

Product Information

VESTAMID® Care ME40

POLYAMIDE 12 ELASTOMER MOLDING COMPOUNDS



VESTAMID® Care ME40 is free of plasticizers and heat and light stabilized. VESTAMID® Care ME40 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

Sustainable, Medical Devices

Sustainability

Sustainable electricity

Processing

Injection molding

Delivery form

Pellets, Granules

Optics

Translucent

Resistance to

Heat (thermal stability), UV / light / weathering

Conformity

Biocompatibility, Medical application

Additives

Unfilled

LCA-values

	dry	Unit	Test Standard
LCA name of certificate	VESTAMID® E40	-	ISO 14040, 14044
LCA certifier	TÜV Rheinland	-	ISO 14040, 14044
Blue water consumption	12.5	kg	ISO 14040, 14044
Global Warming Potential incl. bio. C incl. LUC	6.2	kg CO ₂ eq./kg	ISO 14040, 14044
Global Warming Potential excl. bio. C incl. LUC	6.2	kg CO ₂ eq./kg	ISO 14040, 14044
Land use (ReCiPe 2016)	0	Annual crop eq. y	ISO 14040, 14044
GWP savings as compared to 2023 reference	-1.3	kg CO ₂ eq./kg	ISO 14040, 14044

Mechanical properties ISO

	dry / cond	Unit	Test Standard
Tensile modulus	12500 / -	psi	ISO 527
Stress at 50% strain	1310 / -	psi	ISO 527
Typical for the mat. nom. strain at br., tB	>500	%	ISO 527
Tensile creep modulus, 0,5% Strain, 1000h	* / 8700	psi	ISO 899-1
Charpy impact strength, +23°C	N / -	ftlb/in ²	ISO 179/1eU
Charpy impact strength, -30°C	N / -	ftlb/in ²	ISO 179/1eU
Charpy notched impact strength, +23°C	N / -	ftlb/in ²	ISO 179/1eA
Charpy notched impact strength, -30°C	N / -	ftlb/in ²	ISO 179/1eA

Thermal properties

	dry / cond	Unit	Test Standard
Melting temperature	304 / *	°F	ISO 11357-1/-3

Glass transition temperature, DSC	-76 / *	°F	ISO 11357-1/-2
Temp. of deflection under load B, 0.45 MPa	131 / *	°F	ISO 75-1/-2
Vicat softening temperature A, 10 N, 50 K/h	257 / *	°F	ISO 306
Vicat softening temperature B, 50 N, 50 K/h	140 / *	°F	ISO 306
Coeff. of linear therm. expansion, 23°C to 55 °C, parallel	0.000122 / *	in/in/°F	ISO 11359-1/-2
Melting Temperature	304	°F	ASTM D 3418

Physical properties	dry / cond	Unit	Test Standard
Density	1.01 / -	g/cm ³	ISO 1183
Water absorption	1 / *	%	Sim. to ISO 62
Shore D hardness	40^[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	-

Rheological properties	dry / cond	Unit	Test Standard
Melt volume-flow rate, MVR	38 / *	cm ³ /10min	ISO 1133
Temperature	240 / *	°C	-
Load	2.16 / *	kg	-
Molding shrinkage, parallel	0.5 / *	%	ISO 294-4, 2577
Molding shrinkage, normal	1.1 / *	%	ISO 294-4, 2577

Polymer analytics	dry / cond	Unit	Test Standard
Viscosity number	5260 / *	in ³ /lb	ISO 307, 1157, 1628

Test specimen production	dry	Unit	Test Standard
Injection Molding, melt temperature	392	°F	ISO 294
Injection Molding, mold temperature	95	°F	ISO 294
Injection Molding, injection velocity	7.87	in/s	ISO 294

Characteristics

Applications

Medical devices

Special Characteristics

Light-stabilized, U.V. stabilized, High heat resistant

Features

Low coefficient of friction

Regulatory

US Pharmacopeia Class VI conformity, Cytotoxicity ISO 10993-5

Color

Natural color

Delivery form

Cylindrical pellets

Chemical Resistance

General chemical resistance