Zeotherm
Thermoplastic Vulcanizates

Zeotherm® 120-90B

Product Description

A high-performance thermoplastic vulcanizate (TPV) designed to survive long-term exposure to 150°C (300°F) air, oil and greases. Specifically designed for automotive air ducts, boots and bellows including CVJ boots, prop shaft boots, and rack-and-pinion boots.

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; repeated 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).
- Optimized for press blow and extrusion blow molding processes.

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	1.10	ASTM D792
Durometer (Type A, 15 sec)	95 Points	ASTM D2240
Tensile Strength at Break	13 MPa (1885 psi)	ASTM D412
Elongation at Break	200%	ASTM D412
Tensile Stress @ 100% Elongation	8.7 MPa (1266 psi)	ASTM D412
Compression Set (70h, 125°C, Method B - Buttons)	80%	ASTM D395
Low Temperature		
Gehman, T10	-49°C	ASTM D1053
Brittle Point	-47°C	ASTM D2137
Melt Temperature	220°C (428°F)	--

Heat and Oil Aging Properties	Nominal Values
Properties After 168h, 150°C (300°F) -- Air	
- Tensile Strength, Change:	-5%
- Elongation at Break, Change:	-25%
- Hardness, Change:	+2 Points
Properties After 168h, 150°C (300°F) -- SF105 Oil	
- Tensile Strength, Change:	+10%
- Elongation at Break, Change:	-25%
- Hardness, Change:	-1 Points
- Volume Change:	-1-%

SAE Line Callout (Tentative)

SAE J2558 TPV (A35435 BS2490 DA92 EO351351D EL150 F40 SGC1120 TMA7 TS9)

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 extrusion + press blow molding equipment. Zeotherm should be dried in a warm desiccant dryer prior to use -- at minimum of 12hrs, 110°C. 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

Phone: +1.502.775.2000 (North America; Asia) || +49.211.5267.150 (Europe)
Email: zeotherm@zeonchemicals.com
Web: www.zeotherm.com

Revision History

Revised: 20-Feb-2006

ZEON CHEMICALS L.P.

4111 Bells Lane, Louisville, KY 40211 USA Phone 502.775.2000 Fax 502.775.2025