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Vamac® Ultra XF

Ethylene Methylacrylate Elastomer

Product information

Resin Identification	AEM		ISO 1043
Part Marking Code	>AEM<		ISO 11469
Colour	Clear[1]		
Viscosity, Mooney, ML 1'+4' at 100 °C	23		ISO 289-1-2
Volatiles	≤0.5	%	EN 1400 / EN 14350-2
Maximum Service Temperature	175	°C	

[1]: clear to light yellow translucent

Rheological properties

Scorch, Mooney viscosity, MS at 121 °C	≥29		ISO 289-1-2
Scorch, time to 10 unit rise, MS at 121 °C	11	min	ISO 289-1-2
Moving Die Rheometer at 180 °C, torque	68 - 1100	Nmm	ISO 6502
Moving Die Rheometer at 180 °C, t(50)	2.3	min	ISO 6502
Moving Die Rheometer at 180 °C, t(90)	8.3	min	ISO 6502

Cure conditions

Cure time	5	min
Cure temperature	190	°C
Post cure time	4	h
Post cure temperature	175	°C

Typical mechanical properties

Tensile stress at 100% strain	5.4	MPa	ISO 527-1/-2
Tensile stress at break	16	MPa	ISO 527-1/-2
Tensile strain at break	>300	%	ISO 527-1/-2
Shore A hardness	73		ASTM D 2240
Compression set, 150 °C, 70h	26	%	ISO 815

Characteristics

Processing	Injection Moulding, Extrusion, Transfer Moulding, Compression moulding
Delivery form	Bale
Special characteristics	Heat stabilised or stable to heat

Additional information

Profile extrusion

Vamac® Ultra XF fits in when Vamac® GXF compounds for a required Hardness levels would be too low in viscosity or in compound green strength, to avoid collapse of the uncured hose, or to avoid that reinforcement yarns cut into the veneer layer. This may happen when hoses are designed to withstand higher internal pressures and thicker yarns are applied at higher stress levels.

On the other side, Vamac® Ultra XF may be used when Vamac® Ultra HT would result in problems like too high compound viscosity or high pressure at the extruder head for the same Hardness range.

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Handling precautions

Because Vamac® Ultra XF contains small amounts of residual methyl acrylate monomer, adequate ventilation should be provided during storage and processing to prevent worker exposure to methyl acrylate vapor. Additional information may be found in the Vamac® Ultra XF product Safety Data Sheet (SDS), and our bulletin, *Safe Handling and Processing of Vamac®*.

Chemical Media Resistance

Mineral oils

- ✔ SAE 10W40 multigrade motor oil, 23°C
- ✔ SAE 10W40 multigrade motor oil, 130°C
- ✔ SAE 80/90 hypoid-gear oil, 130°C
- ✔ Insulating Oil, 23°C
- ✔ Motor oil OS206 304 Ref.Eng.Oil, ISP, 135°C
- ✔ Automatic hypoid-gear oil Shell Donax TX, 135°C
- ✔ Hydraulic oil Pentosin CHF 202, 125°C

Standard Fuels

- ✘ Diesel fuel (pref. ISO 1817 Liquid F), 23°C
- ✘ Diesel fuel (pref. ISO 1817 Liquid F), 90°C
- ✘ Diesel fuel (pref. ISO 1817 Liquid F), >90°C
- ✘ Diesel EN 590, 100°C

Symbols used:

✔ possibly resistant
Defined as: Supplier has sufficient indication that contact with chemical can be potentially accepted under the intended use conditions and expected service life. Criteria for assessment have to be indicated (e.g. surface aspect, volume change, property change).

✘ not recommended - see explanation
Defined as: Not recommended for general use. However, short-term exposure under certain restricted conditions could be acceptable (e.g. fast cleaning with thorough rinsing, spills, wiping, vapor exposure).

Revised: 2021-12-15 Source: Celanese Materials Database