛 科 Maoming, SECCO

## 涂覆料

#### **Coating Grade**

#### 产品简介

中国石化聚丙烯涂覆料具有较高的熔体流动速率,良好的流延性,与基材的粘结性强度高等特点,成型加工性能稳定、适用性好。

#### Overview

Sinopec PP coating grade has higher melt flow rate, good flow casting properties, good adhesivity with base materials, stable processability and strong adaptability.

#### 产品用途

聚丙烯涂覆料产品主要用于编织袋、篷布、彩条布、管道等 涂膜领域。



#### **Applications**

PP coating grade is mainly used for coating woven bags, tarpaulin, colored stripe cloth and pipes.

#### 产品包装及贮运要求

产品采用重包装袋(FFS)包装、FFS薄膜袋包装,净重25 Kg/袋。

产品应存放在通风、干燥的仓库内,远离火源,防止阳光直接照射,不得露天堆放。产品运输时不得在阳光下曝晒或雨淋,不得与沙土、碎金属、煤炭、玻璃等混合装运,更不可与有毒物质、腐蚀性和易燃物品混装。

#### Package, Storage and Transportation

The resin is packaged in internally film-coated polypropylene woven bags or FFS film bags. The net weight is 25Kg/bag.

The resin should be stored in a drafty, dry warehouse and away from fire and direct sunlight. It should not be piled up in the open air. During transportation, the material should not be exposed to strong sunlight or rain and should not be transported together with sand, soil, scrap metal, coal or glass. Transportation together with toxic, corrosive and flammable substance is strictly prohibited.

#### 主要产品牌号性能指标典型值(非保证值)

Grades and Typical Values (Not Warranted Values)

产品牌号 Grade		H2800	H30S
熔体流动速率 MFR	g/10min	28	37
拉伸屈服强度 Tensile Strength at yield	MPa≽	29.5	29
悬臂梁缺口冲击强度 Notched Izod impact Strength	(23°C , J/m)≥	16.7	_
弯曲模量 Flexural Modulus	GPa≽	0.95	_
维卡软化点 Vicat Softening Point	°C ≽	145	_
洛氏硬度 Rockwell Hardness	R标尺≥	76	_
等规指数 Isotactic index	%		94.5
灰分 Ash	%		0.03
产品认证 Certifications		食品卫生/FDA	_
生产企业 Manufacturer		上海 Shanghai	镇海 Zhenhai

## 发泡料(高熔体强度聚丙烯)

#### Foaming Grade (High melt strength PP)

#### 产品简介

中国石化聚丙烯发泡料具有:优良的耐温性能,改善的加工性能,较宽的加工窗口,优良的挤出、注塑发泡及制备发泡粒子的能力,制品具有良好的尺寸稳定性,发泡倍率范围宽,耐油性、耐化学品性优良,无毒、环保,还有优良的二次加工性,可回收再利用,节省能源和资源。

#### Overview

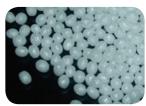
Sinopec PP foaming grade is optimised to deliver good heat resistance, improved processability, broad process temperature range, foamability in foaming extrusion/injection/beads processes, good dimensional stability, wide range of foaming rate, good oil and chemical product resistance, non-poisonous, environmentally friendly, recyclable, energy and resource saving.

#### 产品用途

聚丙烯发泡料产品主要利用挤出及注塑发泡,热成型,片材,板材挤出等加工成型方式,应用于包装材料、隔热材料、汽车部件、建筑及体育用品等领域。

#### **Applications**

PP foaming grade is mainly used to produce packing materials, thermal insulation material, automobile components, building materials and sports equipment by foam extrusion/injection, thermalforming and sheet/board extrusion.





主要产品牌号性能指标典型值(非保证值)及用途 Grades, Typical Values (Not Warranted Values) and Applications

#### 产品包装及贮运要求

产品采用重包装袋(FFS)包装、FFS薄膜袋包装,净重25 Kg/袋。

产品应存放在通风、干燥的仓库内,远离火源,防止阳光直接照射,不得露天堆放。产品运输时不得在阳光下曝晒或雨淋,不得与沙土、碎金属、煤炭、玻璃等混合装运,更不可与有毒物质、腐蚀性和易燃物品混装。

#### Package, Storage and Transportation

The resin is packaged in internally film-coated polypropylene woven bags or FFS film bags. The net weight is 25Kg/bag. The resin should be stored in a drafty, dry warehouse and away from fire and direct sunlight. It should not be piled up in the open air. During transportation, the material should not be exposed to strong sunlight or rain and should not be transported together with sand, soil, scrap metal, coal or glass. Transportation together with toxic, corrosive and flammable substance is strictly prohibited









产品牌号 Grades		HMS 20Z	E02ES
熔体流动速率 MFR	g/10min	2.2	1.5
拉伸屈服强度 Tensile Strength at yield	MPa≽	36.3	28.8
拉伸弹性模量 Tensile Modulus	GPa≽	1.1	1.01
拉伸断裂标称应变 Stretching broken column nominal strain	%≥	200	550
悬臂梁缺口冲击强度	(23 $^{\circ}$ C), kJ/m $^{2}$ $\geqslant$	4.5	7.2
Notched Izod impact Strength	(0 $^{\circ}$ C), kJ/m $^{2}$ $\geqslant$	1.5	_
等规指数 Isotactic Index	%≽	95.0	_
热变形温度 Heat Deflection Temperature	°C ≽	101	_
产品认证 Certifications		食品卫生	_
生产企业 Manufacturers		镇海 Zhenhai	镇海 Zhenhai

## 粉料

#### **Powder Grade**

#### 产品简介

中国石化聚丙烯粉料是采用间歇式液相本体法聚合、不含添 加剂的本色粉末状固体,产品质量稳定,种类齐全。

#### Overview

Sinopec PP powder grade, produced using the batch bulk/liquid process, is powdered solids of natural color, free of additives. Sinopec produces many kinds of PP powdered grades with consistent high quality.

#### 产品用途

聚丙烯粉料主要用于制作一般用途制品,如绳索、编制袋、 打包带、玩具、日用品、无纺布等。

#### **Applications**

PP powder grade is mainly used to produce general-purpose products such as ropes, woven bags, packaging tapes, toys, daily necessities and non-woven fabric.



#### 产品包装及贮运要求

产品采用内衬塑料薄膜的聚丙烯编织袋、聚丙烯内涂膜聚丙 烯编织袋包装,一般净重20或25 Kg/袋。

产品应存放在通风、干燥的仓库内,远离火源,防止阳光直 接照射,不得露天堆放。产品运输时不得在阳光下曝晒或雨 淋,不得与沙土、碎金属、煤炭、玻璃等混合装运,更不可 与有毒物质、腐蚀性和易燃物品混装。

#### Package, Storage and Transportation

The resin is packaged in polypropylene woven bags with inside plastic film lining or internally film-coated polypropylene woven bags. The net weight is 20 or 25Kg/bag.

