

Technical Data: PSU (Polysulfone)

Product Description

Define and Grades

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

Common grades of injection molded PSU (Polysulfone) used for injection molding include:

- General-Purpose PSU
- Reinforced PSU
- Flame-Retardant PSU
- Medical-Grade PSU
- High-Temperature PSU



Features and Applications

Grade	Features	Applications
General-Purpose PSU	- High heat resistance - Good chemical resistance - Mechanical strength	Medical devices, plumbing components, electrical insulators
Reinforced PSU	- Enhanced mechanical strength - Improved dimensional stability - High heat resistance	Aerospace components, automotive parts, food service equipment
Flame-Retardant PSU	- Flame resistance - Low smoke emissions - Electrical insulating properties	Electrical enclosures, aerospace applications, safety equipment
Medical-Grade PSU	- Biocompatible - Sterilizable - Chemical resistance - High heat resistance	Medical devices, surgical instruments, dental equipment
High-Temperature PSU	- Exceptional heat resistance - Chemical resistance - Mechanical strength	Aerospace, automotive under-hood components, electrical connectors

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 PSU	1.36	80	5	2.7	120	70	163	0.4	75
Reinforced PSU	1.52	130	3	4	160	80	175	0.6	85
Flame-Retardant PSU	1.45	90	4	2.9	140	65	158	0.5	80
Medical-Grade PSU	1.35	70	6	2.5	110	60	160	0.3	70
High-Temperature PSU	1.37	85	5	2.8	130	75	180	0.4	78

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



PSU Injection Molding

Polysulfone

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Benefits of Material Grades

General-Purpose PSU

Applications: General-purpose PSU is versatile and suitable for various applications. It is commonly used in medical devices, plumbing components, and electrical insulators due to its high heat resistance, good chemical resistance, and mechanical strength.

Reasons for Popularity: Its popularity stems from its broad utility in different industries. It offers a balance of heat and chemical resistance, making it suitable for various engineering applications.



Reinforced PSU



Applications: Reinforced PSU is chosen for enhanced mechanical strength and dimensional stability applications. It finds uses in aerospace components, automotive parts, and food service equipment.

Reasons for Popularity: Its popularity is due to its superior mechanical properties, making it suitable for structural components in demanding industries. Reinforced PSU maintains its integrity under stress and heat.

Flame-Retardant PSU

Applications: Flame-retardant PSU is crucial in applications where fire safety is paramount. It is used in electrical enclosures, aerospace components, and safety equipment due to its flame resistance, low smoke emissions, and electrical insulating properties.

Reasons for Popularity: Its popularity is driven by its ability to meet stringent fire safety standards. Flame-Retardant PSU ensures safety in environments where fire risks are a concern.



Medical-Grade PSU



Applications: Medical-grade PSU is biocompatible and sterilizable, ideal for medical devices, surgical instruments, and dental equipment. Its chemical resistance and high heat resistance are essential in healthcare settings.

Reasons for Popularity: Popularity arises from its suitability for sensitive medical applications. Medical-grade PSU ensures patient safety and device reliability while withstanding sterilization processes.

High-Temperature PSU

Applications: High-temperature PSU is chosen for applications requiring extreme heat resistance. It is used in aerospace, automotive under-hood components, and electrical connectors due to its exceptional heat resistance, chemical resistance, and mechanical strength.

Reasons for Popularity: Its popularity is rooted in its ability to maintain structural integrity at elevated temperatures. High-temperature PSU is crucial in applications exposed to extreme heat conditions.



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