

Udel® P-1750 MR

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Udel® P-1750 MR is a lower color grade of polysulfone that contains a mold release which aids part ejection when parts with low draft are injection molded.

Polysulfones have long been known for transparency and clarity, but have been somewhat limited by a slight yellow cast which has been typical of the material. These grades were designed to eliminate the yellow cast and provide improved aesthetics for applications where a yellow cast is undesirable.

In general, Udel® polysulfone is a tough, rigid, high-strength, high-heat thermoplastic that retains its properties at temperatures from -101°C to 149°C (-150°F

to 300°F). With a heat deflection temperature at 1.8 MPa (264 psi) of 174°C (345°F) and excellent thermal and oxidative stability, this resin is suitable for sustained use at temperatures up to 149°C (300°F).

Other key properties of polysulfone include resistance to hydrolysis by hot water and resistance to acids and bases. In addition, the resin is resistant to a wide range of cleaners and disinfectants. Polysulfone's resistance to alcohols and aliphatic hydrocarbons is also good; however, the resin is generally not resistant to polar organic or chlorinated solvents.

- Natural/Transparent: Udel® P-1750 NT MR

总体

| | | | |
|----------|--|--|-------------------------------|
| 材料状态 | • 已商用：当前有效 | | |
| 供货地区 | • 北美洲 • 拉丁美洲 | • 欧洲 • 亚太地区 | |
| 特性 | • 耐化学性良好 • 耐碱 • 耐酒精 | • 耐热性，高 • 耐酸 • 耐碳氢化合物 | • 韧性良好 • 水解稳定 |
| 用途 | • 电池 • 电气/电子应用领域 • 电气元件 • 电器用具 • 阀门/阀门部件 | • 工业部件 • 管道部件 • 管道系统 • 家电部件 • 汽车电子 | • 商务设备 • 食品服务领域 • 微波炉炊具 |
| RoHS 合规性 | • 联系制造商 | | |
| 外观 | • 清晰/透明 | | |
| 形式 | • 粒子 | | |
| 加工方法 | • 挤出 | • 注射成型 | |

物理性能

| | 典型数值 | 单位制 | 测试方法 |
|------------------------------|------|----------|------------|
| 比重 | 1.24 | | ASTM D792 |
| 熔流率 (熔体流动速率) (343°C/2.16 kg) | 6.5 | g/10 min | ASTM D1238 |
| 收缩率 - 流动 | 0.70 | % | ASTM D955 |
| 吸水率 (24 hr) | 0.30 | % | ASTM D570 |

机械性能

| | 典型数值 | 单位制 | 测试方法 |
|----------|----------|-----|-----------|
| 拉伸模量 | 2480 | MPa | ASTM D638 |
| 抗张强度 | 70.3 | MPa | ASTM D638 |
| 伸长率 (断裂) | 50 到 100 | % | ASTM D638 |
| 弯曲模量 | 2690 | MPa | ASTM D790 |
| 弯曲强度 | 106 | MPa | ASTM D790 |

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| 冲击性能 | 典型数值 | 单位制 | 测试方法 |
|-----------|------|-------------------|------------|
| 悬臂梁缺口冲击强度 | 69 | J/m | ASTM D256 |
| 拉伸冲击强度 | 420 | kJ/m ² | ASTM D1822 |

| 热性能 | 典型数值 | 单位制 | 测试方法 |
|-------------------------|--------|----------|-----------|
| 载荷下热变形温度 (1.8 MPa, 未退火) | 174 | °C | ASTM D648 |
| 线形热膨胀系数 - 流动 | 5.6E-5 | cm/cm/°C | ASTM D696 |

| 电气性能 | 典型数值 | 单位制 | 测试方法 |
|-------|---------|---------|-----------|
| 体积电阻率 | 3.0E+16 | ohms·cm | ASTM D257 |
| 介电强度 | 17 | kV/mm | ASTM D149 |
| 介电常数 | | | ASTM D150 |
| 60 Hz | 2.90 | | |
| 1 kHz | 3.04 | | |
| 1 MHz | 3.02 | | |
| 耗散因数 | | | ASTM D150 |
| 60 Hz | 7.0E-4 | | |
| 1 kHz | 1.0E-3 | | |
| 1 MHz | 6.0E-3 | | |

| 注射 | 典型数值 | 单位制 |
|------------|-----------|-----|
| 干燥温度 | 135 到 163 | °C |
| 干燥时间 | 3.5 | hr |
| 建议注射量 | 50 到 75 | % |
| 加工 (熔体) 温度 | 329 到 385 | °C |
| 模具温度 | 121 到 163 | °C |

备注

典型数值：此等典型数值不应被解释为规格。