The resin should be stored in a drafty, dry warehouse and away from fire and direct sunlight. It should not be piled up in the open air. During transportation, the material should not be exposed to strong sunlight or rain and should not be transported together with sand, soil, scrap metal, coal or glass. Transportation together with toxic, corrosive and flammable substance is strictly prohibited.



#### 主要产品牌号性能指标典型值(非保证值)

Manufacturers

Grades and Typical Values (Not Warranted Values)

	产品牌号 Grades		PP-H- GD-040	PP-H- GD-085	PP-H- GD-150	PP-H- GD-230	PP-H- GD-320	PP-H- GD-450	
熔体流动速率 MFR	g/10min	1.3	4	8.5	15	23	32	45	
拉伸屈服强度 Tensile Strength at yield	MPa≽	31.5	31.5	31.5	31.5	31.5	31.5	31.5	
等规指数 Isotactic Index	%≽	94	94	94	94	94	94	94	
总灰分 <b>A</b> sh	mg/kg ≤	350	350	350	350	350	350	350	
生产	企业	石家庄、沧州、巴陵、长岭、荆门、武汉							

石家庄、沧州、巴陵、长岭、荆门、武汉 Shijiazhuang Cangzhou Baling Changling Jingmen Wuhan

## POLYSTYRENE(PS) 聚苯乙烯 (PS) P61~P64

63 | 注塑料

64 | 高抗冲击料

63 | Injection Molding Grade

64 | High Impact Polystyrene (HIPS)

## 聚苯乙烯 (PS)

#### Polystyrene (PS)

聚苯乙烯是指苯乙烯单体均聚或与其它单体共聚而制得的合成树脂。其均聚物分子结构中其主链为饱和碳链,侧基为苯环,是一种非结晶性的线型聚合物。无色、透明、质硬、刚性好、易于着色、耐化学性能好,具有优异的电绝缘性能和低吸湿性。易于成型加工,流动性良好,可以采用注塑、挤出、模压、真空和发泡成型等方法制成各种制品,成型过程中制品尺寸稳定性好、收缩率低,成型周期短。

Polystyrene (PS), is a synthetic resin made by homopolymerization of styrene monomers or with other comonomers. In the molecular structure of homopolymer, the main chain is a saturated carbon chain with benzene rings as the lateral group. The resin is a non-crystalline linear polymer, which is colorless, transparent, hard, easy to be dyed and resistant to chemical solutions. It has excellent electrical insulation property and low hygroscopicity. It is easy to mold and has good fluidity. It can be made into a variety of products through injection molding, extrusion, compression molding, vacuum molding and foaming. The products have stable dimensions and low shrinkage during molding and the molding term is short.

#### 主要用途

中国石化可生产通用级聚苯乙烯(GPPS)和高抗冲聚苯乙烯(HIPS),广泛用于汽车、电器、器械部件、建筑、医疗等领域。通用级聚苯乙烯(GPPS)可用于制作日用品、电气仪表外壳、玩具、灯具、化妆品容器、室内外装饰品、光学零件(如三棱镜、透镜)、车灯、电讯配件、电频电容器薄膜、高频绝缘材料、波导管、化工容器、结构泡沫制品等。高抗冲级聚苯乙烯(HIPS)可用于制作家电产品外壳、冰箱内衬、板材、电器用品、仪器仪表配件、电视机、收录机、电话机壳体、文教用品、玩具、包装容器、日用品、餐具等。

#### **Applications**

Sinopec is able to produce general-purpose PS (GPPS) and high-impact PS (HIPS). These resins are widely used in automobiles, electronic and electrical appliances, apparatus parts, buildings, medical care, etc. GPPS can be used to make daily necessities, electrical instrument shells, toys, lamps, cosmetic containers, decorations, optical parts (such as triangular prisms and lens), auto headlights, telecom accessories, capacitor films, high-frequency insulating materials, waveguide tubes, chemical vessels, structural foam products, etc. HIPS can be used to make shells of electrical household appliances, refrigerator lining, plates, TV sets, recorders, telephone body cases, stationary, toys, packaging vessels, daily necessities, dishware, etc.

#### 主要生产企业及工艺列表

Manufacturers and Processes

生产企业	所在地	产能 (万吨/年)	工艺技术	企业认证 Certifications		
Manufacturers	Locations	Design Capacity (10,000 Tons/a)	Processes	质量管理体系 Quality	HSE管理体系 HSE	
扬子石化-巴斯夫有限责任公司 BASF-YPC Company Limited	南京 Nanjing	20	德国BASF专利技术本体法 Germany BASF Bulk Process	ISO9001	GB/T 9001-2000	
广州分公司 Guangzhou Petrochemical	广州 Guangzhou	5	美国Fina公司连续本体工艺 U.S. Fina Company Continuous Bulk Process	ISO9001	GB/T 9001-2000	
湛江新中美化工有限公司	湛江 Zhanjiang	10	美国Fina公司连续本体工艺 U.S. Fina Company Continuous Bulk Process	ISO9001	GB/T 9001- 2000	

## 注塑料

#### Injection Molding Grade

#### 产品简介

中国石化聚苯乙烯注塑料具有良好的刚性、透光性、耐腐蚀性、电绝缘性,易于着色,热收缩率低,成型加工性能良好,成型周期短,可进行高速注塑成型,制品尺寸稳定性优异。

#### Overview

Sinopec PS injection molding grade has good rigidity, light transmittance, corrosion resistance, electrical insulation property and dyeability. It features low shrinkage rate, good molding and processing properties and short molding cycle time. In addition, it allows high-speed injection molding and products made from it have excellent dimensional stability.

#### 产品用途

聚苯乙烯注塑料可用于制作录音磁带盒、录像带盒和光盘 盒、电视机和收录机外壳、电冰箱的内胆、洗衣机零件、灯 罩、食品盘、水杯、仪表外壳、光学仪器表面、电器零部 件、发泡产品等。

#### **Applications**

PS injection molding grade can be used to make shells of cassette boxes, videotape boxes and disk boxes, TV sets and recorders, liners of refrigerators, parts of washing machines, lamp shades, food plates, cups, instrument shells, optical instrument surface, parts of electrical appliances, foaming products, etc.

#### 产品包装及贮运要求

产品采用内涂膜料聚丙烯编织袋包装,净重25Kg/袋。

产品应存放在通风、干燥的仓库内,应远离火源,防止阳光直接照射,不得露天堆放。产品运输时应避免日光曝晒或雨淋,不得与沙土、金属、煤等污染物混合装运,更不可与易燃或有腐蚀性的物品混装。

#### Package, Storage and Transportation

The resin is packaged in internally film-coated polypropylene woven bags. The net weight is 25Kg/bag.

