

# TROGAMID T5004

Transparent polyamides /透明尼龙

性能 Properties	测试方法 Test method	单位 Unit	数值 Value
<b>Mechanical properties /机械性能</b>			
Tensile test /拉伸测试 Stress at yield $\sigma_S$ /屈服强度 $\sigma_S$ Strain at yield $\epsilon_S$ /屈服拉伸率 $\epsilon_S$ Nominal strain at break $\epsilon_B$ /断裂伸长率 $\epsilon_B$	23°C 50mm/min ISO 527-1/2	MPa % %	90 8 >50
Tensile test /拉伸测试 Tensile strength $\sigma_B$ /拉伸强度 $\sigma_B$ Nominal strain at break $\epsilon_B$ /断裂伸长率 $\epsilon_B$	23°C 5mm/min ISO 527-1/2	MPa %	
Tensile modulus /拉伸模量	23°C ISO 527-1/2	MPa	2800
Tensile creep modulus /拉伸蠕变模量	1h 100-h ISO 899-1	MPa MPa	2500 1300
Flexural test /弯曲测试 Flexural strength $\sigma_{bB}$ /弯曲强度 $\sigma_{bB}$ Flexural strength at 3.5% strain $\sigma_{b3.5}$ /弯曲强度(3.5%应变) $\sigma_{b3.5}$ Outer fiber strain at maximum stress $\epsilon_{bB}$ /最大应力时外力应变 $\epsilon_{bB}$ Outer fiber strain at break $\epsilon_{bR}$ /断裂时外力应变 $\epsilon_{bR}$	5mm/min ISO 178	MPa MPa % %	152 104 8.5 n.r.
Flexural modulus /弯曲模量	ISO 178	MPa	3000
CHARPY impact strength /悬臂梁冲击强度	23°C 0°C -30°C ISO 179/1eU	kJ/m <sup>2</sup> kJ/m <sup>2</sup> kJ/m <sup>2</sup>	N N N
CHARPY notched impact strength /悬臂梁冲击强度(缺口)	23°C 0°C -30°C ISO 179/1eA	kJ/m <sup>2</sup> kJ/m <sup>2</sup> kJ/m <sup>2</sup>	11C 9C 6C
Shore hardness D /邵氏硬度D	ISO 868		86
Ball indentation hardness H30 /球缺口硬度H30	ISO 2039-1	N/mm <sup>2</sup>	150
<b>Physical and Thermal Properties /物理和热性能</b>			
Density /密度	23°C ISO 1183	g/cm <sup>3</sup>	1.12
Viscosity number /粘度	ISO 307	cm <sup>3</sup> /g	125
Vicat softening temperature /维卡软化温度 Method A /方法A Method B /方法B	10N 50N ISO 306	°C °C	148 142
Temperature of deflection under load /荷载变形温度 Method A /方法A Method B /方法B	1.8MPa 0.45MPa ISO 75-1/2	°C °C	120 140
Linear thermal expansion /热线性伸展 longitudinal $\alpha_{B  }$ /纵向 $\alpha_{B  }$ transverse $\alpha_{\perp}$ /横向 $\alpha_{\perp}$	23°C-80°C ISO 11359	10 <sup>-4</sup> K <sup>-1</sup> 10 <sup>-4</sup> K <sup>-1</sup>	0.53 0.57
Glass transition temperature Tg	10k/min	°C	150
Melt temperature (DSC) /熔点(DSC)	10k/min	°C	
<b>Electrical properties /电性能</b>			
Relative permittivity $\epsilon_r$ /相对介电率 23°C	50Hz 100Hz 1MHz IEC 60250		4.2 4.6 3.3
Dissipation factor $\tan \delta$ /分散因数 $\delta$ 23°C	50Hz 100Hz 1MHz IEC 60250		0.017 0.024 0.028
Electric strength E <sub>d</sub> /电强度E <sub>d</sub>	K20/P50 IEC 60243-1	kV/mm	24
Comparative tracking index /相对漏电跟踪指数 Test solution A /测试溶液A	CTI 100-drops value IEC 60112		>600
Glow wire test /发热电线测试	thickness=1mm IEC 60695-2-1/0-3	°C	
Volume resistivity $\rho_v$ /体积电阻率 $\rho_v$	IEC 60093	Ohm m	>10 <sup>13</sup>
Spec. surface resistance $\rho_s$ /表面电阻系数 $\rho_s$	IEC 60093	Ohm	>10 <sup>15</sup>
Surface resistance R <sub>OA</sub> /表面电阻R <sub>OA</sub>	IEC 60093	Ohm	>10 <sup>13</sup>

N=no break /无断裂 C=complete /完全断裂 n.r.=not reached /没有达到

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