

## DuPont Performance Polymers Hytrel® 7246HS NC010 Polyester Elastomer TPC-ET (Unverified Data\*\*)

Category : Polymer , Thermoplastic , Polyester, TP , Polyester Thermoplastic Elastomer

### Material Notes:

72 Shore D High Performance Polyester Elastomer with Heat Ageing Protection Hytrel 7246HS NC010 is a high modulus heat stabilized grade with nominal hardness of 72D. Information provided by DuPont Performance Polymers

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_DuPont-Performance-Polymers-Hytrel-7246HS-NC010-Polyester-Elastomer-TPC-ET-nbspUnverified-Data.php](http://www.lookpolymers.com/polymer_DuPont-Performance-Polymers-Hytrel-7246HS-NC010-Polyester-Elastomer-TPC-ET-nbspUnverified-Data.php)

Physical Properties	Metric	English	Comments
Density	1.25 g/cc	0.0452 lb/in <sup>3</sup>	ISO 1183

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	66	66	15s; ISO 868
	<= 70	<= 70	ISO 868
Tensile Strength at Break	52.0 MPa	7540 psi	ISO 527-1/-2
Tensile Stress	23.0 MPa	3340 psi	ISO 527-1/-2
	@Strain 10.0 %	@Strain 10.0 %	
	24.0 MPa	3480 psi	ISO 527-1/-2
	@Strain 50.0 %	@Strain 50.0 %	
	5.55 MPa	805 psi	ISO 11403-1 -2
	@Strain 2.72 %, Temperature 90.0 °C	@Strain 2.72 %, Temperature 194 °F	
	8.37 MPa	1210 psi	ISO 11403-1 -2
	@Strain 2.14 %, Temperature 40.0 °C	@Strain 2.14 %, Temperature 104 °F	
	11.3 MPa	1640 psi	ISO 11403-1 -2
	@Strain 2.00 %, Temperature 23.0 °C	@Strain 2.00 %, Temperature 73.4 °F	
	12.5 MPa	1810 psi	ISO 11403-1 -2
	@Strain 10.9 %, Temperature 90.0 °C	@Strain 10.9 %, Temperature 194 °F	
	18.7 MPa	2710 psi	ISO 11403-1 -2
	@Strain 8.56 %, Temperature 40.0 °C	@Strain 8.56 %, Temperature 104 °F	

Mechanical Properties	Metric <sup>Pa</sup>	English <sup>l</sup>	Comments
	@Strain 1.80 %, Temperature 0.000 °C	@Strain 1.80 %, Temperature 32.0 °F	ISO 11403-1 -2
	23.2 MPa	3360 psi	
	@Strain 8.00 %, Temperature 23.0 °C	@Strain 8.00 %, Temperature 73.4 °F	ISO 11403-1 -2
	24.4 MPa	3540 psi	
	@Strain 1.57 %, Temperature -20.0 °C	@Strain 1.57 %, Temperature -4.00 °F	ISO 11403-1 -2
	39.3 MPa	5700 psi	
	@Strain 7.20 %, Temperature 0.000 °C	@Strain 7.20 %, Temperature 32.0 °F	ISO 11403-1 -2
	41.7 MPa	6050 psi	
	@Strain 12.6 %, Temperature 0.000 °C	@Strain 12.6 %, Temperature 32.0 °F	ISO 11403-1 -2
	44.9 MPa	6510 psi	
	@Strain 6.28 %, Temperature -20.0 °C	@Strain 6.28 %, Temperature -4.00 °F	ISO 11403-1 -2
	47.6 MPa	6900 psi	
	@Strain 11.0 %, Temperature -20.0 °C	@Strain 11.0 %, Temperature -4.00 °F	ISO 11403-1 -2
	1.05 MPa	152 psi	
	@Strain 0.516 %, Time 3.60e+6 sec	@Strain 0.516 %, Time 1000 hour	isochronous; ISO 11403-1 -2
	1.05 MPa	152 psi	
	@Strain 0.556 %, Time 3.60e+7 sec	@Strain 0.556 %, Time 10000 hour	isochronous; ISO 11403-1 -2
	1.05 MPa	152 psi	
	@Strain 0.444 %, Time 36000 sec	@Strain 0.444 %, Time 10.0 hour	isochronous; ISO 11403-1 -2
	1.05 MPa	152 psi	
	@Strain 0.479 %, Time 360000 sec	@Strain 0.479 %, Time 100 hour	isochronous; ISO 11403-1 -2
	1.05 MPa	152 psi	
	@Strain 0.412 %, Time 3600 sec	@Strain 0.412 %, Time 1.00 hour	isochronous; ISO 11403-1 -2
	2.00 MPa	290 psi	
			isochronous; ISO 11403-1 -2