The resin should be stored in well-ventilated and dry warehouses and away from fire and direct sunlight. It should not be piled up in the open air. During transportation, the material should not be exposed to strong sunlight or rain and should not be transported together with sand, soil, metal, coal or other contaminants. Transportation together with corrosive or flammable substance is strictly prohibited.



#### 主要产品牌号性能指标典型值 (非保证值)

Grades and Typical Values (Not Warranted Values)

产品牌 Grade		143E	158K	165H	525	535	525	535LF
熔体流动速率 MFR	g/10min	6	3	2.7	8.0	3.5	9	3
维卡软化点 Vicat Softening Point	°C	91	101	94	90	94	95	101
残留苯乙烯单 体 Residual Monomer	mg/kg≤	_	-	-	800	800	-	-
溶液粘度 Solution Viscosity	X10-3pa. s	-	-	-	-	-	-	-
产品认 Certificat		_	-	_	食品卫生/ FDA/ROHS	-	-	-
生产企 Manufacti		扬巴 BASF-YPC	扬巴 BASF-YPC	扬巴 BASF-YPC	广州 Guangzhou	广州 Guangzhou	湛江 Zhanjiang	湛江 Zhanjiang

## 高抗冲击料

#### High Impact Polystyrene (HIPS)

#### 产品简介

中国石化聚苯乙烯高抗冲击料(HIPS)具有优异的抗冲击性、刚性、电绝缘性、耐腐蚀性,并易于着色。

#### Overview

Sinopec HIPS has excellent impact resistance, rigidity, electrical insulating property, corrosion resistance and dyeability.

#### 产品用途

聚苯乙烯高抗冲击料可用于制作家用电器外壳、玩具、汽车零部件、日常生活用品等。

#### **Applications**

HIPS can be used to produce the shells of electrical household appliances, toys, automobile parts, daily necessities, etc.

#### 产品包装及贮运要求

产品采用内涂膜料聚丙烯编织袋包装,净重25Kg/袋。 产品应存放在通风、干燥的仓库内,应远离火源,防止阳光 直接照射,不得露天堆放。产品运输时应避免日光曝晒或雨 淋、不得与沙土、金属、煤等污染物混合装污、更不可与易

淋,不得与沙土、金属、煤等污染物混合装运,更不可与易燃或有腐蚀性的物品混装。

#### Package, Storage and Transportation

The resin is packaged in internally film-coated polypropylene woven bags. The net weight is 25Kg/bag.

The resin should be stored in well-ventilated and dry warehouses and away from fire and direct sunlight. It should not be piled up in the open air. During transportation, the material should not be exposed to strong sunlight or rain and should not be transported together with sand, soil, metal, coal or other contaminants. Transportation together with corrosive or flammable substance is strictly prohibited.



#### 主要产品牌号性能指标典型值(非保证值)及用途

产品牌号 Grades		466F	476L	2710	GH660	GH660H	990
熔体流动速率 MFR	g/10min	4	5	5	6.0	5.5	4
残留苯乙烯单体 Residual Monomer	mg/kg	-	_	_	800	800	-
维卡软化点 Vicat softening Point	°C	95	90	90	88	87	94
悬臂梁缺口冲击强度 Notched Izod Impact Strength	KJ/m2	11	11	10	7.3	8.0	150
拉伸屈服应力 Tensile Stress at Yield	MPa	30	23	21	18	18	23
拉伸断裂应变 Tensile Strain at Break	%	_	_	_	30	26	-
产品认证 Certifications		-	-	-	食品卫生/FDA/ ROHS	-	-
生产企业 Manufacturers		扬巴 BASF-YPC	扬巴 BASF-YPC	扬巴 BASF-YPC	广州 Guangzhou	广州 Guangzhou	湛江 Zhanjiang

## Acrylonitrile-Butadiene-Styrene (ABS)

丙烯腈-丁二烯-苯乙烯共聚物 (ABS)

P65~P67

## 丙烯腈、丁二烯、苯乙烯共聚物 (ABS)

#### Acrylonitrile-Butadiene-Styrene (ABS)

ABS树脂是由丙烯腈、丁二烯和苯乙烯合成的三元共聚物,具有优良的耐低温冲击性能,表面硬度高,耐化学性及电性能良好,ABS具有从低到高不同光泽度,其中低光泽度的ABS树脂可以满足在IT(信息技术)产品应用中广泛使用皮纹表面的特殊要求。

中国石化ABS树脂是采用美国陶氏化学本体法工艺聚合而成的,在生产过程中不使用乳液聚合法所使用的皂类添加剂,产品中的杂质含量低,尤其是重金属含量极低,产品自然纯白,没有异味,是目前最安全、最健康的ABS产品。

ABS is a terpolymer made from acrylonitrile, butadiene and styrene. The resin has good resistance to impact at low temperatures, high surface hardness, good resistance to chemicals and good electrical properties. ABS has varied levels of glosses. ABS with low-level gloss can be used to meet the special requirement of extensive application of leather-like surface in information technology.

Sinopec ABS is produced by Dow Chemical's Bulk process. As no soap-based additives used in emulsion polymerization, the contents of impurities in Sinopec ABS resin are low and particularly the contents of heavy metals are extremely low. The product is pure white and free of peculiar smell. It is the safest and healthiest ABS product currently available in the market.

#### 主要用途

产品主要用于制作家用电器和家用电子设备的零部件,其中包括电视机、收录机、电冰箱、洗衣机、空调机、饮水机、电话机、电风扇等的外壳、内衬和配件。在机械工业中可用于制造齿轮、叶轮、轴承、把手、管道、仪表盘等。在汽车工业中用于制作仪表板、挡泥板、扶手。还广泛用于制作箱包、办公设备、复印机、玩具、食品包装容器以及家具等。ABS制品可以进行电镀、焊接、表面涂饰等二次加工,加工后可替代金属制作装饰件。

#### **Applications**

ABS is largely used in the production of components and parts of electrical household appliances and equipments, including the shells, linings and spare parts of TV sets, recorders, refrigerators, washing machines, air conditioners, water dispensers, telephones and electric fans, etc. It can also be used to make gears, impellers, bearings, handles, pipes and panels used in the machinery industry. It is also used in the automobile industry to make dashboards, splashboards and armrests. ABS is also widely used in the production of cases, bags, office equipments, duplicating machines, toys, food packaging vessels and furnitures. Products made from ABS can be re-processed through galvanization, welding and coating to make ornaments as substitutes of metals.

