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JU XIAN YA AN

开拓进取 为客户创造价值

Pioneering and enterprising, creating value for customers



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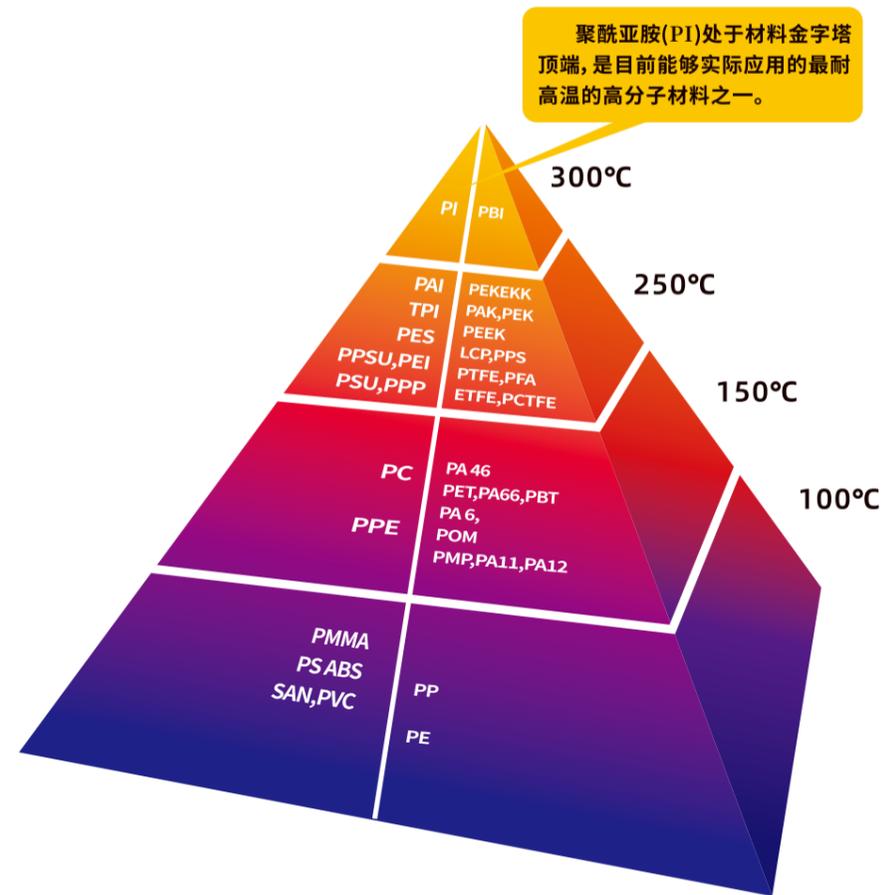
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聚酰亚胺 PI



聚酰亚胺 (Polyimide, 简称为PI) 指主链上含有酰亚胺环 (-CO-NR-CO-) 的一类聚合物, 是综合性能最佳的有机高分子材料之一。其短期使用温度400℃以上, 长期使用温度范围-269~300℃, 部分无明显熔点, 高绝缘性能, 低介电常数等优点。

聚酰亚胺因其在性能和合成方面的突出特点, 不论是作为结构材料或是作为功能性材料, 其巨大的应用前景已经得到充分的认识, 被称为是“解决问题的能手” (problem solver), 并认为“没有聚酰亚胺就不会有今天的微电子技术”, “21世纪最有希望的工程塑料之一”。

Polyimide (PI), abbreviated as PI, refers to a type of polymer with an imide ring (-CO-NR-CO-) on the main chain, and is one of the organic polymer materials with the best comprehensive performance. It has Short-term usage temperature can reach up to 400°C, long-term use temperature range of -269~300°C, no obvious melting point in some parts, high insulation performance, low dielectric constant, etc.

Due to its outstanding characteristics in performance and synthesis, polyimide has been fully recognized for its enormous application prospects, whether as a structural material or a functional material. It is known as a "problem-solving expert" and believes that "without polyimide, there would be no microelectronics technology today". It is also one of the most promising engineering plastics of the 21st century.



公司简介 Company Profile

黄山金石木塑料科技有限公司是一家专业从事研发、生产和销售高性能聚酰亚胺树脂的国家高新技术企业, 致力于为客户提供一体化技术解决方案和定制化服务。

公司目前有基础型、改性型、功能型、填充型、可溶型五大系列聚酰亚胺产品, 主要用于制造轴承、垫圈、齿轮、密封件、传动件、绝缘件、耐高温精密零部件、增韧剂、胶黏剂、耐高温涂层等, 广泛应用于航空航天、电子电器、半导体行业、汽车工业、精密仪器、工业机器人、玻璃行业、等离子切割等领域。

公司始终坚守“开拓进取, 为客户创造价值”的使命担当, 以“成为中国高性能聚酰亚胺树脂行业领跑者”的愿景为指引, 秉承“致力于企业和员工共同成长”的宗旨, 践行“创新驱动、担当自省, 团结协作、共赢未来”的企业价值观, 不断开拓创新, 与客户共谋发展, 共赢未来。

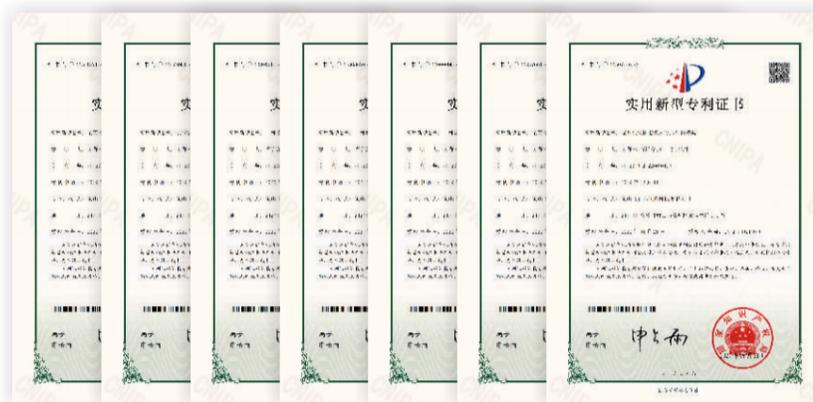
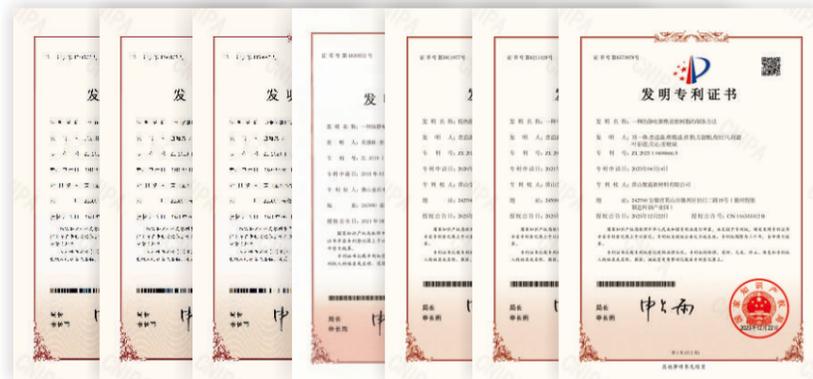
Huangshan Jinshimu Plastic Technology Co., Ltd. is a national high-tech enterprise specializing in R&D, production and sales of high-performance polyimide resin, which is committed to providing customers with integrated technical solutions and customized services.

The company currently has five major series of polyimide products: basic type, modified type, functional type, filled type and soluble type. They are mainly used in the manufacturing of bearings, gaskets, gears, seals, transmission components, insulation components, high and low temperature resistant precision components, toughening agents, adhesives, coatings, etc. They are widely used in aerospace, electronic and electrical industries, semiconductor industries, automotive industries, precision instruments, industrial robots, plasma cutting, and other fields.

