VESTENAMER®

Product Information

VESTENAMER® 8012

RUBBER WITH UNIQUE PROPERTIES

VESTENAMER® 8012 is a semi-crystalline rubber, also know 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	dry	Unit	Test Standard
LCA name of certificate	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	**136**	MPa	ISO 527
Tensile strength	**7**	MPa	ISO 527
Yield stress	**7**	MPa	ISO 527
Yield strain	**23**	%	ISO 527
Stress at 50% strain	**7**	MPa	ISO 527
Nominal strain at break, tB	**280**	%	ISO 527
Charpy impact strength, +23°C	**N**	kJ/m^2	ISO 179/1eU
Charpy impact strength, -20°C	**N**	kJ/m^2	ISO 179/1eU
Charpy notched impact strength, +23°C	**28**	kJ/m^2	ISO 179/1eA
Type of failure	**P**	-	-
Izod Impact notched, 23°C	**29**	kJ/m^2	ISO 180/1A
Type of failure	**P**	-	-
Izod impact notched, 0°C	**28**	kJ/m^2	ISO 180/1A
Type of failure	**C**	-	-
Izod impact notched, -20°C	**13**	kJ/m^2	ISO 180/1A
Type of failure	**C**	-	-
Tensile-impact strength, atU 23°C	**108**	kJ/m^2	ISO 8256/1
Type of failure	**C**	-	-
Tensile-impact strength, atU 0°C	**114**	kJ/m^2	ISO 8256/1
Type of failure	**C**	-	-
Tensile-impact strength, atU -20°C	**120**	kJ/m^2	ISO 8256/1
Type of failure	**C**	-	-

Thermal properties	dry	Unit	Test Standard
Melting temperature	**55.6**	°C	ISO 11357-1/-3
Glass transition temperature, DSC	**-67.1**	°C	ISO 11357-1/-2
Vicat softening temperature A, 10 N, 50 K/h	**50**	°C	ISO 306
Melting Temperature	**55.6**	°C	ASTM D 3418

Physical properties	dry	Unit	Test Standard
Density	**912**	kg/m³	ISO 1183
Water absorption	**0.2**	%	Sim. to ISO 62
Bulk density, Granulate	**0.56**	kg/m³	-
Density	**912**	kg/m³	ASTM D 792

Rheological properties	dry	Unit	Test Standard
Melt volume-flow rate, MVR	**20**	cm³/10min	ISO 1133
Temperature	**190**	°C	-
Load	**2.16**	kg	-
Melt volume-flow rate, MVR	**55**	cm³/10min	ISO 1133
Temperature	**190**	°C	-
Load	**5**	kg	-
Melt volume-flow rate, MVR	**28**	cm³/10min	ISO 1133
Temperature	**230**	°C	-
Load	**2.16**	kg	-

Properties of 3D printed parts acc. ISO	dry	Unit	Test Standard
Charpy impact strength flat X, -20°C	**N**	kJ/m²	ISO 179/1eU

Test specimen production	dry	Unit	Test Standard
Injection Molding, melt temperature	**60**	°C	ISO 294

Characteristics

Color
Natural color