

Product Information

VESTENAMER® 8012

RUBBER WITH UNIQUE PROPERTIES

VESTENAMER® 8012 is a semi-crystalline rubber, also known as trans-polyoctenamer, which has proved itself as a valuable processing aid. Due to its properties, it is a versatile polymer that can be used to solve a wide variety of problems dealing with rubber compounding and processing.

The monomer feedstock of VESTENAMER® 8012 is cyclooctene, which is synthesized from 1,3-butadiene via 1,5-cyclooctadiene. Cyclooctene is polymerized to polyoctenamer (TOR) in a metathesis reaction.

VESTENAMER® 8012 can be used in the following applications:

- calendering
- tire production
- batch technology
- modifications of thermoplastics
- rubber recycling

VESTENAMER® 8012 is supplied as cylindrical pellets in polyethylen packaging.

Upon protection from direct sunlight and avoidance of temperatures above 30°C, the product is storable for 5 years after manufacture. In addition to this specification, only the General Conditions of Sale and Delivery in their most current version shall be applicable.

Key Features

Industrial Sector

Automotive and Mobility

Additives

Unfilled

Delivery form

Pellets, Granules

LCA-values

LCA name of certificate

dry

Unit

Test Standard

[VESTENAMER® 8012](#) -

ISO 14040, 14044

LCA certifier

[TÜV Rheinland](#) -

ISO 14040, 14044

Blue water consumption	12.3	kg	ISO 14040, 14044
Global Warming Potential incl. bio. C incl. LUC	5.0	kg CO ₂ eq./kg	ISO 14040, 14044
Global Warming Potential excl. bio. C incl. LUC	5.0	kg CO ₂ eq./kg	ISO 14040, 14044

Mechanical properties ISO	dry	Unit	Test Standard
Tensile modulus	19700	psi	ISO 527
Tensile strength	1020	psi	ISO 527
Yield stress	1020	psi	ISO 527
Yield strain	23	%	ISO 527
Stress at 50% strain	1020	psi	ISO 527
Nominal strain at break, tB	280	%	ISO 527
Charpy impact strength, +23°C	N	ftlb/in ²	ISO 179/1eU
Charpy impact strength, -20°C	N	ftlb/in ²	ISO 179/1eU
Charpy notched impact strength, +23°C	13.3	ftlb/in ²	ISO 179/1eA
Type of failure	P	-	-
Izod Impact notched, 23°C	13.8	ftlb/in ²	ISO 180/1A
Type of failure	P	-	-
Izod impact notched, 0°C	13.3	ftlb/in ²	ISO 180/1A
Type of failure	C	-	-
Izod impact notched, -20°C	6.18	ftlb/in ²	ISO 180/1A
Type of failure	C	-	-
Tensile-impact strength, atU 23°C	51.4	ftlb/in ²	ISO 8256/1
Type of failure	C	-	-
Tensile-impact strength, atU 0°C	54.2	ftlb/in ²	ISO 8256/1
Type of failure	C	-	-
Tensile-impact strength, atU -20°C	57.1	ftlb/in ²	ISO 8256/1
Type of failure	C	-	-

Thermal properties	dry	Unit	Test Standard
Melting temperature	132	°F	ISO 11357-1/-3
Glass transition temperature, DSC	-88.8	°F	ISO 11357-1/-2
Vicat softening temperature A, 10 N, 50 K/h	122	°F	ISO 306
Melting Temperature	132	°F	ASTM D 3418

Physical properties	dry	Unit	Test Standard
Density	0.912	g/cm ³	ISO 1183
Water absorption	0.2	%	Sim. to ISO 62
Bulk density, Granulate	0.035	lb/ft ³	-
Density	0.912	g/cm ³	ASTM D 792

Rheological properties	dry	Unit	Test Standard
Melt volume-flow rate, MVR	20	cm ³ /10min	ISO 1133
Temperature	190	°C	-
Load	2.16	kg	-
Melt volume-flow rate, MVR	55	cm ³ /10min	ISO 1133
Temperature	374	°F	-
Load	11	lb	-
Melt volume-flow rate, MVR	28	cm ³ /10min	ISO 1133
Temperature	446	°F	-
Load	4.76	lb	-

Properties of 3D printed parts acc. ISO	dry	Unit	Test Standard
Charpy impact strength flat X, -20°C	N	ftlb/in ²	ISO 179/1eU

Test specimen production	dry	Unit	Test Standard
Injection Molding, melt temperature	140	°F	ISO 294

VESTENAMER®

Characteristics

Color

Natural color