The company always adheres to the mission of "pioneering and creating value for customers", guided by the vision of "becoming a leader in China's high-performance polyimide resin industry", adhering to the purpose of "committed to the common growth of enterprises and employees", and practicing the corporate values of "innovation-driven, responsible, united and collaborative, and win-win future". We will continue to innovate, seek development with customers, and win the future together.

www.jsm-pi.com

荣誉资质 Honor and Qualification



- ◆ 国家高新技术企业
- ◆ National High-tech Enterprise
- ◆ 省专精特新企业
- ◆ Provincial specialized, refined, and innovative enterprises
- ◆ 省首批次新材料
- ◆ The first batch of new materials in the province
- ◆ 安徽工业精品
- ◆ Anhui Industrial Boutique
- ◆ 省级企业研发中心
- ◆ Provincial Enterprise R&D Center
- ◆ 省高成长型小微企业
- ◆ Provincial High Growth Small and Micro Enterprises
- ◆ 省创新型中小企业
- ◆ Provincial innovative small and medium-sized enterprises
- ◆ 省首批次新材料推广应用指导目录产品
- ◆ The first batch of new material promotion and application guidance catalog products in the province
- ◆ 省工业领域节能环保“五个一百”新产品新装备目录产品
- ◆ Catalogue of New Products and Equipment for Energy Conservation and Environmental Protection in the Industrial Sector of the Province
- ◆ 制造业重点领域产学研用补短板产品和关键共性技术攻关指导目录
- ◆ Catalogue of Guidelines for Key Areas of Manufacturing Industry, IUR and Application, Shortcomings in Products and Key Common Technologies
- ◆ 市前沿技术创新团队及省民营科技型企业
- ◆ Huangshan City's cutting-edge technology innovation team and provincial private technology-based enterprises

荣誉

金石木

金石木 A-PI 简介

Introduction to A-PI of JSM

金石木A-PI, 是黄山金石木塑料科技有限公司开发的芳香族聚酰亚胺树脂粉体、型材和零部件的总称。金石木A-PI是一类耐高温及耐磨损性能非常卓越的高性能工程塑料。

金石木A-PI分为原材料(粉体)、加工用型材(板材、棒材、管材等)以及成品零部件, 主要用于制造垫圈、轴承、阀座、密封件、传动件、绝缘件等零部件, 广泛应用于航空航天、电子电器、芯片半导体、汽车、精密仪器、工业机器人、等离子切割等领域。

JSM A-PI is the general name of aromatic polyimide resin powder, profile and parts developed by Huangshan JSM Plastic Technology Co., Ltd. JSM A-PI is a high-performance special engineered plastic with excellent high temperature resistance and wear resistance.

JSM A-PI is divided into raw materials (powder) and processing profiles (sheet, rod, pipe, etc.) and finished components, mainly used for manufacturing gaskets, bearings, valve seats, seals, transmission parts, insulation parts and other components, are widely used in aerospace, electronic appliances, chip semiconductors, automobiles, precision instruments, industrial robots, plasma cutting and other fields.

产品优点 Product advantage

耐高温: 长期使用温度-269~300°C, 短时使用温度可达400°C以上。

High temperature resistance: the long-term usage temperature is -269~300°C, and the short-term usage temperature can reach above 400°C.

耐磨损性: 无润滑条件下PV临界值是一般工程塑料的10倍以上, 可抵抗较强的摇动磨损和冲击磨损。

Wear resistance: Under non lubricated conditions, the critical value of PV is more than 10 times that of general engineered plastics, which can resist strong shaking and impact wear.

耐热变形: 高温下不会熔融, 可承受较高载荷。

Heat resistant deformation: It will not melt or at high temperatures and can withstand high loads.

绝缘: 绝缘强度高于20kV/mm。

Insulation: The insulation strength is higher than 20kV/mm.

耐化学性: 耐润滑油、耐溶剂。

Chemical resistance: Resistant to lubricating oil and solvents.

耐等离子体、耐射线。

Resistant to plasma and radiation.

优良的机加工性能。

Excellent machining performance.



部分产品种类、优点及用途

Partial product categories, advantages, and uses

产品名称 Name of Product	主要型号 Items	突出优点 Outstanding Advantages	主要用途 Application
基础型聚酰亚胺树脂 Basic polyimide resin	A-PI-L8	耐高低温、耐磨、高绝缘、 自润滑、低摩擦系数、低介电常数、 耐化学性、耐射线、耐热变形、 较高机械强度、良好的机加工性能 Resistant to high and low temperature wear-resisting, High insulation Self-lubricating, Radiation resistance Chemical resistance Heat-resistant deformation Low friction coefficient Low dielectric constant High mechanical strength Excellent machining performance	耐高低温零件、耐磨件、 密封件、绝缘零件、 无油轴承、芯片测试座等 High and low temperature resistant parts Wear resistant parts Sealing components Insulation components Oil free bearings Chip testing stand, etc
	A-PI-260S		
	A-PI-280		
	A-PI-330		
	A-PI-350-A		
	A-PI-380		
	A-PI-6010		
	A-PI-5001		
	A-PI-480H		
A-PI-480W			
改性型聚酰亚胺树脂 Modified polyimide resin	A-PI-350-21	耐高温、高强度、 极佳的耐磨性能、良好的机加工性能 High temperature resistance High strength Excellent wear resistance Excellent machining performance	阀座、轴承、轴套、 活塞环、止推垫片、 热玻璃夹持器等 Valve seat Bearing Sleeve Piston ring Thrust washer Hot glass holder, etc.
	A-PI-380-21		
	A-PI-211		
	A-PI-5050		
	A-PI-5051		
	A-PI-50049		
A-PI-MS	真空环境下自润滑特性 Self-lubricating properties in vacuum environment	高真空环境下的传动零部件 Transmission components in high vacuum environment	
功能型聚酰亚胺树脂 Functional polyimide resin	A-PI-D	材料的电阻区间可调 良好的机加工性能 Adjustable resistance range Excellent machining performance	防静电零部件 导电零部件 Anti-static components Conductive parts
	A-PI-F		
填充型聚酰亚胺树脂 Filled polyimide resin	A-PI-31	粉末粒度均匀 分散性极佳 Uniform powder size Excellent dispersibility	极少的添加量可明显改善PTFE 产品的耐磨性能和抗蠕变性 A very small amount of addition can significantly improve the wear resistance and creep resistance of PTFE products
	A-PI-32		
	A-PI-33		
	A-PI-34		
可溶型聚酰亚胺树脂 Soluble polyimide resin	A-PI-S	温室下, 可溶性聚酰亚胺树脂粉末 可溶于DMF、DMAC、NMP、DMSO 等溶剂, 最高固含量可达40% Under normal room temperature, soluble polyimide resin powder can be dissolved in DMF, DMAC, NMP, DMSO and other solvents, and the maximum solid content can reach 40%.	可增韧改性纤维、特种环氧、 双马来酰亚胺和热固性聚酰亚胺 树脂等 It can toughen modified fibers, special epoxy, bismaleimide and thermosetting polyimide resins, etc.
	A-PI-R		

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A-PI-L8 聚酰亚胺树脂 Polyimide



产品介绍

A-PI-L8是一款冷压成型聚酰亚胺树脂，产品具有耐高低温、高绝缘、机械强度高、良好的机加工性能等优点。

产品用途

用于制造刹车传感器、汽车玻璃升降限位钉、涡流环、耐磨件、绝缘件、耐高温零部件等；

产品广泛应用于汽车工业、等离子切割等领域。

Product Introduction

A-PI-L8 is a cold pressed polyimide resin, which has advantages such as high and low temperature resistance, high insulation, high mechanical strength, and good machining performance.

