

**Technical Data: PPS (Polyphenylene Sulfide)**

**Product Description**

**Define and Grades**

Injection-molded PPS (Polyphenylene Sulfide) is a high-performance thermoplastic known for its outstanding heat resistance, chemical inertness, electrical insulating properties, and mechanical strength. It is widely used in industries requiring durable and heat-resistant components.

Neway utilizes various grades of injection molded PPS (Polyphenylene Sulfide), including:

- General-Purpose PPS
- Reinforced PPS
- Flame-Retardant PPS
- Conductive PPS
- Glass-Filled PPS



**Features and Applications**

Grade	Features	Applications
General-Purpose PPS	- Exceptional heat resistance - Chemical inertness - High electrical resistance	Automotive parts, electrical components
Reinforced PPS	- Enhanced mechanical strength - Improved dimensional stability - Good chemical resistance	Structural components, industrial equipment
Flame-Retardant PPS	- Flame resistance - Low smoke emissions - Good electrical properties	Electronics, aircraft interiors, electrical enclosures
Conductive PPS	- Electrical conductivity - Electrostatic discharge (ESD) protection - Chemical resistance	Electronic packaging, ESD-sensitive applications
Glass-Filled PPS	- Increased stiffness and strength - Dimensional stability - Chemical resistance	Industrial machinery, automotive, structural parts

**Physical and Mechanical**

Property	Density	Tensile Strength	Tensile Elongation	Flexural Modulus	Flexural Strength	Izod Impact Strength	Heat Deflection Temp.	Shrinkage	Hardness
Units	(g/cm <sup>3</sup> )	(Mpa)	(%)	(MPa)	(MPa)	(J/m)	(°C)	(%)	(HRB)
General-Purpose PPS	1.3	75	2	3	150	50	95	0.3	85
Reinforced PPS	1.5	110	1.5	4	180	30	220	0.5	90
Flame-Retardant PPS	1.45	85	1.8	3.5	160	40	180	0.4	88
Conductive PPS	1.4	95	2	3.2	170	35	160	0.4	87
Glass-Filled PPS	1.8	150	1	6	250	15	260	0.7	95

**Note**

The above data are reference material science data. This data reference is not binding and is not considered as authoritative test data. If your material requirements are extremely precise, please contact our material engineers. Tel | +86 18926788217 | Web | [www.newayprecision.com](http://www.newayprecision.com) | Contact Neway



# PPS Injection Molding

## Polyphenylene Sulfide

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#### Benefits of Material Grades

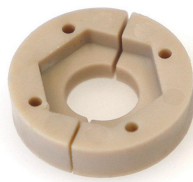
##### General-Purpose PPS

**Key Properties:** General-purpose PPS is characterized by its excellent heat resistance, with a heat deflection temperature of approximately 95°C. It has good chemical inertness and high electrical resistance. Its tensile strength is around 75 MPa and exhibits moderate impact strength.

**Applications:** This grade of PPS finds applications in various industries, including automotive and electrical. Typical uses include automotive parts exposed to high temperatures, electrical connectors, and insulating components.



##### Reinforced PPS



**Key Properties:** Reinforced PPS offers enhanced mechanical properties. It has a higher tensile strength of about 110 MPa and improved dimensional stability. The heat deflection temperature is elevated, typically reaching around 220°C. This grade has good chemical resistance.

**Applications:** Reinforced PPS is preferred for applications where strength and dimensional stability are crucial. It is used in structural components, industrial equipment, and parts that must withstand high-temperature environments.

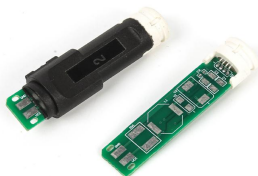
##### Flame-Retardant PPS

**Key Properties:** Flame-retardant PPS is designed to resist combustion and emit low levels of smoke. It maintains good electrical properties and has a tensile strength of approximately 85 MPa. Its heat deflection temperature is around 180°C.

**Applications:** This grade is ideal for applications where fire safety is paramount, such as electronics, aircraft interiors, and electrical enclosures, ensuring that components meet stringent fire safety standards.



##### Conductive PPS



**Key Properties:** Conductive PPS possesses electrical conductivity, making it suitable for electrostatic discharge (ESD) protection applications. It offers good chemical resistance, a tensile strength of about 95 MPa, and a heat deflection temperature of approximately 160°C.

**Applications:** Conductive PPS is used in electronic packaging, where ESD protection is vital. It prevents damage to sensitive electronic components and is employed in various ESD-sensitive applications.

##### Glass-Filled PPS

**Key Properties:** Glass-filled PPS is reinforced with glass fibers, increasing stiffness and strength. It has a high tensile strength of around 150 MPa and a heat deflection temperature reaching 260°C. It exhibits lower shrinkage.

**Applications:** This grade excels in industrial machinery, automotive components, and structural parts that demand enhanced mechanical properties. Its dimensional stability and resistance to wear make it suitable for high-stress applications.



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