Zeotherm
Thermoplastic Vulcanizates

Zeotherm® 100-80B

Product Description

A high-performance thermoplastic vulcanizate (TPV) designed to survive long-term exposure to 150°C (300°F) air and oil. Ideal for automotive and industrial applications where there is exposure to heat and/or oil.

Composition

TPV based on polyacrylate elastomer dynamically vulcanized in a matrix of polyamide (nylon) plastic.

Key Features

- Excellent heat resistance (sustained at 150°C / 300°F; spikes to 175°C / 350°F).
- Excellent resistance to many mineral + synthetic motor oils, transmission fluids, and greases.
- Low temperature performance to -40°C.
- Bondable to polyamides via overmolding (insert and 2-shot).
- Medium durometer in Zeotherm 100-series TPV family.
- Optimized for thermoplastic injection molding processing.

Product Characteristics

Physical Form	Free-flow pellets
Color	Black
Packaging	50 lbs (22.7 kg) moisture-barrier bags

Physical Properties	Nominal Values	Test Method
Density - Specific Gravity	1.15	ASTM D792
Durometer (Type A, 15 sec)	85 Points	ASTM D2240
Tensile Strength at Break	9 MPa (1305 psi)	ASTM D412
Elongation at Break	200%	ASTM D412
Tensile Stress @ 100% Elongation	6 MPa (870 psi)	ASTM D412
Young's Modulus	12 MPa (1740 psi)	ASTM D412
Compression Set (70h, 125°C, Method B - Buttons)	60%	ASTM D395
Low Temperature		
Gehman, T10	-35°C (-31°F)	ASTM D1053
Gehman, T100	-50°C (-58°F)	ASTM D1053
Melt Temperature	220°C (428°F)	--

Heat and Oil Aging Properties	Nominal Values
Properties After 168h, 150°C (300°F) -- Air	
- Tensile Strength, Change:	-10%
- Elongation at Break, Change:	-30%
- Hardness, Change:	+3 Points
Properties After 168h, 150°C (300°F) -- SF105 Oil	
- Tensile Strength, Change:	+10%
- Elongation at Break, Change:	-30%
- Hardness, Change:	+4 Points
- Volume Change:	-4%

SAE Line Callout

SAE J2558 TPV (A35566 BS2470 DA85 EO351351D EL180 F40 SGC1127 TMA5 TS8)

Product Notes

Values noted above are for injection molded samples. **Values are typical properties and should not be construed as specifications.**

Zeotherm is a registered ® trademark of Zeon Chemicals L.P.

This technology is protected by one or more United States Patent.

Processing Statement

Zeotherm can be processed using conventional thermoplastic equipment for injection molding, extrusion or blow molding. Zeotherm should be dried in a warm desiccant dryer prior to use. Processing guidelines for Zeotherm can be found on-line at: www.zeotherm.com/processing. Zeotherm can be readily recycled -- both in-process and post-consumer.

For Additional Information

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Revision History

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