Product Applications

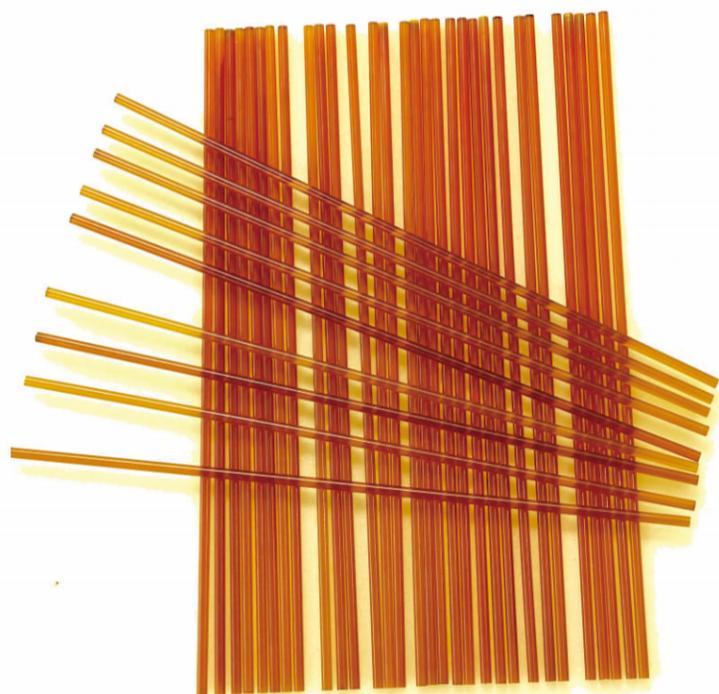
Used for manufacturing brake sensors, automotive glass lifting limit nails, eddy current rings, wear-resistant parts, insulation parts, high temperature resistant components, etc;

The product is widely used in the automotive industry, plasma cutting and other fields.

测试特性 Test Features	测试方法 Test Method	单位 Unit	测试条件 Test Conditions	测试结果 Results
洛氏硬度 Rockwell Hardness	GB/T 3398.2-2008	HRE	23°C	9
无缺口冲击强度 Unnotched Impact Strength	GB/T 1043.1-2008	kJ/m ²	23°C	24
弯曲强度 Flexural Strength	GB/T 9341-2008	MPa	23°C	70
			260°C	45
弯曲模量 Flexural Modulus	GB/T 9341-2008	MPa	23°C	1900
			260°C	1497
拉伸强度 Tensile Strength	GB/T 1040.1-2018	MPa	23°C	46
			260°C	33
断裂伸长率 Elongation at break	GB/T 1040.1-2018	%	23°C	5.1
			260°C	4.6
剪切强度 Shear Strength	HG/T 3839-2006	MPa	23°C	/
泊松比 Poisson's ratio	ASTM D638-22	/	23°C	/
表面电阻率 Surface Resistance	IEC 61340	Ω	23°C	>10 ¹²
线性膨胀系数 Coefficient of thermal expansion	ASTM D696-16	10 ⁻⁶ /°C	-30°C~200°C	/
摩擦系数 Friction coefficient	GB/T 3960-2016	/	2h	0.26
磨损质量 Mass of wear	GB/T 3960-2016	mg	2h	9.8
			24h	0.6
吸水率 Absorption	GB/T 1034-2008	%	48h	1
型材密度 Forming Density	GB/T 4472-2011	g/cm ³	23°C	1.27

以上数据为产品样本测量值，非保证值；所有产品均为压制成型，具有一定的方向性；
The above data are product sample measurement values, not guaranteed values;
All products are formed by compression, with a certain degree of directionality;

A-PI-260S 聚酰亚胺树脂 Polyimide



产品介绍

A-PI-260S是一款热塑性聚酰亚胺树脂，外观颜色为琥珀色，具有耐高温、高强度、耐磨、自润滑、耐化学腐蚀、耐射线等优点。

产品用途

用于制造耐高温精密零部件、绝缘零部件、耐磨件、密封件等零部件；

产品广泛应用于航空航天、半导体行业、石油工业等领域。

Product Introduction

A-PI-260S is a thermoplastic polyimide resin with an amber appearance. It has the advantages of high temperature resistance, high strength, wear resistance, self-lubrication, chemical resistance, and radiation resistance.

Product Applications

Used to manufacture high-temperature resistant precision parts, insulating parts, wear-resistant parts, seals and other parts; The products are widely used in aerospace, semiconductor industry, petroleum industry and other fields.

测试特性 Test Features	测试方法 Test Method	单位 Unit	测试条件 Test Conditions	测试结果 Results
洛氏硬度 Rockwell Hardness	GB/T 3398.2-2008	HRE	23°C	58
无缺口冲击强度 Unnotched Impact Strength	GB/T 1043.1-2008	kJ/m ²	23°C	160
弯曲强度 Flexural Strength	GB/T 9341-2008	MPa	23°C	163
			220°C	50
弯曲模量 Flexural Modulus	GB/T 9341-2008	MPa	23°C	3200
			220°C	1650
拉伸强度 Tensile Strength	GB/T 1040.1-2018	MPa	23°C	125
			220°C	40
断裂伸长率 Elongation at break	GB/T 1040.1-2018	%	23°C	20
			220°C	45
剪切强度 Shear Strength	HG/T 3839-2006	MPa	23°C	/
泊松比 Poisson's ratio	ASTM D638-22	/	23°C	0.37
表面电阻率 Surface Resistance	IEC 61340	Ω	23°C	>10 ¹²
线性膨胀系数 Coefficient of thermal expansion	ASTM D696-16	10 ⁻⁶ /°C	-30°C~200°C	50
摩擦系数 Friction coefficient	GB/T 3960-2016	/	2h	0.18
磨损质量 Mass of wear	GB/T 3960-2016	mg	2h	5.2
			24h	0.37
吸水率 Absorption	GB/T 1034-2008	%	48h	0.5
型材密度 Forming Density	GB/T 4472-2011	g/cm ³	23°C	1.36

以上数据为产品样本测量值，非保证值；所有产品均为压制成型，具有一定的方向性；
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All products are formed by compression, with a certain degree of directionality;

A-PI-280 聚酰亚胺树脂 Polyimide



产品介绍

A-PI-280是一款高性能聚酰亚胺树脂，产品具有耐高温、耐化学性、耐磨自润滑、高强度高模量、出色的抗蠕变性及抗疲劳性、高阻燃性等优点。

产品用途

用于制造耐高温精密零件、耐磨零件、无油润滑零部件、密封件、齿轮、轴套、芯片测试座等；

产品广泛应用于航空航天、半导体行业、电子电器等领域。

Product Introduction

A-PI-280 is a high-performance polyimide resin, the product has advantages such as high temperature resistance, chemical resistance, wear-resistant self-lubricating, high strength and high modulus, excellent creep resistance and fatigue resistance, and high flame retardancy.

Product Applications

Used for manufacturing high-temperature resistant precision parts, wear-resistant parts, oil-free lubrication parts, seals, gears, shaft sleeves, chip test bases, etc;

The product is widely used in aerospace, semiconductor industry, electronics and other fields.

测试特性 Test Features	测试方法 Test Method	单位 Unit	测试条件 Test Conditions	测试结果 Results	竞品(PAI) Competitor
洛氏硬度 Rockwell Hardness	GB/T 3398.2-2008	HRE	23°C	61	50
无缺口冲击强度 Unnotched Impact Strength	GB/T 1043.1-2008	kJ/m ²	23°C	157	>150
弯曲强度 Flexural Strength	GB/T 9341-2008	MPa	23°C	175	170
			260°C	57	失效
弯曲模量 Flexural Modulus	GB/T 9341-2008	MPa	23°C	3520	3200
			260°C	1832	失效
拉伸强度 Tensile Strength	GB/T 1040.1-2018	MPa	23°C	120	133
			260°C	35	失效
断裂伸长率 Elongation at break	GB/T 1040.1-2018	%	23°C	10	19
			260°C	21	失效
剪切强度 Shear Strength	HG/T 3839-2006	MPa	23°C	100	/
泊松比 Poisson's ratio	ASTM D638-22	/	23°C	0.36	/
表面电阻率 Surface Resistance	IEC 61340	Ω	23°C	>10 ¹²	>10 ¹²
线性膨胀系数 Coefficient of thermal expansion	ASTM D696-16	10 ⁻⁶ /°C	-30°C~200°C	39	31
摩擦系数 Friction coefficient	GB/T 3960-2016	/	2h	0.17	0.22
磨损质量 Mass of wear	GB/T 3960-2016	mg	2h	2.7	39
			24h	0.07	2.0
吸水率 Absorption	GB/T 1034-2008	%	48h	0.14	/
型材密度 Forming Density	GB/T 4472-2011	g/cm ³	23°C	1.41	1.42

