

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

Biocompatibility 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

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	1090 / 760	MPa	ISO 527
Tensile strength	39 / 34	MPa	ISO 527
Yield stress	39 / 34	MPa	ISO 527
Yield strain	13 / 16	%	ISO 527
Stress at 50% strain	29 / 27	MPa	ISO 527
Stress at break	61 / 56	MPa	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	kJ/m ²	ISO 179/1eU
Charpy impact strength, -30°C	N / N	kJ/m ²	ISO 179/1eU
Charpy notched impact strength, +23°C	5 / 7	kJ/m ²	ISO 179/1eA
Type of failure	C / C	-	-
Charpy notched impact strength, -30°C	6 / 4	kJ/m ²	ISO 179/1eA
Type of failure	C / C	-	-
Flexural modulus, 23°C	930 / 785	MPa	ISO 178
Flexural stress at conv. deflection, 23°C	30 / 25	MPa	ISO 178
Flexural strength, 23°C	40 / 36	MPa	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	35.7 / -	MPa	ISO 527
Stress at 10% elongation	37 / -	MPa	ISO 527
Stress at 20% elongation	33.6 / -	MPa	ISO 527
Stress at 50% elongation	29.8 / -	MPa	ISO 527
Stress at 100% elongation	30.6 / -	MPa	-
Strain at break TPE	282 / -	%	ISO 527
Stress at break TPE	60.3 / -	MPa	ISO 527

Thermal properties	dry / cond	Unit	Test Standard
Melting temperature	177 / *	°C	ISO 11357-1/-3
Temp. of deflection under load A, 1.80 MPa	54 / *	°C	ISO 75-1/-2
Temp. of deflection under load B, 0.45 MPa	111 / *	°C	ISO 75-1/-2
Vicat softening temperature A, 10 N, 50 K/h	172 / *	°C	ISO 306
Vicat softening temperature B, 50 N, 50 K/h	137 / *	°C	ISO 306
Coeff. of linear therm. expansion, 23°C to 55 °C, parallel	150 / *	E-6/K	ISO 11359-1/-2
Coeff. of linear therm. expansion, 23°C to 55 °C, normal	155 / *	E-6/K	ISO 11359-1/-2
Melting Temperature	177	°C	ASTM D 3418

Physical properties	dry / cond	Unit	Test Standard
Density	1010 / -	kg/m 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	1010	kg/m 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	1.6 / *	mm	-
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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 per square	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	60 / *	°C	-
Melt temperature	240 / *	°C	-

Test specimen production	dry	Unit	Test Standard
Injection Molding, melt temperature	220	°C	ISO 294
Injection Molding, mold temperature	35	°C	ISO 294
Injection Molding, injection velocity	200	mm/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