Technical Data Sheet

Diamaloy QR-1221 IM-NAT

Polycarbonate + ABS

Product Description

QR-1221-IM is an injection molding grade of PC/ABS that has high gloss and can be colored. Common applications include interior automotive, lawn & garden, and agricultural parts.

Processing Method	Injection Molding
Attribute	Good Flow; High Gloss
Forms	Pellets
Appearance	Colors Available; Natural Color

Typical Properties	Nominal Value	Units	Test Method
Physical			
Melt Flow Rate, (260 °C/5.0 kg)	16	g/10 min	ISO 1133
Density, (23 °C, Method A)	1.14	g/cm³	ISO 1183
Mechanical			
Tensile Stress at Yield			
(50 mm/min)	63.8	MPa	ISO 527
(1 mm/min)	23.3	MPa	ISO 527
Tensile Strain at Break	140	%	ISO 527-2
Tensile Modulus, (1 mm/min)	2360	MPa	ISO 527-1
Impact			
Charpy Impact Strength - Notched			
(-30 °C, Type 1)	44	kJ/m²	ISO 179
(23 °C, Type 1)	140	kJ/m²	ISO 179
Multi-axial Impact Strength			
(-30 °C, 6.6 m/sec, Total Penetration Energy, Brittle Failure)	66.9	J	ASTM D3763
(23 °C, 6.6 m/sec, Total Penetration Energy, Ductile Failure)	62.6	J	ASTM D3763
Thermal			
Vicat Softening Temperature			
(B (50N), 50 °C/h)	119	°C	ISO 306
(B (50N), 120 °C/h)	123	°C	ISO 306
Deflection Temperature Under Load Unannealed (1.80 MPa)	105	°C	ISO 75-2/A
Coefficent of Linear Thermal Expansion (CLTE), Flow	6.7E-05	cm/cm/°C	ISO 11359-2
Coefficent of Linear Thermal Expansion (CLTE), Perpendicular	8E-05	cm/cm/°C	ISO 11359-2

Injection Parameters	Nominal Value	Units
Drying Time	4.0 to 8.0	hr
Drying Temperature	107	°C
Nozzle Temperature	260 to 288	°C
Processing (Melt) Temp	260 to 288	°C
Front Temperature	260 to 288	°C
Middle Temperature	249 to 288	°C
Rear Temperature	246 to 282	°C
Mold Temperature	60 to 93	°C
Drying Time, Maximum	8	hr