以上数据为产品样本测量值，非保证值；所有产品均为压制成型，具有一定的方向性；
The above data are product sample measurement values, not guaranteed values;
All products are formed by compression, with a certain degree of directionality;

A-PI-330 聚酰亚胺树脂 Polyimide



产品介绍

A-PI-330是一款高性能聚酰亚胺树脂，产品具有耐高温、高绝缘、自润滑、低摩擦系数、低介电常数、耐化学性、耐射线、耐热变形、较高机械强度和良好的机加工性能等优点。

产品用途

用于制造耐高低温零件、耐磨件、绝缘件、无油轴承、阀座、密封件、芯片测试座等零部件；

产品广泛应用于航空航天、半导体行业、汽车工业、热流道等领域。

Product Introduction

A-PI-330 is a high-performance polyimide resin, the product has advantages such as high temperature resistance, high insulation, self-lubricating, low friction coefficient, low dielectric constant, chemical resistance, radiation resistance, heat deformation resistance, high mechanical strength, and good machining performance.

Product Applications

Used for manufacturing components such as high and low temperature resistant parts, wear-resistant parts, insulation parts, oil-free bearings, valve seats, seals, chip test bases, etc;

The product is widely used in aerospace, semiconductor industry, automotive industry, hot runner and other fields.

测试特性 Test Features	测试方法 Test Method	单位 Unit	测试条件 Test Conditions	测试结果 Results	竞品1 Competitor1	竞品2 Competitor2
洛氏硬度 Rockwell Hardness	GB/T 3398.2-2008	HRE	23°C	46	45	46
无缺口冲击强度 Unnotched Impact Strength	GB/T 1043.1-2008	kJ/m ²	23°C	128	73	49
弯曲强度 Flexural Strength	GB/T 9341-2008	MPa	23°C	132	110	113
			260°C	64	62	59
弯曲模量 Flexural Modulus	GB/T 9341-2008	MPa	23°C	3231	3100	3040
			260°C	1754	1724	1667
拉伸强度 Tensile Strength	GB/T 1040.1-2018	MPa	23°C	107	86	88
			260°C	41	41	41
断裂伸长率 Elongation at break	GB/T 1040.1-2018	%	23°C	9.0	7.5	8
			260°C	23	7	6
剪切强度 Shear Strength	HG/T 3839-2006	MPa	23°C	99	89	/
泊松比 Poisson's ratio	ASTM D638-22	/	23°C	0.36	0.41	0.37
表面电阻率 Surface Resistance	IEC 61340	Ω	23°C	>10 ¹²	>10 ¹²	>10 ¹²
线性膨胀系数 Coefficient of thermal expansion	ASTM D696-16	10 ⁻⁶ /°C	-30°C~200°C	37	/	/
摩擦系数 Friction coefficient	GB/T 3960-2016	/	2h	0.27	0.29	0.32
磨损质量 Mass of wear	GB/T 3960-2016	mg	2h	6.4	7.6	/
			24h	0.16	0.23	0.21
吸水率 Absorption	GB/T 1034-2008	%	48h	0.22	0.32	0.5
			24h	0.16	0.23	0.21
型材密度 Forming Density	GB/T 4472-2011	g/cm ³	23°C	1.41	1.43	1.38

以上数据为产品样本测量值，非保证值；所有产品均为压制成型，具有一定的方向性；
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All products are formed by compression, with a certain degree of directionality;

A-PI-350-A 聚酰亚胺树脂 Polyimide



产品介绍

A-PI-350-A是一款高性能聚酰亚胺树脂，产品具有耐高温、高绝缘、自润滑、低摩擦系数、低介电常数、耐化学性、耐射线、耐热变形、较高机械强度和良好的机加工性能等优点。

产品用途

用于制造耐高低温零件、耐磨件、绝缘件、无油轴承、阀座、密封件、芯片测试座等零部件；

产品广泛应用于航空航天、半导体行业、汽车工业、热流道等领域。

Product Introduction

A-PI-350-A is a high-performance polyimide resin, the product has advantages such as high temperature resistance, high insulation, self-lubricating, low friction coefficient, low dielectric constant, chemical resistance, radiation resistance, heat deformation resistance, high mechanical strength, and good machining performance.

Product Applications

Used for manufacturing components such as high and low temperature resistant parts, wear-resistant parts, insulation parts, oil-free bearings, valve seats, seals, chip test bases, etc;

The product is widely used in aerospace, semiconductor industry, automotive industry, hot runner and other fields.

测试特性 Test Features	测试方法 Test Method	单位 Unit	测试条件 Test Conditions	测试结果 Results	竞品1 Competitor1	竞品2 Competitor2
洛氏硬度 Rockwell Hardness	GB/T 3398.2-2008	HRE	23°C	46	45	46
无缺口冲击强度 Unnotched Impact Strength	GB/T 1043.1-2008	kJ/m ²	23°C	120	73	49
弯曲强度 Flexural Strength	GB/T 9341-2008	MPa	23°C	115	110	113
			260°C	68	62	59
弯曲模量 Flexural Modulus	GB/T 9341-2008	MPa	23°C	3200	3100	3040
			260°C	1650	1724	1667
拉伸强度 Tensile Strength	GB/T 1040.1-2018	MPa	23°C	108	86	88
			260°C	44	41	41
断裂伸长率 Elongation at break	GB/T 1040.1-2018	%	23°C	10	7.5	8
			260°C	19	7	6
剪切强度 Shear Strength	HG/T 3839-2006	MPa	23°C	103	89	/
泊松比 Poisson's ratio	ASTM D638-22	/	23°C	0.39	0.41	0.37
表面电阻率 Surface Resistance	IEC 61340	Ω	23°C	>10 ¹²	>10 ¹²	>10 ¹²
线性膨胀系数 Coefficient of thermal expansion	ASTM D696-16	10 ⁻⁶ /°C	-30°C~200°C	37	/	/
摩擦系数 Friction coefficient	GB/T 3960-2016	/	2h	0.25	0.29	0.32
磨损质量 Mass of wear	GB/T 3960-2016	mg	2h	4.7	7.6	/
			24h	0.19	0.23	0.21
吸水率 Absorption	GB/T 1034-2008	%	48h	0.22	0.32	0.5
			23°C	1.41	1.43	1.38
型材密度 Forming Density	GB/T 4472-2011	g/cm ³	23°C	1.41	1.43	1.38

以上数据为产品样本测量值，非保证值；所有产品均为压制成型，具有一定的方向性；
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A-PI-380 聚酰亚胺树脂 Polyimide



产品介绍

A-PI-380是一款高性能聚酰亚胺树脂，产品具有耐高温、高绝缘、自润滑、低摩擦系数、低介电常数、耐化学性、耐射线、耐热变形、较高机械强度和良好的机加工性能等优点。

产品用途

用于制造耐高低温零件、耐磨件、绝缘件、无油轴承、阀座、密封件、芯片测试座等零部件；

产品广泛应用于航空航天、半导体行业、汽车工业、热流道等领域。

Product Introduction

A-PI-380 is a high-performance polyimide resin, the product has advantages such as high temperature resistance, high insulation, self-lubricating, low friction coefficient, low dielectric constant, chemical resistance, radiation resistance, heat deformation resistance, high mechanical strength, and good machining performance.

Product Applications

Used for manufacturing components such as high and low temperature resistant parts, wear-resistant parts, insulation parts, oil-free bearings, valve seats, seals, chip test bases, etc;

The product is widely used in aerospace, semiconductor industry, automotive industry, hot runner and other fields.