Mechanical Properties	Metric @Strain 0.643 %, Time 3.60e+7 sec	English @Strain 0.643 %, Time 10000 hour	Comments
	2.00 MPa	290 psi	
	@Strain 0.557 %, Time 3600 sec	@Strain 0.557 %, Time 1.00 hour	isochronous; ISO 11403-1 -2
	2.00 MPa	290 psi	
	@Strain 0.641 %, Time 360000 sec	@Strain 0.641 %, Time 100 hour	isochronous; ISO 11403-1 -2
	2.00 MPa	290 psi	
	@Strain 0.642 %, Time 3.60e+6 sec	@Strain 0.642 %, Time 1000 hour	isochronous; ISO 11403-1 -2
	2.00 MPa	290 psi	
	@Strain 0.614 %, Time 36000 sec	@Strain 0.614 %, Time 10.0 hour	isochronous; ISO 11403-1 -2
	4.20 MPa	609 psi	
	@Strain 2.00 %, Time 36000 sec	@Strain 2.00 %, Time 10.0 hour	isochronous; ISO 11403-1 -2
	4.20 MPa	609 psi	
	@Time 3600 sec, Strain 1.83 %	@Time 1.00 hour, Strain 1.83 %	isochronous; ISO 11403-1 -2
	4.20 MPa	609 psi	
	@Strain 2.35 %, Time 3.60e+6 sec	@Strain 2.35 %, Time 1000 hour	isochronous; ISO 11403-1 -2
	4.20 MPa	609 psi	
	@Strain 2.52 %, Time 3.60e+7 sec	@Strain 2.52 %, Time 10000 hour	isochronous; ISO 11403-1 -2
	4.20 MPa	609 psi	
	@Strain 2.18 %, Time 360000 sec	@Strain 2.18 %, Time 100 hour	isochronous; ISO 11403-1 -2
	8.00 MPa	1160 psi	
	@Strain 3.11 %, Time 3.60e+6 sec	@Strain 3.11 %, Time 1000 hour	isochronous; ISO 11403-1 -2
	8.00 MPa	1160 psi	
	@Strain 2.98 %, Time 360000 sec	@Strain 2.98 %, Time 100 hour	isochronous; ISO 11403-1 -2
	8.00 MPa	1160 psi	
	@Time 3600 sec, Strain 2.46 %	@Time 1.00 hour, Strain 2.46 %	isochronous; ISO 11403-1 -2

