Technical Data Sheet

Diamaloy QR-1220IM-NAT

Polycarbonate + ABS

Product Description

Diamaloy QR-1220IM-NAT is a Polycarbonate + ABS material. Features include: High Heat Resistance, High Impact Resistance, Impact Modified, and Low Temperature Impact Resistance.

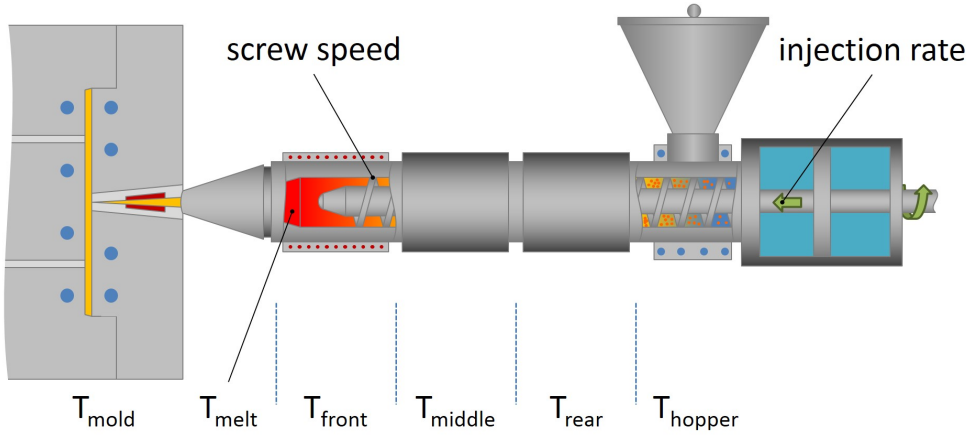
Regulatory Status

For regulatory compliance information, see QR-1220IM-NAT Product Stewardship Bulletin (PSB) and Safety Data Sheet (SDS).

Status	Commercial: Active
Availability	North America
Attribute	High Heat Resistance; High Impact Resistance; Impact Modified; Low Temperature Impact Resistance
Forms	Pellets
Appearance	Black; Colors Available; Natural Color
Additive	Impact Modifier

Typical Properties	Nominal Value	Units	Test Method
Physical			
Melt Flow Rate, (260 °C/5.0 kg)	20	g/10 min	ASTM D1238
Melt Volume Flow Rate			
(260 °C/5.0 kg)	22	cm³/10 min	ASTM D1238
(260 °C/5.0 kg)	19.9	cm³/10 min	ISO 1133
Density	1.12	g/cm³	ISO 1183-1
Density - Specific Gravity	1.14	g/cm³	ASTM D792
Mechanical			
Tensile Elongation at Yield, (23 °C)	150	%	ASTM D638
Tensile Strength at Yield, (23 °C)	52.0	MPa	ASTM D638
Flexural Strength at Yield, (23 °C)	84.8	MPa	ASTM D790
Tensile Stress at Yield, (23 °C, 5 mm/min)	54.5	MPa	ISO 527-2
Tensile Strain at Break, (23 °C, 5 mm/min)	100	%	ISO 527-2
Flexural Modulus			
(23 °C)	2250	MPa	ASTM D790
(23 °C, 2.0 mm/min, Chord, 64.0 mm)	2560	MPa	ISO 178
Tensile Strain at Yield, (23 °C)	3.4	%	ISO 527-2
Tensile Stress at Break, (23 °C, 5 mm/min)	52.0	MPa	ISO 527-2
Tensile Modulus, (23 °C, 1 mm/min)	2340	MPa	ISO 527-1
Flexural Stress, (23 °C, 2.0 mm/min)	90.0	MPa	ISO 178
Impact			
Charpy Impact Strength - Notched			
(23 °C)	46	kJ/m²	ISO 179
(-30 °C)	33	kJ/m²	ISO 179

Notched Izod Impact Strength			
(23 °C)	47	kJ/m²	ISO 180
(-30 °C)	37	kJ/m²	ISO 180
Notched Izod Impact			
(23 °C)	530	J/m	ASTM D256
(-30 °C)	430	J/m	ASTM D256
Thermal			
Vicat Softening Temperature, (B (50N), 50 °C/h)	122	°C	ISO 306
Deflection Temperature Under Load Unannealed (0.45 MPa)	122	°C	ISO 75-2/B
Deflection Temperature Under Load Unannealed (1.80 MPa)	104	°C	ISO 75-2/A
Deflection Temperature Under Load Unannealed (264 psi)	104	°C	ASTM D648
Coefficent of Linear Thermal Expansion (CLTE), Flow, (-30 to 80 °C)	7.5E-5	cm/cm/°C	ASTM E228
Coefficent of Linear Thermal Expansion (CLTE), Perpendicular, (-30 to 80 °C)	7.6E-5	cm/cm/°C	ASTM E228



Injection Parameters	Nominal Value	Units
Drying Time	2.0 to 4.0	hr
Drying Temperature	74	°C
Nozzle Temperature	243 to 271	°C
Processing (Melt) Temp	249 to 260	°C
Front Temperature	243 to 271	°C
Middle Temperature	243 to 271	°C
Rear Temperature	227 to 254	°C
Mold Temperature	38 to 71	°C
Drying Time, Maximum	4	hr

Notes

These are typical property values not to be construed as specification limits. The typical values for this product may have been tested on a natural grade.

Processing Techniques

Specific recommendations for resin type and processing conditions can only be made when the end use, required properties and fabrication equipment are known.

Company Information

For further information regarding the LyondellBasell company, please visit http://www.lyb.com/.

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