测试特性 Test Features	测试方法 Test Method	单位 Unit	测试条件 Test Conditions	测试结果 Results	竞品1 Competitor1	竞品2 Competitor2
洛氏硬度 Rockwell Hardness	GB/T 3398.2-2008	HRE	23°C	46	45	46
无缺口冲击强度 Unnotched Impact Strength	GB/T 1043.1-2008	kJ/m ²	23°C	65	73	49
弯曲强度 Flexural Strength	GB/T 9341-2008	MPa	23°C	112	110	113
			260°C	71	62	59
弯曲模量 Flexural Modulus	GB/T 9341-2008	MPa	23°C	3031	3100	3040
			260°C	1876	1724	1667
拉伸强度 Tensile Strength	GB/T 1040.1-2018	MPa	23°C	83	86	88
			260°C	47	41	41
断裂伸长率 Elongation at break	GB/T 1040.1-2018	%	23°C	7.3	7.5	8
			260°C	6.5	7	6
剪切强度 Shear Strength	HG/T 3839-2006	MPa	23°C	88	89	/
泊松比 Poisson's ratio	ASTM D638-22	/	23°C	0.43	0.41	0.37
表面电阻率 Surface Resistance	IEC 61340	Ω	23°C	>10 ¹²	>10 ¹²	>10 ¹²
线性膨胀系数 Coefficient of thermal expansion	ASTM D696-16	10 ⁻⁶ /°C	-30°C~200°C	39	/	/
摩擦系数 Friction coefficient	GB/T 3960-2016	/	2h	0.25	0.29	0.32
磨损质量 Mass of wear	GB/T 3960-2016	mg	2h	6.8	7.6	/
			24h	0.18	0.23	0.21
吸水率 Absorption	GB/T 1034-2008	%	48h	0.31	0.32	0.5
			24h	0.18	0.23	0.21
型材密度 Forming Density	GB/T 4472-2011	g/cm ³	23°C	1.42	1.43	1.38

以上数据为产品样本测量值，非保证值；所有产品均为压制成型，具有一定的方向性；
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A-PI-6010 聚酰亚胺树脂 Polyimide



产品介绍

A-PI-6010是一款热固性聚酰亚胺树脂，产品具有耐高低温、自润滑、高绝缘、耐化学性、机械强度高、低吸水率、良好的机加工性能等优点。

产品用途

用于制造耐高低温零件、绝缘零件、无油轴承、轴套等；

产品广泛应用于航空航天、半导体行业、汽车工业等领域。

Product Introduction

A-PI-6010 is a thermosetting polyimide resin with advantages such as high and low temperature resistance, self-lubricating, high insulation, chemical resistance, high mechanical strength, low water absorption, and good machining performance.

Product Applications

Used for manufacturing high and low temperature resistant parts, insulation parts, oil-free bearings, shaft sleeves, etc;

The product is widely used in fields such as aerospace, semiconductor industry, and automotive industry.

测试特性 Test Features	测试方法 Test Method	单位 Unit	测试条件 Test Conditions	测试结果 Results
洛氏硬度 Rockwell Hardness	GB/T 3398.2-2008	HRE	23°C	85
无缺口冲击强度 Unnotched Impact Strength	GB/T 1043.1-2008	kJ/m ²	23°C	73
弯曲强度 Flexural Strength	GB/T 9341-2008	MPa	23°C	200
			260°C	89
弯曲模量 Flexural Modulus	GB/T 9341-2008	MPa	23°C	3969
			260°C	2610
拉伸强度 Tensile Strength	GB/T 1040.1-2018	MPa	23°C	138
			260°C	49
断裂伸长率 Elongation at break	GB/T 1040.1-2018	%	23°C	9.5
			260°C	13
剪切强度 Shear Strength	HG/T 3839-2006	MPa	23°C	124
泊松比 Poisson's ratio	ASTM D638-22	/	23°C	0.33
表面电阻率 Surface Resistance	IEC 61340	Ω	23°C	>10 ¹²
线性膨胀系数 Coefficient of thermal expansion	ASTM D696-16	10 ⁻⁶ /°C	-30°C~200°C	42
摩擦系数 Friction coefficient	GB/T 3960-2016	/	2h	0.17
磨损质量 Mass of wear	GB/T 3960-2016	mg	2h	7.2
			24h	0.11
吸水率 Absorption	GB/T 1034-2008	%	48h	0.22
型材密度 Forming Density	GB/T 4472-2011	g/cm ³	23°C	1.39

以上数据为产品样本测量值，非保证值；所有产品均为压制成型，具有一定的方向性；
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A-PI-5001 聚酰亚胺树脂 Polyimide



产品介绍

A-PI-5001是一款高刚性聚酰亚胺树脂，相比其他聚酰亚胺产品，它具有更高的模量、更高的硬度、高温条件下尺寸稳定性更优异。

产品用途

用于制造耐高温密封件、耐磨件、传动件、绝缘件、芯片测试治具等精密零部件；

主要应用于航空航天、半导体行业、汽车工业、石油工业、特种工业等领域。

Product Introduction

A-PI-5001 is a high-rigidity polyimide resin. Compared with other polyimide products, it has higher modulus, higher hardness, and better dimensional stability under high temperature conditions.

Product Applications

Used to manufacture high temperature resistant seals, wear resistant parts, transmission parts, insulation parts, chip test fixtures and other precision parts;

Mainly used in aerospace, semiconductor industry, automobile industry, petroleum industry, special industry and other fields;

测试特性 Test Features	测试方法 Test Method	单位 Unit	测试条件 Test Conditions	测试结果 Results
洛氏硬度 Rockwell Hardness	GB/T 3398.2-2008	HRE	23°C	92
无缺口冲击强度 Unnotched Impact Strength	GB/T 1043.1-2008	kJ/m ²	23°C	60
弯曲强度 Flexural Strength	GB/T 9341-2008	MPa	23°C	225
			260°C	102
弯曲模量 Flexural Modulus	GB/T 9341-2008	MPa	23°C	5016
			260°C	3622
拉伸强度 Tensile Strength	GB/T 1040.1-2018	MPa	23°C	135
			260°C	66
断裂伸长率 Elongation at break	GB/T 1040.1-2018	%	23°C	7.2
			260°C	21
剪切强度 Shear Strength	HG/T 3839-2006	MPa	23°C	/
泊松比 Poisson's ratio	ASTM D638-22	/	23°C	0.33
表面电阻率 Surface Resistance	IEC 61340	Ω	23°C	>10 ¹²
线性膨胀系数 Coefficient of thermal expansion	ASTM D696-16	10 ⁻⁶ /°C	-30°C~200°C	32
摩擦系数 Friction coefficient	GB/T 3960-2016	/	2h	0.15
磨损质量 Mass of wear	GB/T 3960-2016	mg	2h	4.9
			24h	0.13
吸水率 Absorption	GB/T 1034-2008	%	48h	0.18
			24h	0.13
型材密度 Forming Density	GB/T 4472-2011	g/cm ³	23°C	1.43

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A-PI-480H 聚酰亚胺树脂 Polyimide



产品介绍

A-PI-480H是一款超高耐温聚酰亚胺树脂，长期使用温度 > 400℃，具有抗等离子体、低吸水性、低释气，以及优良的机加工性能等特点。

产品用途

用于液晶和半导体制造设备零件和精密加工部件，以及仪器仪表零部件等。产品广泛应用于航空航天、半导体行业和电子电器等领域。

Product Introduction

A-PI-480H is an ultra-high temperature resistant polyimide resin with a long-term use temperature of over 400 °C. It has the characteristics of plasma resistance, low water absorption, low gas release, and excellent machining performance.

Product Applications

Used in parts and precision-machined components for LCD and semiconductor manufacturing equipment, as well as instrumentation components.

Our products are widely used in aerospace, semiconductor, and electronics industries.

