

Delrin® 100P NC010

ACETAL RESIN

DuPont Performance Polymers



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Technical Data

产品说明

Delrin® 100P is a high viscosity acetal homopolymer for use in easy to fill molds. It has improved processing thermal stability, good mechanical properties, toughness, and low volatile emissions.

总体

材料状态	• 已商用：当前有效		
供货地区	• 北美洲 • 非洲和中东 • 拉丁美洲	• 南美洲 • 欧洲 • 亚太地区	• 中美洲
性能特点	• 超声波可焊接 • 尺寸稳定性良好 • 刚性，高 • 高分子量	• 高强度 • 均聚物 • 抗撞击性，高 • 良好的抗蠕变性	• 耐疲劳性能 • 韧性良好 • 粘度，高
用途	• 齿轮 • 传送机 • 电线电缆应用	• 工程配件 • 管道 • 紧固件	• 片材 • 型号 • 铸造薄膜
RoHS 合规性	• 联系制造商		
外观	• 自然色		
形式	• 颗粒料		
加工方法	• 挤出 • 片材挤出成型	• 型材挤出成型 • 注射成型	• 铸造薄膜
多点数据	• Isothermal Stress vs. Strain (ISO 11403-1)	• Shear Modulus vs. Temperature (ISO 11403-1)	• Viscosity vs. Shear Rate (ISO 11403-2)
部件标识代码 (ISO 11469)	• >POM<		
树脂ID (ISO 1043)	• POM		

物理性能	额定值 (英制)	额定值 (公制)	测试方法
密度	1.42 g/cm ³	1.42 g/cm ³	ISO 1183
熔速率 (190°C/2.16 kg)	2.5 g/10 min	2.5 g/10 min	ISO 1133
溶化体积流率 (MVR) (190°C/2.16 kg)	0.116 in ³ /10min	1.90 cm ³ /10min	ISO 1133
收缩率			ISO 294-4
横向流量: 0.0787 in (2.00 mm)	2.0 %	2.0 %	
流量: 0.0787 in (2.00 mm)	2.2 %	2.2 %	
吸水率			ISO 62
饱和, 73°F (23°C)	1.4 %	1.4 %	
平衡, 73°F (23°C), 50% RH	0.30 %	0.30 %	

机械性能	额定值 (英制)	额定值 (公制)	测试方法
拉伸模量 (73°F (23°C))	421000 psi	2900 MPa	ISO 527-2
拉伸应力 (屈服, 73°F (23°C))	10200 psi	70.0 MPa	ISO 527-2
拉伸应变			
屈服, 73°F (23°C)	25 %	25 %	ISO 527-2
断裂, 73°F (23°C)	65 %	65 %	ISO 527-2/50
断张率 (73°F (23°C))	45 %	45 %	ISO 527-2
拉伸蠕变模量			ISO 899-1
1 hr	392000 psi	2700 MPa	
1000 hr	218000 psi	1500 MPa	
弯曲模量 (73°F (23°C))	377000 psi	2600 MPa	ISO 178
弯曲强度 (3.5% 应变, 73°F (23°C))	10700 psi	74.0 MPa	ISO 178

冲击性能	额定值 (英制)	额定值 (公制)	测试方法
简支梁缺口冲击强度			ISO 179/1eA
-22°F (-30°C)	5.2 ft·lb/in ²	11 kJ/m ²	
73°F (23°C)	6.7 ft·lb/in ²	14 kJ/m ²	

冲击性能	额定值 (英制)	额定值 (公制)	测试方法
筒支梁缺口冲击强度			ISO 179/1eU
-22°F (-30°C)	170 ft·lb/in ²	350 kJ/m ²	
73°F (23°C)	无断裂	无断裂	
悬壁梁缺口冲击强度			ISO 180/1A
-40°F (-40°C)	5.7 ft·lb/in ²	12 kJ/m ²	
73°F (23°C)	6.7 ft·lb/in ²	14 kJ/m ²	
硬度	额定值 (英制)	额定值 (公制)	测试方法
洛氏硬度			ISO 2039-2
M 计秤	92	92	
R 计秤	120	120	
热性能	额定值 (英制)	额定值 (公制)	测试方法
热变形温度			
66 psi (0.45 MPa), 未退火	320 °F	160 °C	ISO 75-2/B
264 psi (1.8 MPa), 未退火	199 °F	93.0 °C	ISO 75-2/A
熔融温度 ²	352 °F	178 °C	ISO 11357-3
线形膨胀系数			ISO 11359-2
流动: -40 到 73°F (-40 到 23°C)	0.000061 in/in/°F	0.00011 cm/cm/°C	
流动: 73 到 131°F (23 到 55°C)	0.000061 in/in/°F	0.00011 cm/cm/°C	
流动: 131 到 212°F (55 到 100°C)	0.000083 in/in/°F	0.00015 cm/cm/°C	
横向: -40 到 73°F (-40 到 23°C)	0.000056 in/in/°F	0.00010 cm/cm/°C	
横向: 73 到 131°F (23 到 55°C)	0.000061 in/in/°F	0.00011 cm/cm/°C	
横向: 131 到 212°F (55 到 100°C)	0.000083 in/in/°F	0.00015 cm/cm/°C	
RTI Elec			UL 746
0.0295 in (0.750 mm)	122 °F	50.0 °C	
0.0591 in (1.50 mm)	230 °F	110 °C	
0.118 in (3.00 mm)	230 °F	110 °C	
RTI Imp			UL 746
0.0295 in (0.750 mm)	122 °F	50.0 °C	
0.0591 in (1.50 mm)	185 °F	85.0 °C	
0.118 in (3.00 mm)	194 °F	90.0 °C	
RTI Str			UL 746
0.0295 in (0.750 mm)	122 °F	50.0 °C	
0.0591 in (1.50 mm)	194 °F	90.0 °C	
0.118 in (3.00 mm)	203 °F	95.0 °C	
电气性能	额定值 (英制)	额定值 (公制)	测试方法
表面电阻率	> 1.0E+15 ohm	> 1.0E+15 ohm	IEC 60093
体积电阻率	1.0E+14 ohm·cm	1.0E+14 ohm·cm	IEC 60093
相对电容率			IEC 60250
73°F (23°C), 100 Hz	3.80	3.80	
73°F (23°C), 1 MHz	3.70	3.70	
耗散因数 (73°F (23°C), 1 MHz)	0.0040	0.0040	IEC 60250
漏电起痕指数	600 V	600 V	IEC 60112
可燃性	额定值 (英制)	额定值 (公制)	测试方法
可燃性等级			IEC 60695-11-10, -20
0.0295 in (0.750 mm)	HB	HB	
0.0591 in (1.50 mm)	HB	HB	
0.118 in (3.00 mm)	HB	HB	
极限氧指数	21 %	21 %	ISO 4589-2
注射	额定值 (英制)	额定值 (公制)	
干燥温度	176 °F	80.0 °C	
干燥时间 - Desiccant Dryer	2.0 到 4.0 hr	2.0 到 4.0 hr	
建议的最大水分含量	< 0.20 %	< 0.20 %	

注射	额定值 (英制)	额定值 (公制)
加工 (熔体) 温度	410 到 428 °F	210 到 220 °C
Melt Temperature, Optimum - Injection Molding	419 °F	215 °C
模具温度	176 到 212 °F	80.0 到 100 °C
Mold Temperature, Optimum - Injection Molding	194 °F	90 °C
Drying Recommended	Not normally required unless moisture content of resin exceeds recommended level	Not normally required unless moisture content of resin exceeds recommended level

备注

¹ 一般属性：这些不能被视为规格。

² 10°C/min



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