TROGAMID® myCX

PAPACM12 Evonik Operations GmbH

Product Texts

Microcrystalline, permanently transparent polyamide

TROGAMID® myCX is a microcrystalline transparent polyamide for the manufacture of parts in the optical industry, like lenses according the injection molding procedure.

The crystallites are so small, that they do not scatter visible light, and the material appears transparent to the human eye.

The crystalline structure causes the excellent crack resistance for this polymer. TROGAMID® myCX is supplied as spherical pellets in polyethylene- packaging. Deviations of molds or in processing are possible to a certain extent, if they are required by the cavity or the process itself.

Pigmentation may affect values.

For information about processing of TROGAMID®, please follow the general recommendations about "Processing of TROGAMID® compounds".

The values presented are typical or average values, they do not constitute a specification.

FOR FURTHER INFORMATION PLEASE CONTACT US AT EVONIK-HP@EVONIK.COM OR VISIT OUR PRODUCT AT WWW.TROGAMID.COM

Processing/Physical Characteristics	dry / cond	Unit	Test Standard
ISO Data			
[C] Melt volume-flow rate, MVR	**8.2 / ***	cm³/10min	ISO 1133
Temperature	**280 / ***	°C	-
Load	**2.16 / ***	kg	-
[C] Molding shrinkage, parallel	**0.7 / ***	%	ISO 294-4, 2577
[C] Molding shrinkage, normal	**0.7 / ***	%	ISO 294-4, 2577
[C] Density of melt	**900**	kg/m³	-
[C] Thermal conductivity of melt	**0.25**	W/(m K)	-
[C] Spec. heat capacity of melt	**2490**	J/(kg K)	-
[C] Ejection temperature	**120**	°C	-

[C]: CAMPUS

Mechanical properties	dry / cond	Unit	Test Standard
ISO Data			
[C] Tensile Modulus	**1400 / -**	MPa	ISO 527
[C] Yield stress	**60 / -**	MPa	ISO 527
[C] Yield strain	**8 / -**	%	ISO 527
[C] Nominal strain at break	**>50 / -**	%	ISO 527
[C] Tensile creep modulus, 1h	*** / 1300**	MPa	ISO 899-1
[C] Tensile creep modulus, 1000h	*** / 700**	MPa	ISO 899-1
[C] Charpy impact strength, +23°C	**N / -**	kJ/m²	ISO 179/1eU
[C] Charpy impact strength, -30°C	**N / -**	kJ/m²	ISO 179/1eU
[C] Charpy notched impact strength, +23°C	**16 / 11**	kJ/m²	ISO 179/1eA
[C] Type of failure	**C / C**	-	-
[C] Charpy notched impact strength, -30°C	**14 / 10**	kJ/m²	ISO 179/1eA
[C] Type of failure	**C / C**	-	-
[C] Shore D hardness	**81 / ***	-	ISO 7619-1

[C]: CAMPUS

Thermal properties	dry / cond	Unit	Test Standard
ISO Data			
[C] Melting temperature, 10°C/min	**255 / ***	°C	ISO 11357-1/-3
[C] Glass transition temperature, 10°C/min	**140 / ***	°C	ISO 11357-1/-2
[C] Temp. of deflection under load, 1.80 MPa	**105 / ***	°C	ISO 75-1/-2
[C] Temp. of deflection under load, 0.45 MPa	**122 / ***	°C	ISO 75-1/-2
[C] Vicat softening temperature, B	**130 / ***	°C	ISO 306

[C] Coeff. of linear therm. expansion, parallel	**90 / ***	E-6/K	ISO 11359-1/-2
[C] Coeff. of linear therm. expansion, normal	**90 / ***	E-6/K	ISO 11359-1/-2
[C] Burning Behav. at 1.5 mm nom. thickn.	**HB / ***	class	IEC 60695-11-10
Thickness tested	**1.6 / ***	mm	-
[C] Burning Behav. at thickness h	**HB / ***	class	IEC 60695-11-10
Thickness tested	**0.8 / ***	mm	-
[C] Burning rate, FMVSS, Thickness 1 mm	**0.1**	mm/min	ISO 3795 (FMVSS 302)

[C]: CAMPUS

Electrical properties	**dry / cond**	**Unit**	**Test Standard**
ISO Data			
[C] Relative permittivity, 100Hz	**3.6 / -**	-	IEC 62631-2-1
[C] Relative permittivity, 1MHz	**3.2 / -**	-	IEC 62631-2-1
[C] Dissipation factor, 100Hz	**115 / -**	E-4	IEC 62631-2-1
[C] Dissipation factor, 1MHz	**325 / -**	E-4	IEC 62631-2-1
[C] Volume resistivity	**>1E13 / -**	Ohm*m	IEC 62631-3-1
[C] Electric strength	**27 / -**	kV/mm	IEC 60243-1
[C] Comparative tracking index	**600 / -**	-	IEC 60112

[C]: CAMPUS

Other properties	**dry / cond**	**Unit**	**Test Standard**
[C] Water absorption	**3.5 / ***	%	Sim. to ISO 62
[C] Humidity absorption	**1.5 / ***	%	Sim. to ISO 62
[C] Density	**1020 / -**	kg/m³	ISO 1183

[C]: CAMPUS

Test specimen production	**Value**	**Unit**	**Test Standard**
ISO Data			
[C] Injection Molding, melt temperature	**280**	°C	ISO 294
Injection Molding, mold temperature	**80**	°C	ISO 294
Injection Molding, injection velocity	**200**	mm/s	ISO 294
Injection Molding, pressure at hold	**70**	MPa	ISO 294

[C]: CAMPUS

Characteristics

Processing
Injection Molding, Film Extrusion, Profile Extrusion

Delivery form
Granules

Special Characteristics
Light stabilized or stable to light, U.V. stabilized or stable to weather, Transparent

Chemical Resistance
Environmental Stress Crack Resistance

Certifications
Food contact, Medical Grade, US Pharmacopeia Class VI Approved

Regional Availability
North America, Europe, Asia Pacific, South and Central America, Near East/Africa