测试特性 Test Features	测试方法 Test Method	单位 Unit	测试条件 Test Conditions	测试结果 Results
洛氏硬度 Rockwell Hardness	GB/T 3398.2-2008	HRE	23°C	82
无缺口冲击强度 Unnotched Impact Strength	GB/T 1043.1-2008	kJ/m ²	23°C	10
弯曲强度 Flexural Strength	GB/T 9341-2008	MPa	23°C	120
			260°C	74
弯曲模量 Flexural Modulus	GB/T 9341-2008	MPa	23°C	6700
			260°C	3199
拉伸强度 Tensile Strength	GB/T 1040.1-2018	MPa	23°C	82
			260°C	48
断裂伸长率 Elongation at break	GB/T 1040.1-2018	%	23°C	2.6
			260°C	4.1
剪切强度 Shear Strength	HG/T 3839-2006	MPa	23°C	/
泊松比 Poisson's ratio	ASTM D638-22	/	23°C	0.34
表面电阻率 Surface Resistance	IEC 61340	Ω	23°C	>10 ¹²
线性膨胀系数 Coefficient of thermal expansion	ASTM D696-16	10 ⁻⁶ /°C	-30°C~200°C	32
摩擦系数 Friction coefficient	GB/T 3960-2016	/	2h	0.14
磨损质量 Mass of wear	GB/T 3960-2016	mg	2h	2.0
			24h	0.07
吸水率 Absorption	GB/T 1034-2008	%	48h	0.09
型材密度 Forming Density	GB/T 4472-2011	g/cm ³	23°C	1.44

以上数据为产品样本测量值，非保证值；所有产品均为压制成型，具有一定的方向性；
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A-PI-480W 聚酰亚胺树脂 Polyimide



产品介绍

A-PI-480W是一款超高耐温聚酰亚胺树脂，长期使用温度 > 400℃，具有抗等离子体、优异的耐磨性、低吸水率、低释气，以及优良的机加工性能等特点。

产品用途

用于液晶和半导体制造等设备零件和精密加工部件，以及仪器仪表零部件等，如耐高温零部件、高温摩擦零部件、电子生产零部件等等。

产品广泛应用于航天航空、半导体行业和电子电器等领域。

Product Introduction

A-PI-480W is an ultra-high temperature resistant polyimide resin with a long-term service temperature > 400°C, which has the characteristics of plasma resistance, excellent wear resistance, low water absorption, low outgassing, and excellent machinability.

Product Applications

It is used for equipment parts and precision machining parts such as liquid crystal and semiconductor manufacturing, as well as instrumentation parts, such as high-temperature resistant parts, high-temperature friction parts, electronic production parts, etc.

The products are widely used in aerospace, semiconductor industry and electronic appliances and other fields.

测试特性 Test Features	测试方法 Test Method	单位 Unit	测试条件 Test Conditions	测试结果 Results
洛氏硬度 Rockwell Hardness	GB/T 3398.2-2008	HRE	23°C	85
无缺口冲击强度 Unnotched Impact Strength	GB/T 1043.1-2008	kJ/m ²	23°C	17
弯曲强度 Flexural Strength	GB/T 9341-2008	MPa	23°C	149
			300°C	81
弯曲模量 Flexural Modulus	GB/T 9341-2008	MPa	23°C	6407
			300°C	2937
拉伸强度 Tensile Strength	GB/T 1040.1-2018	MPa	23°C	113
			300°C	47
断裂伸长率 Elongation at break	GB/T 1040.1-2018	%	23°C	4.2
			300°C	5.3
剪切强度 Shear Strength	HG/T 3839-2006	MPa	23°C	/
泊松比 Poisson's ratio	ASTM D638-22	/	23°C	/
表面电阻率 Surface Resistance	IEC 61340	Ω	23°C	>10 ¹²
线性膨胀系数 Coefficient of thermal expansion	ASTM D696-16	10 ⁻⁶ /°C	-30°C~200°C	27
摩擦系数 Friction coefficient	GB/T 3960-2016	/	2h	0.11
磨损质量 Mass of wear	GB/T 3960-2016	mg	2h	1.8
			24h	0.11
吸水率 Absorption	GB/T 1034-2008	%	48h	0.15
型材密度 Forming Density	GB/T 4472-2011	g/cm ³	23°C	1.45

以上数据为产品样本测量值，非保证值；所有产品均为压制成型，具有一定的方向性；
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A-PI-350-21 改性型聚酰亚胺树脂

Modified polyimide resin



产品介绍

A-PI-350-21 是一款改性聚酰亚胺树脂，产品具有高耐热性、机械强度高、低吸水性、极高 PV 值下低摩擦系数、良好的机加工性能等优点。

产品用途

用于制造隔热垫片、阀座镶嵌件、衬套、活塞环、密封件等；
产品广泛应用于航空航天、石油工业、一般工业等领域。

Product Introduction

A-PI-350-21 is a modified polyimide resin with advantages such as high heat resistance, high mechanical strength, low water absorption, low friction coefficient under extremely high PV value, and good machining performance.

Product Applications

Used for manufacturing insulation gas-kets, valve seat inserts, bushings, piston rings, seals, etc;
The product is widely used in fields such as aerospace, petroleum industry, and general industry.

测试特性 Test Features	测试方法 Test Method	单位 Unit	测试条件 Test Conditions	测试结果 Results		竞品1 Competitor1
				热成型 Thermoforming	冷成型 Cold forming	
洛氏硬度 Rockwell Hardness	GB/T 3398.2-2008	HRE	23°C	32	70 (HRL)	32
无缺口冲击强度 Unnotched Impact Strength	GB/T 1043.1-2008	kJ/m ²	23°C	57	25	/
弯曲强度 Flexural Strength	GB/T 9341-2008	MPa	23°C	126	65	110
			260°C	66	38	62
弯曲模量 Flexural Modulus	GB/T 9341-2008	MPa	23°C	4056	2822	3792
			260°C	2384	1446	2551
拉伸强度 Tensile Strength	GB/T 1040.1-2018	MPa	23°C	86	45	66
			260°C	40	24	38
断裂伸长率 Elongation at break	GB/T 1040.1-2018	%	23°C	7.2	3.8	4.5
			260°C	6.1	4.9	3
剪切强度 Shear Strength	HG/T 3839-2006	MPa	23°C	78	/	77
泊松比 Poisson's ratio	ASTM D638-22	/	23°C	0.35	/	0.41
表面电阻率 Surface Resistance	IEC 61340	Ω	23°C	/	/	/
线性膨胀系数 Coefficient of thermal expansion	ASTM D696-16	10 ⁻⁶ /°C	-30°C~200°C	/	/	/
摩擦系数 Friction coefficient	GB/T 3960-2016	/	2h	0.20	0.21	0.24
磨损质量 Mass of wear	GB/T 3960-2016	mg	2h	2.7	6.0	/
			24h	0.09	2.14	0.19
吸水率 Absorption	GB/T 1034-2008	%	48h	0.13	2.32	0.57
型材密度 Forming Density	GB/T 4472-2011	g/cm ³	23°C	1.49	1.35	/

以上数据为产品样本测量值，非保证值；所有产品均为压制成型，具有一定的方向性；
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All products are formed by compression, with a certain degree of directionality;

A-PI-380-21 改性型聚酰亚胺树脂

Modified polyimide resin



产品介绍

A-PI-380-21是一款改性聚酰亚胺树脂，产品具有耐高温、低吸水性、高机械强度、极高PV值下低摩擦系数、良好的机加工性能等优点。

产品用途

用于制造轴承、止推垫圈和动态密封等；

产品广泛应用于航空航天、石油工业、一般工业等领域。

Product Introduction

A-PI-380-21 is a modified polyimide resin with advantages such as high temperature resistance, low water absorption, high mechanical strength, low friction coefficient at extremely high PV value, and good machinability.

Product Applications

Used in the manufacture of bearings, thrust washers, and dynamic seals.

Our products are widely used in aerospace, petroleum, and general industry.

