Technical Data Sheet

Diamaloy Engineered Alloys PC/PBT 1418

Polycarbonate + PBT
LyondellBasell Industries
Engineering Plastics

General	
Forms	• Pellets

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density / Specific Gravity	1.21	1.21 g/cm³	ASTM D792
Melt Mass-Flow Rate (MFR) [1]			ASTM D1238
230°c/3.8 Kg	6.0 g/10 min	6.0 g/10 min	
265°c/2.16 Kg	12 g/10 min	12 g/10 min	
Mechanical	**Nominal Value (English)**	**Nominal Value (SI)**	**Test Method**
Tensile Strength [2] (Yield)	7800 psi	53.8 MPa	ASTM D638
Tensile Elongation [2] (Yield)	4.6 %	4.6 %	ASTM D638
Flexural Modulus [3]	310000 psi	2140 MPa	ASTM D790B
Flexural Strength [3] (Yield)	11700 psi	80.7 MPa	ASTM D790B
Impact	**Nominal Value (English)**	**Nominal Value (SI)**	**Test Method**
Notched Izod Impact (0.125 In (3.18 Mm))	12 ft·lb/in	640 J/m	ASTM D256A
Thermal	**Nominal Value (English)**	**Nominal Value (SI)**	**Test Method**
Deflection Temperature Under Load			ASTM D648
264 Psi (1.8 Mpa), Unannealed, 0.125 In (3.18 Mm)	221 °F	105 °C	
Vicat Softening Temperature	262 °F	128 °C	ASTM D1525 [4]

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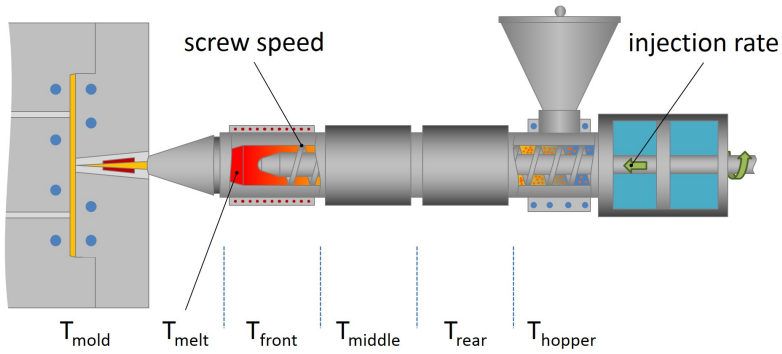

Injection	Nominal Value (English)	Nominal Value (SI)
Drying Temperature - Desiccant Dryer	220 to 230 °F	104 to 110 °C
Drying Time - Desiccant Dryer	4.0 to 6.0 hr	4.0 to 6.0 hr
Dew Point - Desiccant Dryer	< -20 °F	< -29 °C
Suggested Max Moisture	< 0.01 %	< 0.01 %
Suggested Shot Size	60 to 80 %	60 to 80 %
Rear Temperature	470 to 510 °F	243 to 266 °C
Middle Temperature	490 to 530 °F	254 to 277 °C
Front Temperature	500 to 540 °F	260 to 282 °C
Nozzle Temperature	500 to 550 °F	260 to 288 °C
Melt Temperature (Aim)	500 °F	260 °C
Mold Temperature	130 to 180 °F	54 to 82 °C
Injection Pressure	10000 to 20000 psi	68.9 to 138 MPa
Injection Rate	Slow-Moderate	Slow-Moderate
Holding Pressure	50.0 to 75.0 psi	0.345 to 0.517 MPa
Back Pressure	80.0 to 150 psi	0.552 to 1.03 MPa
Screw Speed	50 to 75 rpm	50 to 75 rpm
Clamp Tonnage	3.0 to 5.0 tons/in²	4.1 to 6.9 kN/cm²
Cushion	0.100 to 0.300 in	2.54 to 7.62 mm

Notes

[1] Procedure A

[2] Type I, 2.0 in/min (51 mm/min)

[3] Method I (3 point load), 0.050 in/min (1.3 mm/min)

[4] Rate B (120°C/h), Loading 1 (10 N)