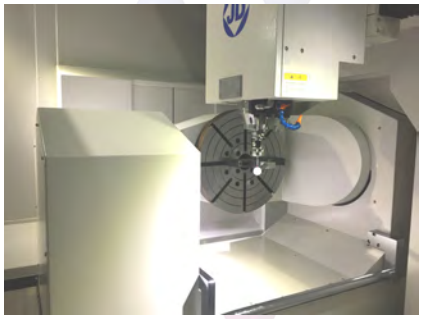
Jiangsu Gonow Precision Technology Co., Ltd.

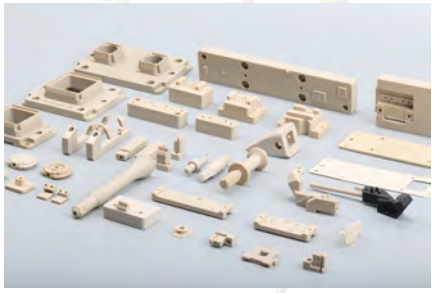
PAI Polyamide-imide

Gonow PAI Polyamide-imide
The strength of polyamide-imide is incomparable to any industrial unreinforced plastic in the world today, its tensile strength exceeds 172 MPa, and its heat deflection temperature is 274°C under l.8 MPa load.

Polyamide-imide may also undergo solid state polymerization after fabrication to provide improved performance by increasing molecular weight through post-curing. Post-curing occurs at 260°C, and the time and temperature required for curing depends primarily on the thickness and shape of the parts.
It can be used for a long time at 260°C, does not lose weight at 300°C, and starts to decompose at about 450°C. Its adhesion, flexibility and alkalinity is better. It can be cured and cross-linked with expoxy resin and has good abrasion resistance.



Polyamide-imide has excellent mechanical properties, and the tensile strength of natural color material is 190 MPa. Molded plastic is mainly used for gear sticks, bearings and copier separation jaws, etc. It has good ablation resistance and electric under high temperature, high frequency. It can be used as ablative material, permeable material and structural material for aircraft. It has good adhesion to metal and other materials. It is suitable for wire enamels, impregnating enamels, films, laminates, coatings and adhesives. For example, Enameled wire made from it has been used in H-class deep-water submersible motors, the laminate is used for printed circuit boards and sockets, and the sea film is used as insulation wrapping material.



PRODUCT ATTRIBUTES

- The maximum working temperature in the air is high (sustained 250°C)
- In a wide range of temperatures, maintaining excellent strength, rigidity and creep resistance.
- Excellent dimensional stability at temperatures up to 260°C
- Excellent wear resistance (especially T4301 and T4501 PAI)
- Excellent UV resistance
- Excellent resistance to high energy radiation (Y- and X-rays)
- Inherent low flammability

PAI polyamide-imide (PAI) profiles are well-established, widely used and proven, and are available in extruded and molded grades. In high temperature applications, this advanced material offers both excellent mechanical properties and very good dimensional stability.
PAI is the highest performance, meltable plastic. It has outstanding resistance to high temperatures. At high load pressures and continuous temperatures up to 260 °C, it can work well.
Compared to most high performance engineering plastics, parts made from profiles have higher compressive and impact strengths.
PAI has excellent dimensional stability due to its very low linear coefficient of thermal expansion and high creep resistance. PAI is an amorphous material with a glass transition temperature of 280 °C.

GONOW PAI

Property	Test Method	Units	Gonow PAI
Mechanical			
Specific Gravity	ISO 1183-1	g/cm^3	1.45
Tensile Strength	ISO 527-1/-2	MPa	110
Flexural Strength	ISO 527-1/-2	Mpa	110
Tensile Elongation	ISO 527-1/-2	%	5
Tensile Modulus of Elasticity	ISO 527-1/-2	MPa	5500
Izod Notched Impact	ISO 179-1/1eA	kJ/m2	4
Rockwell Hardness	ISO 2039-2		M106
Thermal			
Coef. of Linear Thermal Expansion		m/(m.K)	35×10^{-6}
Max. Continuous Use Temp.		℃	-20-270
Heat Deflection Temp	ISO 75-1/-2	℃	280
Melting Point	ISO 11357-1/-3	℃	NA
Glass Transition Temperature	ISO 11357-1/-2	℃	280
Electrical			
Volume Resistivity	IEC 60093	Ohm.cm	＞1013
Surface Resistivity	ANSI/ESD STM 11.11	Ohn/sq	＞1013
Dielectric Constant	IEC 60250		5.5
Dissipation Factor	IEC 60250		0.037
Miscellaneous			
Color			Yellow, Grey, Black
Water Absorption/24 hrs.	ISO 62	%	3.8
Coefficient of Friction			0.4
Arc Trail Resistance Index	IEC 60112		175

Jiangsu Gonow Precision Technology Co., Ltd. is dedicated to supplying our customers with the highest quality thermoplastic stock shapes for machining. We manufacture and stock a full line of thermoplastic materials in a wide variety of rod, plate and tubular bar sizes. In addition, we offer over 20 years of experience in the custom extrusion of application-specific and proprietary resins to meet even the most demanding performance requirements. Gonow Plastics offers full technical support for all products and is certified to ISO 9002 standards for the manufacture of extruded plastics stock shapes.

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