测试特性 Test Features	测试方法 Test Method	单位 Unit	测试条件 Test Conditions	测试结果 Results	
				热成型 Thermoforming	冷成型 Cold forming
洛氏硬度 Rockwell Hardness	GB/T 3398.2-2008	HRE	23°C	28	7
无缺口冲击强度 Unnotched Impact Strength	GB/T 1043.1-2008	kJ/m ²	23°C	32	21
弯曲强度 Flexural Strength	GB/T 9341-2008	MPa	23°C	102	75
			260°C	60	32
弯曲模量 Flexural Modulus	GB/T 9341-2008	MPa	23°C	3432	2572
			260°C	2374	1572
拉伸强度 Tensile Strength	GB/T 1040.1-2018	MPa	23°C	76	47
			260°C	32	23
断裂伸长率 Elongation at break	GB/T 1040.1-2018	%	23°C	4.5	4.1
			260°C	3.8	3.7
剪切强度 Shear Strength	HG/T 3839-2006	MPa	23°C	/	/
泊松比 Poisson's ratio	ASTM D638-22	/	23°C	/	/
表面电阻率 Surface Resistance	IEC 61340	Ω	23°C	/	/
线性膨胀系数 Coefficient of thermal expansion	ASTM D696-16	10 ⁻⁶ /°C	-30°C~200°C	32	/
摩擦系数 Friction coefficient	GB/T 3960-2016	/	2h	0.21	/
磨损质量 Mass of wear	GB/T 3960-2016	mg	2h	3.3	/
			24h	0.13	/
吸水率 Absorption	GB/T 1034-2008	%	48h	0.18	/
			24h	0.13	/
型材密度 Forming Density	GB/T 4472-2011	g/cm ³	23°C	1.50	1.37

以上数据为产品样本测量值，非保证值；所有产品均为压制成型，具有一定的方向性；
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A-PI-211 改性型聚酰亚胺树脂

Modified polyimide resin



产品介绍

A-PI-211是一款耐磨改性聚酰亚胺树脂，具有优异低摩擦系数、低磨损、自润滑等特性。

产品用途

用于制造旋转动态密封垫片、静态密封底座、无油轴套等零部件；产品广泛应用于石油工业、汽车工业、精密仪器等领域。

Product Introduction

A-PI-211 is a wear-resistant modified polyimide resin with excellent low friction coefficient, low wear, self-lubricating properties

Product Applications

Used to manufacture rotating dynamic sealing gaskets, static sealing bases, oil-free sleeves and other parts;
The products are widely used in the fields of petroleum industry, automobile industry, precision instruments, etc.

测试特性 Test Features	测试方法 Test Method	单位 Unit	测试条件 Test Conditions	测试结果 Results
洛氏硬度 Rockwell Hardness	GB/T 3398.2-2008	HRE	23°C	27
无缺口冲击强度 Unnotched Impact Strength	GB/T 1043.1-2008	kJ/m ²	23°C	25
弯曲强度 Flexural Strength	GB/T 9341-2008	MPa	23°C	110
			260°C	52
弯曲模量 Flexural Modulus	GB/T 9341-2008	MPa	23°C	4239
			260°C	2217
拉伸强度 Tensile Strength	GB/T 1040.1-2018	MPa	23°C	68
			260°C	32
断裂伸长率 Elongation at break	GB/T 1040.1-2018	%	23°C	4.5
			260°C	5.0
剪切强度 Shear Strength	HG/T 3839-2006	MPa	23°C	/
泊松比 Poisson's ratio	ASTM D638-22	/	23°C	/
表面电阻率 Surface Resistance	IEC 61340	Ω	23°C	/
线性膨胀系数 Coefficient of thermal expansion	ASTM D696-16	10 ⁻⁶ /°C	-30°C~200°C	/
摩擦系数 Friction coefficient	GB/T 3960-2016	/	2h	0.19
磨损质量 Mass of wear	GB/T 3960-2016	mg	2h	1.8
			24h	0.09
吸水率 Absorption	GB/T 1034-2008	%	48h	0.12
型材密度 Forming Density	GB/T 4472-2011	g/cm ³	23°C	1.56

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A-PI-5050 改性型聚酰亚胺树脂

Modified polyimide resin



产品介绍

A-PI-5050 是一款改性聚酰亚胺树脂，产品具有高耐热性、良好的导热性、极佳的摩擦性能、良好的机加工性能等优点。

产品用途

用于制造热玻璃夹持器、夹心、拨片、推杆、扶瓶器、气动叶片等；产品广泛应用于热玻璃工业、一般工业等领域。

Product Introduction

A-PI-5050 is a modified polyimide resin with advantages such as high heat resistance, good thermal conductivity, excellent friction performance, and good machining performance.

Product Applications

Used for manufacturing hot glass grippers, sandwiches, paddles, push rods, bottle holders, pneumatic blades, etc; The product is widely used in the hot glass industry, general industry, and other fields.

测试特性 Test Features	测试方法 Test Method	单位 Unit	测试条件 Test Conditions	测试结果 Results		竞品1 Competitor1
				热成型 Thermoforming	冷成型 Cold forming	
洛氏硬度 Rockwell Hardness	GB/T 3398.2-2008	HRE	23°C	10	82(HRL)	15
无缺口冲击强度 Unnotched Impact Strength	GB/T 1043.1-2008	kJ/m ²	23°C	18	15	/
弯曲强度 Flexural Strength	GB/T 9341-2008	MPa	23°C	96	75	89.6
			260°C	50	44	44.8
弯曲模量 Flexural Modulus	GB/T 9341-2008	MPa	23°C	7580	5090	4826
			260°C	4558	3088	2758
拉伸强度 Tensile Strength	GB/T 1040.1-2018	MPa	23°C	68	46	52
			260°C	30	26	23
断裂伸长率 Elongation at break	GB/T 1040.1-2018	%	23°C	4	2.5	3
			260°C	2.2	3	2
剪切强度 Shear Strength	HG/T 3839-2006	MPa	23°C	44	/	/
泊松比 Poisson's ratio	ASTM D638-22	/	23°C	0.23	/	/
表面电阻率 Surface Resistance	IEC 61340	Ω	23°C	/	/	75
线性膨胀系数 Coefficient of thermal expansion	ASTM D696-16	10 ⁻⁶ /°C	-30°C~200°C	/	/	75
摩擦系数 Friction coefficient	GB/T 3960-2016	/	2h	0.16	0.17	0.3
磨损质量 Mass of wear	GB/T 3960-2016	mg	2h	1.2	9.5	/
			24h	0.05	0.66	0.14
吸水率 Absorption	GB/T 1034-2008	%	48h	0.08	0.87	0.42
型材密度 Forming Density	GB/T 4472-2011	g/cm ³	23°C	1.72	1.61	/

以上数据为产品样本测量值，非保证值；所有产品均为压制成型，具有一定的方向性；
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A-PI-MS 改性型聚酰亚胺树脂

Modified polyimide resin



产品介绍

A-PI-MS 是一款改性聚酰亚胺树脂，其在真空环境下自润滑特性优异，具有耐高温、耐磨、自润滑等优点。

产品用途

用于制造传动件、密封件、垫片等精密零部件；
主要应用于航空航天、特种电子电器等领域；

Product Introduction

A-PI-MS is a modified polyimide resin with excellent self-lubricating properties in a vacuum environment, and has the advantages of high temperature resistance, wear resistance, and self-lubricating.