#### 主要生产企业及工艺列表

Manufacturers and Processes

生产企业 Manufacturer	所在地 Location	产能 (万吨/年) Design Capacity (10,000 Tons/a)	工艺技术 Process	企业认证 Certification
高桥分公司	上海	20	美国陶氏化学(DOW)本体法工艺	GB/T
Gaoqiao Petrochemical	Shanghai		U.S. DOW Chemical Bulk Process	19001-2000

#### 产品包装及贮运要求

产品采用牛皮纸包装袋包装,净重25Kg/袋。

产品应存放在通风、干燥的仓库内,应远离火源,防止阳光 直接照射,不得露天堆放。产品在运输时不得在阳光下曝晒 或雨淋,不得与沙土、碎金属、煤炭、玻璃等混合装运,更 不可与有毒物质、腐蚀性和易燃物品混装。

#### Package, Storage and Transportation

The resin is packaged in kraft paper bags and the net weight is 25Kg/bag.

The resin should be stored in well-ventilated and dry warehouses and away from fire and direct sunlight. It should not be piled up in the open air. During transportation, the material should not be exposed to strong sunlight or rain and should not be transported together with sand, soil, scrap metal, coal or glass. Transportation together with toxic, corrosive or flammable substance is strictly prohibited.







#### 主要产品牌号性能指标典型值(非保证值)及用途

•	品牌号 Grades	3453	3504	3604	3513	8391	8394G	8434	275	8364
	€, g/cm³ Density	1.050	1.050	1.05	1.050	1.050	1.05	1.050	1.050	1.050
	宿率,% nrinkage	0.4-0.7	0.4-0.7	0.4-0.7	0.4-0.7	0.4-0.7	0.4-0.7	0.4-0.7	0.4-0.7	0.4-0.7
	率,(220°C/10kg) /10min MFR	14.0	5.2	5.5	8.5	27.0	43	15.0	9.0	16
	60 degree) Gloss	低 Low	低 Low	低	低 Low	78	≥70	72	低 Low	≥65
	反材,CIELab Plates, CIELab	-1.5	-2	-1.5	-0.5	1	-0.5	-1	-4	
	强度(23°C, KJ/m²) mpact Strength	21	22	26	25	21	15	21	14	
	服强度,MPa ngth at yield,MPa	42	41	42	42	43	40	45	36	38
	,50N/50°C, °C oftening Point	95.5	100	101	98.5	92.5	85	98.5	100	98.5
	要用途 plications	亚光注塑级 Matt Injection Molding Grade		亚光挤出级 Matt Extrusion Grade	亚光高抗冲 Matt High Impact	高光泽高 流动 High Gloss, High Flow	超高光泽 高流动 High Gloss, High Flow	高光泽高 刚性 High Gloss, High Rigid	亚光通用级 Matt General Grade	注塑改性产品,高光泽
•	·品认证 tifications	食品卫 生/FDA/ ROHS/ PAHS/UL	食品卫 生/FDA/ ROHS/ PAHS/UL	食品卫 生/FDA/ ROHS/ PAHS/UL	食品卫 生/FDA/ ROHS/ PAHS/UL	食品卫 生/FDA/ ROHS/ PAHS/UL	食品卫 生/FDA/ ROHS/ PAHS/UL	食品卫 生/FDA/ ROHS/ PAHS/UL	食品卫 生/FDA/ ROHS/ PAHS/UL	食品卫 生/FDA/ ROHS/ PAHS/UL
	产企业 ufacturers	高桥 Gaoqiao	高桥 Gaoqiao	高桥 Gaoqiao	高桥 Gaoqiao	高桥 Gaoqiao	高桥 Gaoqiao	高桥 Gaoqiao	高桥 Gaoqiao	高桥 Gaoqiao

# CERTIFICATIONS OF SINOPEC SYNTHETIC RESINS

中国石化合成树脂产品认证情况

P68~P72

## 中国石化合成树脂产品认证情况一览表 Certifications of Sinopec Synthetic Resins

类别		产品名称	牌号	生产企业	已取得的相关认证
Category		Products	Grades	Manufacturers	Certifications
			LD160BW	燕山Yanshan	食品卫生/FDA
			LD100AC	燕山Yanshan	食品卫生/FDA
			LD160AS	燕山Yanshan	食品卫生/FDA
			LD163	燕山Yanshan	食品卫生/FDA
			Q210	上海Shanghai	食品卫生/FDA/ROHS
			2100TN00	齐鲁Qilu	食品卫生/FDA
			2102TN00	齐鲁Qilu	食品卫生/FDA
			2102TN26	齐鲁Qilu	食品卫生/FDA
			N150	上海Shanghai	食品卫生/FDA /ROHS
			N210	上海Shanghai	食品卫生/FDA /ROHS
		薄膜料	N220	上海Shanghai	食品卫生/FDA /ROHS
		Film Grade	Q281	上海Shanghai	食品卫生/FDA/ROHS
			Q400	上海Shanghai	食品卫生/FDA/ROHS
			2426K	扬巴BASF	食品卫生/ROHS
	低密度聚 乙烯		2426H	扬巴BASF	FDA/ROHS
	乙畑 LDPE		2420H	扬巴BASF	FDA/ROHS
			1810D	扬巴BASF	FDA/ROHS
			951 - 000	茂名Maoming	FDA/ROHS/PAHS
			951 - 050	茂名Maoming	FDA/ROHS/PAHS
			2426K	茂名Maoming	食品卫生/FDA/ROHS/PAHS
			2426H	茂名Maoming	食品卫生/FDA/ROHS/PAHS
			1810D	茂名Maoming	FDA/PAHS
ヨマ フ 小×		涂覆料	1C7A	燕山Yanshan	食品卫生/FDA
聚乙烯 PE		Coating Grade	1C7A-1	燕山Yanshan	食品卫生/FDA
			1I2A-1	燕山Yanshan	食品卫生/FDA
		注塑料	LD400	燕山Yanshan	食品卫生/FDA
		Injection Molding Grade	LD605	燕山Yanshan	食品卫生/FDA
			LD607	燕山Yanshan	食品卫生/FDA
		花料	1I50A	燕山Yanshan	食品卫生/FDA
		Artificial Flower Grade	868-000	茂名Maoming	FDA/ROHS/PAHS
			6098 粒	齐鲁Qilu	FDA/ROHS
		薄膜料	7000F	扬子Yangzi	食品卫生/ROHS
		Film Grade	MH602	上海Shanghai	FDA/ROHS
			TR144	茂名Maoming	食品卫生/FDA/ROHS/PAHS
			5200B	燕山Yanshan	食品卫生/FDA
			5301B	扬子Yangzi	ROHS
		中空料	HXB4505M	茂名Maoming	FDA/ROHS
	高密度	Blow Molding Grade	HXM50100	茂名Maoming	FDA/ROHS
	聚乙烯 HDPE		HHM5502ST	茂名Maoming	FDA/ROHS
			HHM5502LW	茂名Maoming	食品卫生/FDA/ROHS/PAHS
		拉丝料	5000S	燕山Yanshan	食品卫生/FDA
		Extrusion Grade	5000S	扬子Yangzi	食品卫生/ROHS
		N 20 40	3300J	燕山Yanshan	食品卫生/FDA
		注塑料 Injection Molding Grade	3300JE	燕山Yanshan	食品卫生/FDA
		injection wording drade	5306J	扬子Yangzi	ROHS
		管材料 Pipe Grade	6100M	燕山Yanshan	食品卫生/FDA

