CAMPUS® Datasheet

TROGAMID® myCX - PAIND/INDT
Evonik Industries AG

Product Texts

TROGAMID® myCX

Resin: ISO 1874 PA PACM-MGT, 14-010

Microcrystalline, permanently transparent, chemical and stress crack resistance resin.
Impact resistance product with outstanding UV- and light stability, low water absorption and dimensionally stable.

Applications:

- production of optical lenses
- medical application

Rheological properties	dry / cond	Unit	Test Standard
Melt volume-flow rate, MVR	**14 / ***	cm^3/10min	ISO 1133
Temperature	**285 / ***	°C	ISO 1133
Load	**5 / ***	kg	ISO 1133
Molding shrinkage, parallel	**0.7 / ***	%	ISO 294-4, 2577
Molding shrinkage, normal	**0.8 / ***	%	ISO 294-4, 2577

Mechanical properties	dry / cond	Unit	Test Standard
Tensile Modulus	**1400 / -**	MPa	ISO 527-1/-2
Yield stress	**60 / -**	MPa	ISO 527-1/-2
Yield strain	**8 / -**	%	ISO 527-1/-2
Nominal strain at break	**>50 / -**	%	ISO 527-1/-2
Tensile creep modulus, 1h	*** / 1300**	MPa	ISO 899-1
Tensile creep modulus, 1000h	*** / 700**	MPa	ISO 899-1
Charpy impact strength, +23°C	**N / -**	kJ/m^2	ISO 179/1eU
Charpy impact strength, -30°C	**N / -**	kJ/m^2	ISO 179/1eU
Charpy notched impact strength, +23°C	**16 / -**	kJ/m^2	ISO 179/1eA
Charpy notched impact strength, -30°C	**14 / -**	kJ/m^2	ISO 179/1eA

Thermal properties	dry / cond	Unit	Test Standard
Melting temperature, 10°C/min	**255 / ***	°C	ISO 11357-1/-3
Glass transition temperature, 10°C/min	**140 / ***	°C	ISO 11357-1/-2
Temp. of deflection under load, 1.80 MPa	**105 / ***	°C	ISO 75-1/-2
Temp. of deflection under load, 0.45 MPa	**122 / ***	°C	ISO 75-1/-2
Vicat softening temperature, 50°C/h 50N	**130 / ***	°C	ISO 306
Coeff. of linear therm. expansion, parallel	**90 / ***	E-6/K	ISO 11359-1/-2
Coeff. of linear therm. expansion, normal	**90 / ***	E-6/K	ISO 11359-1/-2
Burning Behav. at 1.5 mm nom. thickn.	**HB / ***	class	IEC 60695-11-10
Thickness tested (1.5)	**1.6 / ***	mm	IEC 60695-11-10
Burning Behav. at thickness h	**HB / ***	class	IEC 60695-11-10
Thickness tested (h)	**0.8 / ***	mm	IEC 60695-11-10

Electrical properties	dry / cond	Unit	Test Standard
Relative permittivity, 100Hz	**3.6 / -**	-	IEC 60250
Relative permittivity, 1MHz	**3.2 / -**	-	IEC 60250
Dissipation factor, 100Hz	**115 / -**	E-4	IEC 60250
Dissipation factor, 1MHz	**325 / -**	E-4	IEC 60250
Volume resistivity	**>1E13 / -**	Ohm*m	IEC 60093
Electric strength	**27 / -**	kV/mm	IEC 60243-1
Comparative tracking index	**600 / -**	-	IEC 60112

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

Material specific properties	dry / cond	Unit	Test Standard
Viscosity number	**155 / ***	cm³/g	ISO 307, 1157, 1628

Rheological calculation properties	Value	Unit	Test Standard
Density of melt	**900**	kg/m³	-
Thermal conductivity of melt	**0.25**	W/(m K)	-
Spec. heat capacity melt	**2490**	J/(kg K)	-
Ejection temperature	**120**	°C	-

Test specimen production	Value	Unit	Test Standard
Injection Molding, melt temperature	**280**	°C	ISO 294
Injection Molding, mold temperature	**80**	°C	ISO 10724
Injection Molding, injection velocity	**200**	mm/s	ISO 294
Injection Molding, pressure at hold	**70**	MPa	ISO 294

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

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

Other text information

Injection molding

PREPROCESSING INFORMATION
Maximum Water Content: 0.1 %
When the water content is exceeded, the resin must be dried.
The drying times is dependent on the drying temperature. In practice a drying time of 8-16 hours at a temperature of 100 - 120°C (depending on the water content of the resin) has been found to be satisfactory. With the exception of fresh air dryers, all conventional dryers can be used.

PROCESSING INFORMATION

Melt Temperature: 260 - 300 °C
Mold Temperature: 60 - 100 °C

Film extrusion

PREPROCESSING INFORMATION
Maximum Water Content: 0.1 %
When the water content is exceeded, the resin must be dried.
The drying times is dependent on the drying temperature. In practice a drying time of 8-16 hours at a temperature of 100 - 120°C (depending on the water content of the resin) has been found to be satisfactory. With the exception of fresh air dryers, all conventional dryers can be used.

PROCESSING INFORMATION

Melt Temperature: 260 - 300 °C
Mold Temperature: 60 - 100 °C

Profile extrusion

PREPROCESSING INFORMATION
Maximum Water Content: 0.1 %
When the water content is exceeded, the resin must be dried.
The drying times is dependent on the drying temperature. In practice a drying time of 8-16 hours at a temperature of 100 - 120°C (depending on the water content of the resin) has been found to be satisfactory. With the exception of fresh air dryers, all conventional dryers can be used.

PROCESSING INFORMATION

Melt Temperature: 260 - 300 °C
Mold Temperature: 60 - 100 °C

Chemical Media Resistance

Acids

- Acetic Acid (5% by mass) (23°C)
- Citric Acid solution (10% by mass) (23°C)
- Sulfuric Acid (5% by mass) (23°C)

Bases

- Sodium Hydroxide solution (35% by mass) (23°C)
- Sodium Hydroxide solution (1% by mass) (23°C)

Alcohols

- Isopropyl alcohol (23°C)
- Methanol (23°C)
- Ethanol (23°C)

Hydrocarbons

- n-Hexane (23°C)
- iso-Octane (23°C)

Ketones

- Acetone (23°C)

Mineral oils

- SAE 10W40 multigrade motor oil (23°C)
- Insulating Oil (23°C)

Standard Fuels

- Standard fuel without alcohol (pref. ISO 1817 Liquid C) (23°C)
- Standard fuel with alcohol (pref. ISO 1817 Liquid 4) (23°C)
- Diesel fuel (pref. ISO 1817 Liquid F) (23°C)

Salt solutions

- Sodium Chloride solution (10% by mass) (23°C)
- Sodium Hypochlorite solution (10% by mass) (23°C)
- Sodium Carbonate solution (20% by mass) (23°C)
- Sodium Carbonate solution (2% by mass) (23°C)

Other

- Ethyl Acetate (23°C)
- Water (23°C)

All listed technical data are typical values intended for your guidance. They are given without obligation and do not constitute a materials specification. Should you have any further questions concerning material behavior or properties, please contact us at the following address :

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