Product Applications

Used to manufacture precision parts such as transmission parts, seals, gaskets, etc.;
Mainly used in aerospace, special electronic appliances and other fields;

测试特性 Test Features	测试方法 Test Method	单位 Unit	测试条件 Test Conditions	测试结果 Results
洛氏硬度 Rockwell Hardness	GB/T 3398.2-2008	HRE	23°C	40
无缺口冲击强度 Unnotched Impact Strength	GB/T 1043.1-2008	kJ/m ²	23°C	45
弯曲强度 Flexural Strength	GB/T 9341-2008	MPa	23°C	123
			260°C	54
弯曲模量 Flexural Modulus	GB/T 9341-2008	MPa	23°C	3242
			260°C	1927
拉伸强度 Tensile Strength	GB/T 1040.1-2018	MPa	23°C	88
			260°C	40
断裂伸长率 Elongation at break	GB/T 1040.1-2018	%	23°C	6.3
			260°C	6.2
剪切强度 Shear Strength	HG/T 3839-2006	MPa	23°C	/
泊松比 Poisson's ratio	ASTM D638-22	/	23°C	/
表面电阻率 Surface Resistance	IEC 61340	Ω	23°C	/
线性膨胀系数 Coefficient of thermal expansion	ASTM D696-16	10 ⁻⁶ /°C	-30°C~200°C	/
摩擦系数 Friction coefficient	GB/T 3960-2016	/	2h	0.23
磨损质量 Mass of wear	GB/T 3960-2016	mg	2h	8.1
			24h	0.05
吸水率 Absorption	GB/T 1034-2008	%	48h	0.07
			24h	0.05
型材密度 Forming Density	GB/T 4472-2011	g/cm ³	23°C	1.56

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A-PI 功能型聚酰亚胺树脂

Functional polyimide resin



产品介绍

A-PI-D/F是功能型聚酰亚胺树脂，产品具有耐高低温、高机械强度、低吸水性、低摩擦系数、电阻值稳定等优点。

产品用途

用于制造防静电、导电精密零部件；产品广泛应用于特种电子、电器、半导体及相关特殊工业领域。

Product Introduction

A-PI-D/F functional polyimide resin, the product has advantages such as high and low temperature resistance, high mechanical strength, low water absorption, low friction coefficient, and stable resistance value.

Product Applications

Used for manufacturing anti-static and conductive precision components
The product is widely used in special electronics, electrical appliances, semiconductors, and related special industrial fields.

测试特性 Test Features	测试方法 Test Method	单位 Unit	测试条件 Test Conditions	测试结果 Results	
				A-PI-F	A-PI-D
洛氏硬度 Rockwell Hardness	GB/T 3398.2-2008	HRE	23°C	44	43
无缺口冲击强度 Unnotched Impact Strength	GB/T 1043.1-2008	kJ/m ²	23°C	50	32
弯曲强度 Flexural Strength	GB/T 9341-2008	MPa	23°C	113	110
			260°C	61	50
弯曲模量 Flexural Modulus	GB/T 9341-2008	MPa	23°C	3100	3031
			260°C	1754	1554
拉伸强度 Tensile Strength	GB/T 1040.1-2018	MPa	23°C	85	84
			260°C	43	35
断裂伸长率 Elongation at break	GB/T 1040.1-2018	%	23°C	6.1	5.6
			260°C	11	8.4
剪切强度 Shear Strength	HG/T 3839-2006	MPa	23°C	86	/
泊松比 Poisson's ratio	ASTM D638-22	/	23°C	0.38	/
表面电阻率 Surface Resistance	IEC 61340	Ω	23°C	10 ⁶ ~10 ⁹	10 ³ ~10 ⁵
线性膨胀系数 Coefficient of thermal expansion	ASTM D696-16	10 ⁻⁶ /°C	-30°C~200°C	/	/
摩擦系数 Friction coefficient	GB/T 3960-2016	/	2h	0.24	0.24
磨损质量 Mass of wear	GB/T 3960-2016	mg	2h	4.9	5.3
			24h	0.13	0.14
吸水率 Absorption	GB/T 1034-2008	%	48h	0.19	0.17
			24h	0.13	0.14
型材密度 Forming Density	GB/T 4472-2011	g/cm ³	23°C	1.41	1.42

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A-PI-31 填充型聚酰亚胺树脂

Filled polyimide resin



产品介绍

A-PI-31是一款填充型聚酰亚胺树脂，粉末粒度均匀、分散性极佳。极少的添加量可明显改善PTFE产品的耐磨性能和抗蠕变性，可作为砂轮制造粘黏剂使用。

注意事项

1. 在干燥环境下保存，使用前建议对其进行热处理，水分含量控制在0.5%以下。
2. 建议使用带控温系统的混合设备进行混合，若混合时体系温度超过30℃，PTFE会有结团现象导致混合不均匀，理想状态下是将整个混合过程温度控制在25℃以下，混合时建议使用多段高低速结合旋转并及时消除混合过程中产生的静电。
3. A-PI-33可在无氮气工况下进行烧结，但会有氧化圈；
4. A-PI-34必须在氮气条件下进行烧结，否则成型件颜色较深。

Product Introduction

A-PI-31 filled polyimide resin, with uniform powder particle size and excellent dispersibility. A very small amount of addition can significantly improve the wear resistance and creep resistance of PTFE products, and can be used as an adhesive for grinding wheel manufacturing.

Note

1. Store in a dry environment, it is recommended to heat treat it before use, and the moisture content should be controlled below 0.5%.
2. It is recommended to use a mixing device with a temperature control system for mixing. If the system temperature exceeds 30℃ during mixing, PTFE may clump and cause uneven mixing. Ideally, the entire mixing process temperature should be controlled below 25℃. It is recommended to use a multi-stage high-speed and low-speed combination rotation during mixing and promptly eliminate static electricity generated during the mixing process.
3. A-PI-33 can be sintered under nitrogen free conditions, but there will be oxidation circles;
4. A-PI-34 must be sintered under nitrogen conditions, otherwise the formed part will have a darker color.

测试特性 Test Features	测试方法 Test Method	单位 Unit	测试条件 Test Conditions	测试结果 Results			
				A-PI-31	A-PI-33	A-PI-34	PTFE
堆积密度 Bulk density	GB/T 16913-2008	g/cm ³	23°C	0.25	0.22	0.25	0.35
粒径D50 Particle size	GB/T 19077-2024	µm	23°C	21	11	7	25

10% PI粉体填充PTFE复合品标准样条性能数据参考表
Performance Data Reference Table for Standard Specimens of PTFE Composites Filled with 10% PI Powder

拉伸强度 Tensile Strength	GB/T 1040.1-2018	MPa	23°C	12	12	13	22
断裂伸长率 Elongation at break	GB/T 1040.1-2018	%	23°C	302	305	324	423
摩擦系数 Friction coefficient	GB/T 3960-2016	/	2h	0.11	0.08	0.09	0.08
磨损质量 Mass of wear	GB/T 3960-2016	mg	2h	1.3	1.1	1	204 (20min)
型材密度 Forming Density	GB/T 4472-2011	g/cm ³	23°C	2.05	2.04	2.05	2.15

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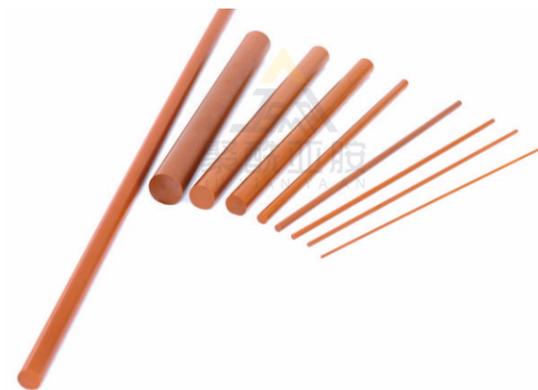
规格尺寸 金石木A-PI部分产品

Specification and size

板材 Plates

长mm *宽mm Length(mm) *Width(mm)	厚度mm Thickness(mm)
1000*320	0.5-105
650*520	0.5-50
360*320	0.5-80
320*320	0.5-80
210*120	0.5-50

其他规格尺寸可定制
Other specifications can be customized



棒材 Rods

长mm Length(mm)	直径mm Diameter(mm)
1000	1-100
510	1-50
210	1-50
360	1-80
320	1-80

其他规格尺寸可定制
Other specifications can be customized

圆环 Ring

外径mm Outer diameter(mm)	内径mm Inner diameter(mm)	厚度mm Thickness(mm)
259	138	定制 Customizable

其他规格尺寸可定制
Other specifications can be customized



金石木A-PI 部分产品展示

Part of JSM A-PI product display



未來可期
The future is promising



合作共贏
Cooperation and win-win