Product Information

VESTAMID® Care ME71

POLYAMIDE 12 ELASTOMER MOLDING COMPOUNDS

VESTAMID® Care ME71 is free of plasticizers and heat and light stabilized. VESTAMID® Care ME71 is resistant to body fluids and toxicologically safe.

VESTAMID® Care ME grades are flexible polyether block amides (PEBA) resins.

The advantages at a glance:

- High flexibility & elasticity
- Good rebound properties
- High impact resistance
- Excellent dimensional stability
- High chemical resistance
- Easy processability & colorability
- Plasticizer-free
- Gamma and EtO sterilization resistant
- Tough and resilient

Biocompatibility of VESTAMID® Care ME

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 VESTAMID® Care:

Standard	Description
ASTM F756-08	Hemocompatibility
ISO 10993-5	Cytotoxicity
ISO 10993-10	Sensitization: Maximization test according to Magnusson and Kligman
ISO 10993-10	Irritation: Intracutaneous Reactivity
ISO 10993-11	Acute Systemic Toxicity
USP Class VI	Acute Systemic Toxicity Intracutaneous Reactivity Muscle Implantation

VESTAMID® Care

Key Features

Industrial Sector
Medical Devices

Processing
Injection molding

Delivery form
Pellets, Granules

Optics
Translucent

Resistance to
Heat (thermal stability), UV / light / weathering

Conformity
Biocompatibility, Medical application

Additives
Unfilled

Mechanical properties ISO	dry / cond	Unit	Test Standard
Tensile modulus	**158000 / 110000**	psi	ISO 527
Tensile strength	**5660 / 4930**	psi	ISO 527
Yield stress	**5660 / 4930**	psi	ISO 527
Yield strain	**13 / 16**	%	ISO 527
Stress at 50% strain	**4210 / 3920**	psi	ISO 527
Stress at break	**8850 / 8120**	psi	ISO 527
Nominal strain at break, tB	**420 / 430**	%	ISO 527
Typical for the mat. nom. strain at br., tB	**200**	%	ISO 527
Charpy impact strength, +23°C	**N / N**	ftlb/in^2	ISO 179/1eU
Charpy impact strength, -30°C	**N / N**	ftlb/in^2	ISO 179/1eU
Charpy notched impact strength, +23°C	**2.38 / 3.33**	ftlb/in^2	ISO 179/1eA
Type of failure	**C / C**	-	-
Charpy notched impact strength, -30°C	**2.85 / 1.9**	ftlb/in^2	ISO 179/1eA
Type of failure	**C / C**	-	-
Flexural modulus, 23°C	**135000 / 114000**	psi	ISO 178
Flexural stress at conv. deflection, 23°C	**4350 / 3630**	psi	ISO 178
Flexural strength, 23°C	**5800 / 5220**	psi	ISO 178
Flexural strain at flexural strength, 23°C	**7 / 9**	%	ISO 178

Mechanical properties (TPE)	dry / cond	Unit	Test Standard
Stress at 5% elongation	**5180 / -**	psi	ISO 527
Stress at 10% elongation	**5370 / -**	psi	ISO 527
Stress at 20% elongation	**4870 / -**	psi	ISO 527
Stress at 50% elongation	**4320 / -**	psi	ISO 527
Stress at 100% elongation	**4440 / -**	psi	-
Strain at break TPE	**282 / -**	%	ISO 527
Stress at break TPE	**8750 / -**	psi	ISO 527

Thermal properties	dry / cond	Unit	Test Standard
Melting temperature	**351 / ***	°F	ISO 11357-1/-3
Temp. of deflection under load A, 1.80 MPa	**129 / ***	°F	ISO 75-1/-2
Temp. of deflection under load B, 0.45 MPa	**232 / ***	°F	ISO 75-1/-2
Vicat softening temperature A, 10 N, 50 K/h	**342 / ***	°F	ISO 306
Vicat softening temperature B, 50 N, 50 K/h	**279 / ***	°F	ISO 306
Coeff. of linear therm. expansion, 23°C to 55 °C, parallel	**8.33E-5 / ***	in/in/°F	ISO 11359-1/-2
Coeff. of linear therm. expansion, 23°C to 55 °C, normal	**8.61E-5 / ***	in/in/°F	ISO 11359-1/-2
Melting Temperature	**351**	°F	ASTM D 3418

Physical properties	dry / cond	Unit	Test Standard
Density	**1.01 / -**	g/cm^3	ISO 1183
Water absorption	**1.5 / ***	%	Sim. to ISO 62
Humidity absorption	**0.7 / ***	%	Sim. to ISO 62
Shore D hardness	**71[b] / -**	-	ISO 7619-1
Density	**1.01**	g/cm^3	ASTM D 792

b: 3 seconds

Burning Behav.	dry / cond	Unit	Test Standard
Burning behav. at 1.5 mm nom. thickn.	**HB / ***	class	IEC 60695-11-10

Thickness tested	**0.0630 / ***	in	-

Electrical properties	dry / cond	Unit	Test Standard
Volume resistivity, V	**4E12 / 2.9E11**	Ohm*m	IEC 62631-3-1
Surface resistivity, C, circular electrodes	**9.6E14 / 7.3E14**	Ohm/sq	IEC 62631-3-2
Relative permittivity, 50Hz	**4.6 / -**	-	IEC 62631-2-1
Relative permittivity, 100Hz	**4.5 / -**	-	IEC 62631-2-1
Relative permittivity, 1MHz	**3.2 / -**	-	IEC 62631-2-1
Dissipation factor, 100Hz	**760 / -**	E-4	IEC 62631-2-1
Dissipation factor, 1MHz	**334 / -**	E-4	IEC 62631-2-1

Rheological properties	dry / cond	Unit	Test Standard
Melt volume-flow rate, MVR	**75 / ***	cm^3/10min	ISO 1133
Temperature	**240 / ***	°C	-
Load	**2.16 / ***	kg	-
Molding shrinkage, parallel	**1.2 / ***	%	ISO 294-4, 2577
Molding shrinkage, normal	**1.3 / ***	%	ISO 294-4, 2577
Mold temperature	**140 / ***	°F	-
Melt temperature	**464 / ***	°F	-

Test specimen production	dry	Unit	Test Standard
Injection Molding, melt temperature	**428**	°F	ISO 294
Injection Molding, mold temperature	**95**	°F	ISO 294
Injection Molding, injection velocity	**7.87**	in/s	ISO 294

Characteristics

VESTAMID® Care

Special Characteristics
Light-stabilized, High heat resistant

Features
Low coefficient of friction

Regulatory
US Pharmacopeia Class VI conformity

Color
Natural color

Chemical Resistance
General chemical resistance