Product Texts

Microcrystalline and transparent polyamides for for medical application

TROGAMID® Care MX is the material of choice for all applications dealing with pharmaceutical formulations, lipids or aggressive disinfectants, since it exhibits an exceptional resistance towards chemicals and stress-cracking. Examples include fluid and drug delivery equipment such as stop-cocks, dialyzer parts, housings, covers or hearing aids.

Target areas of application for TROGAMID® Care MX compounds include fluid and drug delivery systems, surgical instruments, housings, monitoring and imaging devices and durable medical equipment.

All advantages at a glance:
- High transparency
- High chemical resistance
- Very good stress crack resistance
- UV resistance
- High dynamic load-bearing capacity
- High impact resistance
- Easy processability & colorability
- Free of BPA
- Gamma and EtO sterilizable

Biocompatibility of TROGAMID® Care

Biocompatiblity was tested following ISO10993-1 recommendations for a surface medical device with up to 30 days body contact.

The material fulfills the requirements of USP<88> class VI.

Tests were performed by independent, certified laboratories.

Biocompatibility tests for TROGAMID® Care:

Processing of TROGAMID® Care

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.EVONIK.COM/MEDICAL-TECHNOLOGY

Processing/Physical Characteristics	dry / cond	Unit	Test Standard
ISO Data			
[C] Melt volume-flow rate, MVR	**31 / ***	cm³/10min	ISO 1133
Temperature	**285 / ***	°C	-
Load	**5 / ***	kg	-
[C] Molding shrinkage, parallel	**0.7 / ***	%	ISO 294-4, 2577
[C] Molding shrinkage, normal	**0.8 / ***	%	ISO 294-4, 2577

[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] 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	**14 / 10.5**	kJ/m²	ISO 179/1eA
[C] Type of failure	**C / C**	-	-
[C] Charpy notched impact strength, -30°C	**13 / -**	kJ/m²	ISO 179/1eA
[C] Type of failure	**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	**250 / ***	°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	**108 / ***	°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]: 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	**120 / -**	E-4	IEC 62631-2-1
[C] Dissipation factor, 1MHz	**325 / -**	E-4	IEC 62631-2-1
[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

[C]: CAMPUS

Characteristics

Processing

Injection Molding, Film Extrusion, Profile Extrusion, Sheet Extrusion

Chemical Resistance

General Chemical Resistance, Environmental Stress Crack Resistance

Delivery form
Pellets

Additives
Release agent

Special Characteristics
High impact or impact modified, U.V. stabilized or stable to weather, Transparent, Sterilizable, Ethylene Oxide (EtO) Sterilization, Gamma irradiation sterilization

Certifications
Medical Grade, Biocompatibility ISO 10993, US Pharmacopeia Class VI Approved

Applications
Medical

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