Mechanical Properties	8.00 MPa Metric	1160 psi English	Comments isochronous; ISO 11403-1 -2
	@Strain 3.22 %, Time 3.60e+7 sec	@Strain 3.22 %, Time 10000 hour	
	<b>8.00 MPa</b>	<b>1160 psi</b>	isochronous; ISO 11403-1 -2
	@Strain 2.76 %, Time 36000 sec	@Strain 2.76 %, Time 10.0 hour	
	<b>8.40 MPa</b>	<b>1220 psi</b>	isochronous; ISO 11403-1 -2
	@Strain 5.68 %, Time 36000 sec	@Strain 5.68 %, Time 10.0 hour	
	<b>8.40 MPa</b>	<b>1220 psi</b>	isochronous; ISO 11403-1 -2
	@Strain 6.81 %, Time 3.60e+6 sec	@Strain 6.81 %, Time 1000 hour	
	<b>8.40 MPa</b>	<b>1220 psi</b>	isochronous; ISO 11403-1 -2
	@Time 3600 sec, Strain 4.98 %	@Time 1.00 hour, Strain 4.98 %	
	<b>8.40 MPa</b>	<b>1220 psi</b>	isochronous; ISO 11403-1 -2
	@Strain 6.32 %, Time 360000 sec	@Strain 6.32 %, Time 100 hour	
	<b>8.40 MPa</b>	<b>1220 psi</b>	isochronous; ISO 11403-1 -2
	@Strain 7.26 %, Time 3.60e+7 sec	@Strain 7.26 %, Time 10000 hour	
	<b>16.0 MPa</b>	<b>2320 psi</b>	isochronous; ISO 11403-1 -2
	@Strain 10.5 %, Time 3.60e+6 sec	@Strain 10.5 %, Time 1000 hour	
	<b>16.0 MPa</b>	<b>2320 psi</b>	isochronous; ISO 11403-1 -2
	@Strain 7.73 %, Time 36000 sec	@Strain 7.73 %, Time 10.0 hour	
	<b>16.0 MPa</b>	<b>2320 psi</b>	isochronous; ISO 11403-1 -2
	@Strain 12.1 %, Time 3.60e+7 sec	@Strain 12.1 %, Time 10000 hour	
	<b>16.0 MPa</b>	<b>2320 psi</b>	isochronous; ISO 11403-1 -2
	@Time 3600 sec, Strain 6.63 %	@Time 1.00 hour, Strain 6.63 %	
	<b>16.0 MPa</b>	<b>2320 psi</b>	isochronous; ISO 11403-1 -2
	@Strain 9.05 %, Time 360000 sec	@Strain 9.05 %, Time 100 hour	
<b>Tensile Strength, Yield</b>	<b>29.0 MPa</b>	<b>4210 psi</b>	ISO 527-1/-2
<b>Elongation at Break</b>	<b>&gt;= 300 %</b>	<b>&gt;= 300 %</b>	ISO 527-1/-2

Mechanical Properties	Metric	English	Comments
Elongation at Yield	22 %	22 %	ISO 527-1/-2
Tensile Modulus	0.430 GPa	62.4 ksi	ISO 527-1/-2
	0.256 GPa @Temperature 110 °C	37.1 ksi @Temperature 230 °F	Dynamic; ISO 11403-1 -2
	0.837 GPa @Temperature 30.0 °C	121 ksi @Temperature 86.0 °F	Dynamic; ISO 11403-1 -2
	2.33 GPa @Temperature -20.0 °C	339 ksi @Temperature -4.00 °F	Dynamic; ISO 11403-1 -2
	3.53 GPa @Temperature -70.0 °C	511 ksi @Temperature -94.0 °F	Dynamic; ISO 11403-1 -2
	4.47 GPa @Temperature -100 °C	648 ksi @Temperature -148 °F	Dynamic; ISO 11403-1 -2
Flexural Modulus	0.500 GPa	72.5 ksi	ISO 178
Shear Modulus	0.0455 GPa @Temperature 160 °C	6.60 ksi @Temperature 320 °F	Dynamic; ISO 11403-1 -2
	0.0580 GPa @Temperature 120 °C	8.41 ksi @Temperature 248 °F	Dynamic; ISO 11403-1 -2
	0.0787 GPa @Temperature 70.0 °C	11.4 ksi @Temperature 158 °F	Dynamic; ISO 11403-1 -2
	0.307 GPa @Temperature 20.0 °C	44.5 ksi @Temperature 68.0 °F	Dynamic; ISO 11403-1 -2
	0.764 GPa @Temperature -20.0 °C	111 ksi @Temperature -4.00 °F	Dynamic; ISO 11403-1 -2
	0.979 GPa @Temperature -50.0 °C	142 ksi @Temperature -58.0 °F	Dynamic; ISO 11403-1 -2
Shear Strength	0.109 MPa @Shear Rate 500 1/s, Temperature 260 °C	15.8 psi @Shear Rate 500 1/s, Temperature 500 °F	ISO 11403-1 -2

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