

PPE-PS Injection Molding

Polyphenylene Ether - Polystyrene

NEWAY PRECISION WORKS

NewayPrecision

www.newayprecision.com

Technical Data: PPE-PS (Polyphenylene Ether - Polystyrene)

Product Description

Define and Grades

Overview of Injection Molded PPE-PS

Injection-molded PPE-PS (Polyphenylene Ether - Polystyrene) comes in various grades, each tailored for specific applications. These grades vary in properties like heat resistance, impact strength, and electrical characteristics, ensuring suitability across automotive and electronics industries.

Neway utilizes several common grades of injection-molded PPE-PS:

- General-Purpose PPE-PS
- Flame-Retardant PPE-PS
- High-Impact PPE-PS
- Heat-Resistant PPE-PS
- Electrical Insulation PPE-PS



Features and Applications

Grade	Features	Applications
General-Purpose PPE-PS	- Good heat resistance - Chemical resistance - Dimensional stability	Automotive components, electrical housings, connectors
Flame-Retardant PPE-PS	- Flame resistance - Low smoke emissions - Heat resistance	Electrical and electronics, aircraft interiors, HVAC
High-Impact PPE-PS	- Excellent impact strength - High toughness - Dimensional stability	Automotive bumpers, medical devices, consumer goods
Heat-Resistant PPE-PS	- Exceptional heat resistance - Low thermal expansion - Dimensional stability	Electrical insulators, cookware, automotive parts
Electrical Insulation PPE-PS	- Excellent electrical insulating properties - High dielectric strength - Dimensional stability	Electrical and electronic components, switchgear

Physical and Mechanical

Property	Density	Tensile Strength	Tensile Elongation	Flexural Modulus	Flexural Strength	Izod Impact Strength	Heat Deflection Temp.	Shrinkage	Hardness
Units	(g/cm ³)	(Mpa)	(%)	(MPa)	(MPa)	(J/m)	(°C)	(%)	(HRB)
General-Purpose PPE-PS	1.04	50	2.5	2.5	70	150	95	0.6	70
Flame-Retardant PPE-PS	1.05	55	2	2.3	75	100	100	0.7	75
High-Impact PPE-PS	1.03	60	3	2.8	80	200	85	0.5	80
Heat-Resistant PPE-PS	1.05	45	1.5	2.2	60	80	110	0.8	65
Electrical Insulation PPE-PS	1.06	45	1	2	60	70	120	0.8	65

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 | Contact Neway



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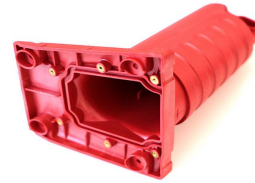
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Benefits of Material Grades

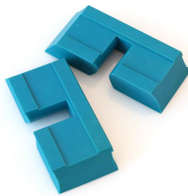
General-Purpose PPE-PS

General-purpose PPE-PS (Polyphenylene Ether - Polystyrene) is valued for its balanced properties. It has a density of approximately 1.04 g/cm³ and offers a tensile strength of 50 MPa. Key properties include good heat resistance, chemical resistance, and dimensional stability.

This grade is commonly used in applications such as automotive components, electrical housings, and connectors due to its versatility and ability to maintain its shape and properties under various conditions.



Flame-Retardant PPE-PS



Flame-retardant PPE-PS is engineered to resist combustion and reduce smoke emissions. It typically has a density of around 1.05 g/cm³ and a tensile strength of 55 MPa. In addition to flame resistance, it offers good heat resistance.

This grade finds applications in environments where fire safety is critical, such as electrical and electronics components, aircraft interiors, and HVAC systems.

High-Impact PPE-PS

High-impact PPE-PS is recognized for its excellent impact strength and toughness. It has a density of approximately 1.03 g/cm³ and a tensile strength of 60 MPa.

With exceptional dimensional stability, this grade is well-suited for applications subjected to impact loads. Typical uses include automotive bumpers, medical devices, and consumer goods where durability and impact resistance are essential.



Heat-Resistant PPE-PS



Heat-resistant PPE-PS offers exceptional resistance to elevated temperatures. It typically has a density of 1.05 g/cm³ and a tensile strength of 45 MPa. Fundamental properties include low thermal expansion and dimensional stability.

This grade is preferred for applications demanding resistance to heat, such as electrical insulators, cookware, and automotive parts operating in high-temperature environments.

Electrical Insulation PPE-PS

PPE-PS is prized for its excellent electrical insulating properties and high dielectric strength. It has a density of around 1.06 g/cm³ and a tensile strength of 45 MPa. In addition to its electrical characteristics, it exhibits dimensional stability.

This grade is commonly used in electrical and electronic components, switchgear, and applications where electrical insulation is critical to prevent short circuits and ensure safe operation.



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