

## Product Information

# POLY-TREL™ Compound HT40-BK, 40 Shore D

## TPC-ET thermoplastic polyester elastomer

Property	Test Method	Units	Value
Tensile Modulus	ISO 527-1/-2	psi	7980
Stress @5% Strain	ISO 527-1/-2	psi	363
Stress @10% Strain	ISO 527-1/-2	psi	638
Stress @ 50% Strain	ISO 527-1/-2	psi	1160
Stress at Break	ISO 527-1/-2	psi	2900
Nominal Strain at Break	ISO 527-1/-2	%	360
Strain at Break	ISO 527-1/-2	%	250
Flexural Modulus	ISO 178	psi	9430
Shear Modulus	ISO 6721	psi	2320
Tensile creep modulus, 1000h	ISO 899-1	psi	5080
Charpy Impact Strength, 23°C	ISO 179/1eU	ftlb/in <sup>2</sup>	N
Charpy Impact Strength, -30°C	ISO 179/1eU	ftlb/in <sup>2</sup>	N
Charpy Notched Impact Strength, 23°C	ISO 179/1eU	ftlb/in <sup>2</sup>	N
Charpy Notched Impact Strength, -30°C	ISO 179/1eU	ftlb/in <sup>2</sup>	N
Puncture Force, -30°C	ISO 6603-2	N	3000
Puncture Energy, -30°C	ISO 6603-2	J	37
Brittleness Temperature	ISO 974	°F	-76
Shore D Hardness, 15s	ISO 868	D	35
Shore D Hardness, Max	ISO 868	D	40
Tear Strength, parallel	ISO 34-1	kN/m	86
Tear Strength, Normal	ISO 34-1	kN/m	96
Abrasion Resistance	ISO 4649	mm <sup>3</sup>	50
Melting Temperature, 10°C/min	ISO 11357-1/-3	°F	338
Glass Transition Temperature (10°C/min)	ISO 11357-1/2	°F	-31
Vicat Softening Temperature, 50°C/h, 10N	ISO 306	°F	239
Coeff. Of Linear Therm. Expansion, Parallel	ISO 11359-1/2	E-4/°F	1.17
Coeff. Of Linear Therm. Expansion, Normal	ISO 11359-1/2	E-4/°F	1.11
Shelf Life	ISO R1183		10 years
Service Temperature Range*			-65°F to 250°F
Color			BLACK

Test specimen for ISO 527 is 1BA (2mm) at 50mm/min; all other ISO & ASTM mechanical properties measured at 4mm; electrical properties measured at 2mm.  
All mechanical & electrical properties measured on injection molded specimens.  
Test temperatures are 23°C unless otherwise stated.

The information provided in this data sheet corresponds to our knowledge on the subject at the date of this publication. This information may be subject to revision as new knowledge and experience becomes available. The data provided fall within the normal range of product properties and relate only to the specific material designated; these data may not be valid for such materials used in combination with any other material, additives or pigments or in any process, unless expressly indicated otherwise. The data provided should not be used to establish specifications limits or used alone as the basis of design; they are not intended to substitute for any testing you may need to do to determine the suitability of a specific compound for your particular purpose. Since Engineered Seals, LLC

cannot anticipate all variation in actual end-use conditions ESC makes no warranties and assumes no liability in connection with any use of this information. Caution: Do not use this product in medical application involving permanent implantation in the human body.

**\*We highly recommend testing in your specific application, this is a guide only.**