类别 Category	产品名称 Products		牌号 Grades	生产企业 Manufacturers	已取得的相关认证 Certifications
			6360M	燕山Yanshan	FDA
			2300XM	燕山Yanshan	食品卫生
			YGH041T	上海Shanghai	SCG/RCP
		管材料 Pipe Grade	YGH051T	上海Shanghai	SCG/RCP
			YGM091T	上海Shanghai	SCG/RCP
	高密度聚乙烯 HDPE		6380M	燕山Yanshan	食品卫生/SCG/RCP
			7600M	燕山Yanshan	食品卫生/SCG/RCP
			YEM-4803T	扬子Yangzi	食品卫生/SCG/RCP
			YEM-4902T	扬子Yangzi	食品卫生/SCG/RCP
			2480H	齐鲁Qilu	SCG/RCP
			TR480M	茂名Maoming	食品卫生
		电缆料	DH050T	上海Shanghai	ROHS
		Wire & CableGrade	QHJ01	齐鲁Qilu	ROHS
₩ → 1×			7042	齐鲁Qilu	FDA
聚乙烯 PE			7042	扬子Yangzi	食品卫生/ROHS
			7042	镇海Zhenhai	食品卫生/FDA/ROHS
			7042	广州Guangzhou	FDA/ROHS
		薄膜料	1802	扬子Yangzi	食品卫生/ROHS
		Film Grade	1801	扬子Yangzi	ROHS
			7050	镇海Zhenhai	FDA/ROHS
	线型低密度聚乙烯		7047	镇海Zhenhai	FDA/ROHS
	· 交坐【版省及兼乙烯		2001	广州Guangzhou	FDA/ROHS
			2001T	广州Guangzhou	FDA
			7144	茂名Maoming	食品卫生/FDA/ROHS/PAHS
		注塑料	7144	广州Guangzhou	FDA/ROHS/PAHS
		Injection Molding Grade	8916	茂名Maoming	食品卫生/FDA/ROHS/PAHS
			8320	镇海Zhenhai	食品卫生/FDA/ROHS
		滚塑料 Rotomolding Grade	7149U	齐鲁Qilu	FDA
			F280T	上海Shanghai	FDA
		取向拉伸料 Orientation Stretching Polypropylen (OPP)	F280SO	上海Shanghai	食品卫生/FDA
			PPHF03D (F280Z)	镇海Zhenhai	食品卫生/FDA/ROHS
			PPHF03D (F1002B)	扬子Yangzi	食品卫生/ROHS
			EP3T56F-H	茂名Maoming	FDA/ROHS
			F280M	茂名Maoming	FDA/ROHS
	薄膜料 Film Grade		F300M	茂名Maoming	FDA/ROHS
聚丙烯	Film Grade		F400-H	广州Guangzhou	食品卫生/FDA/ROHS
PP		流延膜料 Casting Polypropylene (CPP)	F800E	上海Shanghai	食品卫生/FDA
			F800E (DF)	上海Shanghai	FDA
			FC801	上海Shanghai	FDA
			FC801M	上海Shanghai	食品卫生/FDA
			FC801MX	上海Shanghai	食品卫生/FDA
			M180R	上海Shanghai	食品卫生/FDA
	注塑料Injection Molding Grade	抗冲共聚料 Impact Copolymer	EPS30R	茂名Maoming	食品卫生/FDA/ROHS/PAHS
			EPS30R	产鲁Qilu	ROHS
			LI GOUN	川 百 Qillu	TIONS

类别 Category	产品名称 Products		牌号 Grades	生产企业 Manufacturers	已取得的相关认证 Certifications
			K8303	燕山Yanshan	食品卫生/FDA/ROHS/EN71
			K7726	燕山Yanshan	食品卫生/FDA/ROHS/EN71
		抗冲共聚料 Impact Copolymer	K9026	燕山Yanshan	FDA/ROHS/EN71
			K7760	燕山Yanshan	食品卫生/FDA/ROHS/EN71
			M2600R	上海Shanghai	ROHS
			M700R	上海Shanghai	ROHS
			HHP4	茂名Maoming	ROHS/FDA
			HHP8	茂名Maoming	ROHS/FDA
			HHP10	茂名Maoming	ROHS/FDA
			EPT30R	茂名Maoming	食品卫生/FDA/ROHS/PAHS
			EPC30R-H	茂名Maoming	食品卫生/FDA/ROHS/PAHS
			J-641	广州Guangzhou	FDA/ROHS/PAHS
			K9927	扬子Yangzi	食品卫生/FDA/PAHS
			YPJ-706	扬子Yangzi	食品卫生/FDA
			PPB-M02 (J340)	扬子Yangzi	食品卫生/ROHS
			K4818	燕山Yanshan	FDA/ROHS/EN71/ 医药卫生
	注塑料		K4912	燕山Yanshan	FDA/ROHS/EN71/ 医药卫生
	Injection Molding		B4808	燕山Yanshan	食品卫生/FDA/ROHS/EN71/ 医药卫生FDA
	Grade		GM1600E	上海Shanghai	FDA/PAHS
		无规共聚料 Random Copolymer	M800E	上海Shanghai	食品卫生/FDA/ROHS
			GM160E	上海Shanghai	FDA/PAHS/医药卫生
₩ T- LX			GM750E	上海Shanghai	FDA/PAHS/医药卫生
聚丙烯 PP			HT9020M	茂名Maoming	食品卫生/FDA
			HT9025M	茂名Maoming	FDA/ROHS
			UT8012M	茂名Maoming	FDA
		均聚料 Homopolymer	K1008	燕山Yanshan	食品卫生/FDA/ROHS/EN71
			K1708	燕山Yanshan	食品卫生/ROHS/EN71
			K1712	燕山Yanshan	食品卫生/FDA/ROHS/EN71
			K1840	燕山Yanshan	食品卫生/FDA
			M1200HS	上海Shanghai	FDA/ROHS/PAHS
			M800HS	上海Shanghai	FDA/ROHS/PAHS
			HC9012-M	茂名Maoming	食品卫生/FDA/ROHS/PAHS
			HC9006BM	茂名Maoming	FDA/ROHS
			MPHM-160	茂名Maoming	食品卫生/FDA/ROHS/PAHS
			CJS700	广州Guangzhou	食品卫生/FDA/ROHS
	管材料 Pipe Grade		B8101	燕山Yanshan	食品卫生/饮用水卫生/FDA
			4220	燕山Yanshan	食品卫生/饮用水卫生/FDA
			B4101	燕山Yanshan	食品卫生/饮用水卫生/FDA
			B1101	燕山Yanshan	FDA
			C180	扬子Yangzi	食品卫生
			YPR-503	扬子Yangzi	食品卫生
			S700	扬子Yangzi	食品卫生/ROHS
	纤维料 Fiber Grade		CS820	广州Guangzhou	FDA/ROHS
			Z30S	茂名Maoming	FDA/ROHS
			Y3700C	上海Shanghai	食品卫生/FDA/ROHS

