

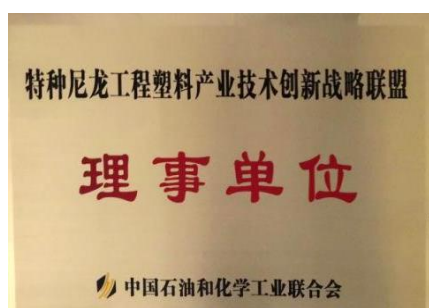
耐高温尼龙树脂 SL PPA

SL PPA是由三力本诺新材料股份有限公司采用四川大学所开发的具有自主知识产权的合成方法，开发的工业用高温尼龙树脂，其具有耐高温、耐腐蚀、吸水率低等优点，可满足挤出、注塑、模塑、纺丝等多种生产工艺要求，可广泛用于电子连接器、LED及低压电器领域的精密成型注塑件，汽车发动机周边耐高温部件、油箱及管道耐燃油、耐溶剂部件。



与脂肪族尼龙相比，SL PPA具有更优异的综合性能：更高的耐热性、更低的吸湿性、更优异的耐腐蚀性。

SL PPA具有独特的分子结构设计性，从而可根据用户需求方便的调节材料的玻璃化温度、熔点、热变形温度、熔体流动指数等特性，为实现您的产品设计提供更多的可行性。



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SL PPA现有三大系列9个牌号树脂，每个牌号根据需求可以提供A、B、C、D和E型5种不同粘度的树脂。

□ **PA6T/6共聚系列**: 分子链结构中含有共聚PA6链段，为部分嵌段型树脂，与无规共聚树脂相比，具有卓越的力学性能，且熔点范围广泛，熔融加工性好。同时，本系列树脂采用己内酰胺代替部分高价的己二胺，具有成本低的优点。

□ **PA6T/66共聚系列**: 分子链结构中PA6T和PA66因为空间位置合适，形成规则的氢键，结晶度高。本系列树脂具有优异的耐热性、尺寸稳定性和耐腐蚀性，为耐高温尼龙树脂中最成熟、应用最广泛的品种。

□ **PA6T/6I共聚系列**: 相比PA6T/6和PA6T/66共聚系列，本系列树脂在分子链结构中具有更高的苯环含量，玻璃化温度高于120°C，具有更低的吸水率和更高的连续使用温度。

此外，我们还可以通过分子结构设计，根据用户需求提供定制的PPA专供料、玻纤增强及阻燃改性材料产品。

表1 SL PPA树脂主要性能

测试项目	测试标准	PA6T/6共聚系列			PA6T/66共聚系列			PA6T/6I共聚系列		
		1132	1145	1152	1245	1252	1262	1345	1352	1357
熔点/°C	GB/T 19466.3-2004	295	308	311	307	312	325	312	317	325
玻璃化温度(中点)/°C	GB/T 19466.3-2004	85	96	100	90	92	100	125	122	135
特性粘度/dL·g ⁻¹	GB/T 10247-2008	A超低粘度型0.60-0.69, B低粘度型0.70-0.79, C通用型0.80-0.89, D高粘度型0.90-0.99, E超高粘度型1.00-1.09 ^a								
密度/g·cm ⁻³	GB/T 1033.1-2008	1.15	1.15	1.15	1.20	1.20	1.20	1.15	1.15	1.15
灰分/%	GB/T 9345.1-2008	0.15 ^b	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15
23°C 24h吸水率/%	GB/T 1034-2008	0.90 ^c	0.80	0.70	0.50	0.50	0.40	0.30	0.30	0.20
含水量/%	三力企标	0.30 ^d	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30
热水可萃取物含量/%	三力企标	0.30 ^e	0.30	0.30	0.10	0.10	0.10	0.10	0.10	0.10

备注:

a、牌号后未注明字母，均代表C通用型。如：1252A代表1252超低粘度型树脂，1132E代表1132超高粘度型树脂，1357代表1357通用型树脂。

b、800°C煅烧4h残重。

c、吸水率数据均为热处理后典型值。

d、150°C干燥2h失重。

e、100°C煮沸1分钟，过滤，干燥后失重。

以上产品指标是代表性指标，不能作为产品验收标准使用。

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High temperature resistant nylon resin - SL PPA

SL PPA as an industrial high-temperature nylon resin for industrial applications. It has the advantages of high temperature resistance, corrosion resistance, and low water absorption, etc. It can meet the requirements of extrusion, injection molding and molding production. It is widely used in precision molded parts for electronic connectors, LED and low-voltage electrical appliances, high temperature resistant parts around automotive engines, fuel tanks and pipes are resistant to fuel and solvent.

SL PPA currently has three series of 9 grade resins, each of which can provide in five different viscosity resins of type A, B, C, D and E according to requirements.

PA6T/6 copolymer series: The molecular chain structure contains a copolymerized PA6 segment, which is a partial block type resin. Compared with the random copolymer resin, it has excellent mechanical properties, and has a wide melting point range and good melt processability. Meanwhile, this series of resins uses caprolactam instead of some high-priced hexamethylene diamine, which has the advantage of low cost.

PA6T/66 copolymer series: PA6T and PA66 in the molecular chain structure form a regular hydrogen bond due to the proper spatial position, and the crystallinity is high. This series of resins has excellent heat resistance, dimensional stability and corrosion resistance, and is the most mature and widely used variety of high temperature resistant nylon resins.

PA6T/6I copolymer series:

Compared with the PA6T/6 and PA6T/66 copolymer series, this series of resins has a higher benzene ring content in the molecular chain structure, and the glass transition temperature is higher than 120 ° C. It has the advantages of low water absorption and high continuous use temperature.

Index	Test standard	PA6T/6 Series			PA6T/66 Series			PA6T/6I Series		
		1132	1145	1152	1245	1252	1262	1345	1352	1357
Melting point/°C	GB/T 19466.3-2004	295	308	311	307	312	325	312	317	325
Glass transition temp (midpoint)/°C	GB/T 19466.3-2004	85	96	100	90	92	100	125	122	135
Inherent viscosity /dL·g ⁻¹	GB/T 10247-2008	Type A ultra-low viscosity 0.60-0.69, Type B low viscosity 0.70-0.79, Type C general 0.80-0.89, Type D high viscosity 0.90-0.99, Type E ultra high viscosity 1.00-1.09 ^a								
Density /g·cm ⁻³	GB/T 1033.1-2008	1.15	1.15	1.15	1.20	1.20	1.20	1.15	1.15	1.15
Ash content /%	GB/T 9345.1-2008	0.15 ^b	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15
23°C 24h Moisture absorption/%	GB/T 1034-2008	0.90 ^c	0.80	0.70	0.50	0.50	0.40	0.30	0.30	0.20
Moisture Content/%	Enterprise Standard	0.30 ^d	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30
Hot water extractables content/%	Enterprise Standard	0.30 ^e	0.30	0.30	0.10	0.10	0.10	0.10	0.10	0.10

1, no letters after the brand, all represent the C general type. For example, 1252A represents 1252 ultra-low viscosity resin, 1132E represents 1132 ultra-high viscosity resin, and 1357 represents 1357 general-purpose resin.

2, calcined at 800 ° C for 4 h residual weight.

3. Moisture absorption data are typical values after heat treatment.

4, 150 ° C dry 2h weight loss.

5, boil for 1 minute at 100 ° C, filter, lose weight after drying.

The above product indicators are representative indicators and cannot be used as product acceptance criteria.

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