

Technical Data: PC-PBT (polycarbonate-polybutylene terephthalate)

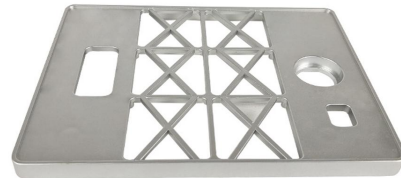
Product Description

Define and Grades

Polycarbonate-polybutylene terephthalate (PC-PBT) is a thermoplastic blend that combines the desirable properties of polycarbonate (PC) and polybutylene terephthalate (PBT). It offers excellent impact resistance, heat resistance, dimensional stability, and chemical resistance.

Neway utilizes various grades of PC-PBT for injection molding, including:

- PC-PBT Blend Grade A
- PC-PBT Blend Grade B
- PC-PBT Blend Grade C
- PC-PBT Flame Retardant Grade
- PC-PBT High-Heat Grade



Features and Applications

Grade	Features	Applications
PC-PBT Blend Grade A	Excellent impact resistance, chemical resistance	Automotive interior components, electrical enclosures
PC-PBT Blend Grade B	High flow, good thermal stability	Thin-walled parts, connectors, electronic housings
PC-PBT Blend Grade C	Good dimensional stability, low warpage	Gears, automotive under-the-hood components
PC-PBT Flame Retardant	Flame retardant, self-extinguishing	Electrical connectors, appliances, safety equipment
PC-PBT High-Heat Grade	Exceptional heat resistance, high strength	Automotive lighting, under-the-hood applications

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)	(%)	(Rockwell R)
PC-PBT Blend Grade A	1.3	70	30	2,000	90	150	100	0.3 - 0.5	90
PC-PBT Blend Grade B	1.34	65	50	2,500	85	200	110	0.2 - 0.4	85
PC-PBT Blend Grade C	1.29	75	20	1,800	95	120	95	0.4 - 0.6	95
PC-PBT Flame Retardant Grade	1.38	60	40	2,800	80	180	120	0.2 - 0.3	80
PC-PBT High-Heat Grade	1.36	80	15	3,200	110	250	150	0.1 - 0.2	100

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



PC-PBT Injection Molding

Polycarbonate-Polybutylene Terephthalate

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Benefits of Material Grades

PC-PBT Blend Grade A

High Impact Strength: PC-PBT Blend Grade A offers excellent impact resistance, making it suitable for durable and tough applications. It's often used in automotive interior components like dashboard parts.

Low Shrinkage: Low shrinkage properties make it ideal for producing intricate and precise components, including connectors and housings for electronic devices.



PC-PBT Blend Grade B



High Tensile Strength: Grade B boasts high tensile strength, making it suitable for load-bearing components in various applications, such as structural brackets in construction.

Enhanced Tensile Elongation: This grade offers improved elongation, providing flexibility in parts. It's used in applications requiring some degree of flexibility, like automotive air ducts.

PC-PBT Blend Grade C

Low Shrinkage: Grade C's low shrinkage characteristics are valuable for maintaining tight tolerances in precision parts. It's commonly used in manufacturing gears and connectors for industrial equipment.

Moderate Tensile Strength: It balances strength and flexibility, making it suitable for components like handles and grips, where strength and ergonomic design are essential.

Good Chemical Resistance: This grade exhibits resistance to chemicals, making it appropriate for components in contact with various substances, such as chemical containers and pumps.



PC-PBT Flame Retardant Grade



Superior Flame Resistance: This grade excels in flame resistance, meeting stringent fire safety requirements. It's employed in applications where fire safety is paramount, like electrical enclosures and connectors in construction and transportation.

High Heat Deflection Temperature: Its elevated heat deflection temperature allows it to withstand high temperatures, making it a choice for parts in engine compartments of vehicles and industrial machinery.

Low Shrinkage: With low shrinkage properties, it's used in precision parts manufacturing, such as connectors and sockets in electrical equipment.

PC-PBT High-Heat Grade

Exceptional Heat Resistance: This grade offers outstanding heat resistance, making it suitable for applications exposed to extreme temperatures, like automotive under-the-hood components and high-temperature industrial machinery parts.

High Tensile Strength: It boasts high tensile strength, contributing to the structural integrity of components subjected to heavy loads, such as gears and bearings.

Excellent Impact Resistance: Despite its heat-resistant properties, this grade maintains good impact resistance, making it versatile for various applications, including aerospace components and power tool housings.



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