类别 Category	产品名称 Products	牌号 Grades	生产企业 Manufacturers	已取得的相关认证 Certifications
聚丙烯 PP	纤维料 Fiber Grade	Y2600T	上海Shanghai	食品卫生
		S1003	燕山Yanshan	食品卫生/FDA
	拉丝料	PPH-T03-H(F401)	扬子Yangzi	食品卫生/ROHS
	Yarn Grade	PPH-T03	镇海Zhenhai	食品卫生/FDA/ROHS
		T300	上海Shanghai	食品卫生/ROHS
	发泡料 Foaming Grade	HMS20Z	镇海Zhenhai	食品卫生
聚苯乙烯 PS	注塑料	666D	燕山Yanshan	食品卫生/FDA
	Injection Molding Grade	525	广州Guangzhou	食品卫生/FDA/ROHS
	双向拉神料 Biaxial Oriented Polyrene	688B	燕山Yanshan	食品卫生
	高抗冲击料 High Impact Polystyrene (HIPS)	GH660	广州Guangzhou	食品卫生/FDA/ROHS
		3453	高桥Gaoqiao	食品卫生/FDA/ROHS/PAHS/UL
		275	高桥Gaoqiao	食品卫生/FDA/ROHS/PAHS/UL
		3504	高桥Gaoqiao	食品卫生/FDA/ROHS/PAHS/UL
丙烯腈、丁	二烯、苯乙烯共聚物 ABS	3604	高桥Gaoqiao	食品卫生/FDA/ROHS/PAHS/UL
		3513	高桥Gaoqiao	食品卫生/FDA/ROHS/PAHS/UL
		8434	高桥Gaoqiao	食品卫生/FDA/ROHS/PAHS/UL
		8394G	高桥Gaoqiao	食品卫生/FDA/ROHS/PAHS/UL

## 国内外相关认证项目简介

#### 1. CE认证

CE标志是产品进入欧盟国家及欧盟自由贸易协会国家市场的"通行证"。任何规定的(新方法指令所涉及的)产品,无论是欧盟以外还是欧盟成员国生产的产品,要想在欧盟市场上自由流通,在投放欧盟市场前,都必须符合指令及相关协调标准的要求,并且加贴CE标志。

#### 2. FDA认证

FDA (美国食品和药物管理局, Food and Drug Administration) 是美国政府在健康与人类服务部 (DHHS) 和公共卫生部 (PHS) 中设立的执行机构之一, FDA的职责是确保美国本国生产或进口的食品、化妆品、药物、生物制剂、医疗设备和放射产品的安全。

#### 3. CCC认证

3C (中国强制认证,China Compulsory Certification) 认证是中国按照世贸有关协议和国际通行规则,依法对涉及人类健康安全、动植物生命安全和健康,以及环境保护和公共安全的产品实行统一的强制性产品认证制度。

#### 4. UL认证

UL(美国保险商实验室,Underwrites Laboratories Inc.) 认证是采用一套严密的组织管理体制、标准开发和产品认 证程序来研究确定各种材料、装置、产品、设备、建筑等 对生命、财产有无危害的一种认证,其最终目的是为市场 提供具有相当安全水准的商品。

#### 5. GS认证

GS (德国安全, Germany Safety) 认证是以德国产品安全法 (SGS) 为依据,按照欧盟统一标准EN或德国工业标准 DIN进行检测的一种自愿性认证,是欧洲市场公认的德国安全认证标志。

#### 6. CB认证

CB认证是国际电工委员会电工产品合格测试与认证组织 (IECEE) 以IEC标准为基础对电工产品安全性能进行的一种认证,其测试结果即CB测试报告和CB测试证书,证书在 IECEE各成员国得到相互认可,目的是为了减少由于必须满足不同国家认证或批准准则而产生的国际贸易壁垒。

#### 7. ROHS 认证

ROHS(电子电气设备中限制使用某些有害物质指令,The Restriction of the use of certain Hazardous substances in Electrical and Electronic Equipment)认证是欧盟议会和欧盟理事会实施的在电子电气设备中限制使用某些有害物质指令,也称2002/95/EC指令,2005年欧盟又以2005/618/EC决议的形式对2002/95/EC进行了补充,明确规定了六种有害物质的最大限量值。2006年7月1日,欧盟《关于在电子电气设备中限制使用某种危险物的指令》中规定,新投放欧盟市场的电子电气设备中限制使用铅、汞、镉、六价铬、多溴联苯和多溴二苯醚6种有害物质。

#### 8. MSDS认证

MSDS(化学材料安全评估报告, Material Safety Data Sheet)认证是关于传递化学品危害信息的重要报告,内容包括:说明对应化学品对人类健康和环境的危害性并提供如何安全搬运、贮存和使用该化学品的信息;说明危险化学品的燃、爆性能,毒性和环境危害,以及安全使用、泄漏应急救护处置、主要理化参数、法律法规等方面的信息;说明化学品的理化特性(如PH值,闪点,易燃度,反应活性等)以及对使用者的健康(如致癌,致畸等)可能产生危害的信息。随着发达国家环境保护意识的加强,目前美国、日本、欧盟等发达国家已经普遍建立并实行了MSDS认证制度,要求化学品的生产厂家在销售、运输或出口其产品时,必须进行MSDS评估认证。

#### 9. 聚烯烃管材认证

LTHS试验(长期静液压强度,Long-term hydrostatic strength of thermoplastics materials in pipe form by extrapolation)是根据ISO/DP9080.2标准来外推预测管材 专用料50年的使用寿命的一种试验方法,用于对管材专用料进行分级。

SCG试验(抗慢速裂纹增长,Resistance to slow crack growth)是根据GB/T 18476-2001标准表征PE管材料的性能的一种试验方法,用来评价管材专用料抵抗管材从小的银纹发展成裂纹的能力。

RCP试验(耐快速裂纹扩展,Determination of resistance to rapid crack propagation)是根据ISO 13477: 1997标准表征PE管材料的性能的一种试验方法,用来评价管材在低温下抵抗快速开裂的性能。

#### 10. 食品卫生检测

本手册中"食品卫生",指中国政府针对食品包装容器、包装材料所制定的强制性标准,要求用于食品包装容器、包装材料的聚乙烯、聚丙烯、聚苯乙烯及聚氯乙烯必须符合相应的《食品包装用聚乙烯树脂卫生标准》(GB9691-1988)、《食品包装用聚丙烯树脂卫生标准》(GB9693-1988)、《食品包装用聚苯乙烯树脂卫生标准》(GB9692-1988)及《食品容器、包装材料用聚氯乙烯树脂卫生标准》(GB4803-1994),丙烯腈一丁二烯-苯乙烯(ABS)类产品按GB/T 5009.60-2003和 GB/T5009.152-2003的规定执行,通过检测的方可用于生产食品包装容器、包装材料。

#### 11. 饮水卫生检测

本手册中"饮水卫生",指中国政府针对输配水设备及防护材料所制定的强制性标准,要求凡与饮用水接触的输配水设备及防护材料不得污染水质。用于输配水的设备及防护材料必须符合《生活饮用水输配水设备及防护材料的安全性评价标准》(GB/T17219-1998),通过检测的方可用于输送饮用水或生产输配水设备。

#### 12. 医药卫生检测

本手册中"医药卫生",指中国政府针对医用输液、输血、注射器具用聚丙烯专用料所制定的强制性标准,要求用于输液、输血、注射器具用聚丙烯必须符合《医用输液、输血、注射器用聚丙烯专用料》标准(YY0242-2007),通过检测

的方可用于生产医用输液、输血、注射器具。

#### 13. EN71系列标准

EN71是欧盟市场玩具类产品的规范标准,通过对进入欧洲市场的玩具产品进行技术规范,从而减少或避免玩具对儿童的伤害。EN71对玩具材料进行了定义,规定了测试范围及以暴露方式(与嘴接触;摄取可能;皮肤接触;眼接触;吸入)存在于玩具或玩具材料中可溶性有害元素含量及有毒化学物质的迁移总量的限量,要求生产公司必须保证其产品在该地区销售前符合相关标准,制造商必须对因生产缺陷、不良设计或不适当材料的使用而导致的事故负责。

#### 14. PAHs认证

多环芳烃PAHs是一种高致癌的物质,损伤生殖系统,易导致皮肤癌,肺癌,上消化道肿瘤,动脉硬化及不育症等,德国政府强制规定,要求在2008年4月1日起所有GS标志认证中强制加入PAHs多环芳香烃测试,在德国出售的电动工具必须经过检验其中不含有过量的PAHs,要进入德国市场的电动工具必须通过专业的检验机构的检测。

## Introduction of Domestic and Foreign Certifications

#### 1. CE Marking

CE Marking is a "passport" which allows products to be freely circulated within European Union (EU) and European Free Trade Area (EFTA) member States. Any specified products (covered by the New Approach Directives), whether made by EU members or not, must meet the requirements of Product Directives and relevant Harmonized Standards and bear CE mark before being placed on the EU market.

#### 2. FDA Certification

Food and Drug Administration (FDA) is an agency of the United States Department of Heath and Human Services (DHHS) and the Public Heath Service (PHS). It is responsible for regulating and supervising the safety of foods, cosmetics, medicines, biological medical products, medical devices and radiation-emitting devices produced domestically or imported to the United States market.

#### 3. CCC

China Compulsory Certification (CCC) is a uniform and compulsory product certification system in China which has been established in accordance with relevant WTO protocols and international practice to ensure the safety of products concerned with the health of human beings, animals and plants, the environment and public security.

#### 4. UL Certification

Underwrites Laboratories Inc. (UL) adopts a set of strict organizational management system, standards development process and product certification procedure to evaluate whether materials, equipments, products, devices and buildings may do harm to human health and property security. The certification is aimed to provide safe commodities to markets.

#### 5. GS Certification

GS (Geprüfte Sicherheit=tested safety) mark is a voluntary product safety certification mark based on German Act GPSG (Equipment and Product Safety Act), in line with EU Standards or Deutsche Industrie-Norm (DIN). It is a well-known and respected German safety certification mark across the European market.

#### 6. CB Certification

CB certification is a scheme established by IECEE based on IEC standards to test the safety of electrical products. The test results are presented in a CB testing report which will be accompanied

by a CB certificate. The certificate is recognized among IECEE members with an aim of breaking down international trade barriers resulting from the requirements for meeting different certifications or approval criteria of different countries.

#### 7. ROHS Certification

EU Directive on the Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment (ROHS), also known as the 2002/95/EC Directive, is adopted by the European Parliament and the Council of European Union to restrict the use of hazardous materials in the manufacture of various types of electronic and electrical equipment. In 2005, EU supplemented the 2002/95/EC with a Decision 2005/618/EC and specified the maximum concentration values for six hazardous substances. The ROHS directive issued by the European Union on July 1, 2006 restricted the use of six hazardous substances -- lead, mercury, cadmium, hexavalent chromium, polybrominated biphenyls and polybrominated biphenyl ether – in electrical and electronic products put on the EU market.

#### 8. MSDS Certification

Material Safety Data Sheet (MSDS) is a significant report conveying information on the dangerous properties of given chemicals. It identifies the hazards of chemicals on human health and environment and provides with procedures for handling, storing and working with the chemicals in a safe manner. It includes such information as hazardous chemicals' explosive properties, toxicity and environmental hazards, procedures for safe use and emergency handling and the related laws and regulations. The MSDS also provides information on the physicochemical properties of chemicals such as pH value, flash point, degree of inflammability and reactivity and other information on the possible injuries to users (causing cancer or monstrosity). As the developed world is increasingly concerned about environmental issues, most developed countries such as U.S., Japan and EU members have had the MSDS certification system at large, under which chemical producers are required to submit MSDS reports when selling, transporting or exporting their products.

#### 9. Polyolefin Pipes Certification

The LTHS test (Long-Term Hydrostatic Strength test) is a test following the ISO/DP9080.2 standard to judge by extrapolation

whether or not the lifetime of thermoplastics materials in pipe form can last 50 years. It is used to classify specialty piping materials. SCG test (Resistance to Slow Crack Growth test) is a test following the GB/T 18476-2001 standard to characterize the performance of PE piping materials. The test is used to evaluate the ability of specialty piping materials to resist the growth from crazes to cracks.

RCP test (Determination of Resistance to Rapid Crack Propagation test) is a test following the ISO 13477: 1997 standard to characterize the performance of PE piping materials. This test is used to evaluate the ability of piping materials to resist fast cracking at low temperatures.

#### 10. Food Sanitation Test

Food Sanitation Test is adopted to meet the compulsory criteria enacted by Chinese government, stipulating that PE,PP,PS and PVC resins used in food packaging containers and materials should comply with relevant criteria, including Sanitation Criteria for PE Resin in Food Packaging (GB9691 – 1988), Sanitation Criteria for PP Resin in Food Packaging (GB9693 – 1988), Sanitation Criteria for PS Resin in Food Packaging (GB9692 – 1988) and Sanitation Criteria for PVC Resin in Food Container and Packaging Material (GB4803 – 1994). ABS resin in food packaging is tested with GB/T 5009.60-2003 and GB/T5009.152-2003. The resins must pass the tests before they are used to produce food packaging containers and materials.

#### 11. Drinking Water Sanitation Test

Drinking Water Sanitation Test is adopted to meet the compulsory criteria enacted by Chinese government, stipulating that water distribution equipment and protective materials should not pollute drinking water. All water distribution equipment and protective materials must comply with the requirements of Standard for Safety Evaluation of Equipment and Protective Materials in Drinking Water System (GB/T17219-1998) and pass the test before being used to distribute drinking water or to produce distribution equipment.

#### 12. Medical Sanitation Test

Medical Sanitation Test is adopted to meet the compulsory criteria enacted by Chinese government, stipulating that PP resins used in infusion, transfusion and injection equipments for medical use should comply with the requirements of Polypropylene Material

for Manufacture of Infusion, Transfusion and Injection Equipments for Medical Use (YY0242 – 2007). The resins must pass the tests before they are used to produce infusion, transfusion and injection equipments for medical use.

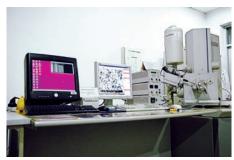
#### 13. EN71 Series Standards

EN71 contains series standards with conformity to EU Toy Safety Directives. EN71 sets down technical criteria which toy products must meet before being placed on EU market, in order to reduce or avoid possible harm to children. EN71 makes definitions of toy materials, prescribes testing scopes and specifies requirements for migration or content of certain hazardous organic chemical compounds in toys and toy materials through all possible exposure routes: Mouthing, Ingestion, Skin contact, Eye contact and Inhalation. The manufacturers are asked to ensure the toy products comply with EN71 standards and be liable for any accident caused by defect production, faulty design and improper material application.

#### 14. PAHs Testing

Polycyclic Aromatic Hydrocarbons (PAHs) are a group of carcinogenic chemicals that may hurt reproductive health and cause other problems such as skin cancer, lung cancer, upper gastrointestinal tumor, arteriosclerosis and infertility. Effective from April 1 2008, German Government add the new mandatory requirement of polycyclic aromatic hydrocarbons (PAHs) testing in GS Mark certified. All electronic products intended for use in households and in the workplace, to be placed on German market, must be certified by authoritative testing organization demonstrating acceptable levels of PAHs.

## 国家化学建筑材料测试中心(材料部) 国家高分子材料与制品质量监督检验中心





国家化学建筑材料测试中心(材料测试部)是国家科学技术部设立在中石化北京化工研究院的国家级检测机构,是我国化学建材行业首家国家级实验室。经二十多年的发展,中心已成为国内、外知名的权威检测机构。在此基础上,2007年国家质量监督检验检疫总局批准成立了国家高分子材料与制品质量监督检验中心,以进一步加强对高分子材料与制品的质量监督工作。目前两中心并轨运行,在人员、管理和仪器设备等方面不断发展和完善,均已成为高分子材料和化学建筑材料领域的领军型检测机构。

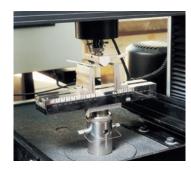
- 在高分子材料行业: 测试中心是国家高分子材料与制品质量监督检验中心。
- 在中国石化行业:测试中心是石化行业产品质量监督检验中心。
- ◆ 在塑料管材行业:测试中心是国家质检总局燃气压力管道安全认证指定检测 单位,亚洲最大的塑料管道系统测试评价研究实验室。
- 在装饰装修行业:测试中心是国家认监委3C认证指定的检测机构。 在塑钢门窗和防水卷材行业:测试中心是国家质检总局确定的生产许可证发放检测 单位。
- ●在汽车塑料行业:测试中心是德国大众中心实验室中国唯一合作实验室。测试中心下设高分子原材料检测室、塑料管材及管件检测室、土工合成材料检测室、塑料门窗及异型材检测室、涂料-胶粘剂检测室和老化性能检测室、汽车塑料检测室、老化性能检测室等,可以按照GB、ISO、ASTM、DIN、JIS及国内、外各行业、企业等标准承检、分析各种高分子材料及化学建材产品的力学、老化、电学、热学、物化、光学、阻燃、流变等各方面性能,测试范围遍及各种基础树脂、塑料管材、塑料异型材、塑料板材、塑料复合制品、塑料薄膜、土工合成材料、汽车和电信电缆等专用塑料及工程塑料等。

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## National Test Center of Polymer and Chemical Building Materials





National Test Center of Polymer & Building Materials, a national test organization under the Ministry of Science and Technology, established in Sinopec Beijing Research Institute of Chemical Industry( Sinopec, BRICI), is the first national test center for chemical building materials in China. After development and improvement in the past two decades, this center has been a well-known authoritative test organization.

In 2007, Polytest (National Polymer & Products Quality Supervision and Inspection Center) was approved and set up in Sinopec BRICI by General Administration of Quality Supervision, Inspection and Quarantine.

Now these two test centers have become leading test organizations in both polymer and building materials fields.

- In polymer materials industry, the test center acts as the quality supervision and inspection center for polymer materials and products;
- In China petrochemical industry, the test center acts as the quality supervision and inspection center for petrochemical products;
- In plastic pipes industry, the test center is an appointed test organization for the safety inspection of gas and pressure pipes authorized by General Administration of Quality Supervision, Inspection and Quarantine. It is also the largest laboratory in Asia in testing, researching and evaluating plastic piping system.
- In the decorating industry, the test center was designated by Certification and Accreditation Administration as the 3C (China Compulsive Certified) appointed test organization;
- In the industry of plastic doors & windows and waterproof membranes, the test center was designated by General Administration of Quality Supervision, Inspection and Quarantine as an appointed test organization for granting production permits;
- In automotive plastics industry, the test center is the only Chinese laboratory cooperating with Germany Volkswagen Center Lab in China.

During testing and evaluating, various standards can be followed, such as GB, ISO, DIN, JIS and other special standards. The test center can test most properties of polymer and building materials in terms of dynamic mechanics, aging properties, electric properties, thermal properties, physicochemical properties, optical properties, flame retardant performance and rheological properties. Varied products can also be tested in the test center, such as resins, plastic pipes and fittings, plastic profiles, plastic sheets, plastic composite products, plastic films, geosynthetic materials, coatings, adhesives, special plastics and engineering plastics for vehicles and cables, etc.

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