

DuPont Performance Polymers Hytrel® HTR8139BK Polyester Elastomer TPC-ET (Unverified Data**)

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

Material Notes:

44 Shore D Lubricated High Viscosity Polyester Elastomer Developed for Blow Molding Hytrel HTR8139BK is designed for blow molding or processing techniques requiring high melt viscosity. It has nominal hardness of 44D is pigmented black with fine particInformation provided by DuPont Performance Polymers

Order this product through the following link:

http://www.lookpolymers.com/polymer_DuPont-Performance-Polymers-Hytrel-HTR8139BK-Polyester-Elastomer-TPC-ET-nbspUnverified-Data.php

| Physical Properties | Metric | English | Comments |
|-----------------------------------|-----------------------------------|-----------------------------------|----------------------------------|
| Density | 0.960 g/cc | 0.0347 lb/in ³ | |
| | 1.15 g/cc | 0.0415 lb/in ³ | ISO 1183 |
| Water Absorption | 0.70 % | 0.70 % | Sim. to ISO 62 |
| | @Thickness 2.00 mm | @Thickness 0.0787 in | |
| Moisture Absorption | 0.200 % | 0.200 % | Sim. to ISO 62 |
| | @Thickness 2.00 mm | @Thickness 0.0787 in | |
| Water Absorption at Saturation | 0.70 % | 0.70 % | Immersion 24h; ASTM D570 |
| Linear Mold Shrinkage, Flow | 0.016 cm/cm | 0.016 in/in | ISO 294-4 2577 |
| Linear Mold Shrinkage, Transverse | 0.014 cm/cm | 0.014 in/in | ISO 294-4 2577 |
| Melt Flow | 1.9 g/10 min | 1.9 g/10 min | cm ³ /10min; ISO 1133 |
| | @Load 2.16 kg, Temperature 230 °C | @Load 4.76 lb, Temperature 446 °F | |
| | 2.1 g/10 min | 2.1 g/10 min | ISO 1133 |
| | @Load 2.16 kg, Temperature 230 °C | @Load 4.76 lb, Temperature 446 °F | |

| Mechanical Properties | Metric | English | Comments |
|---------------------------|----------------|----------------|--------------|
| Hardness, Shore D | 40 | 40 | 15s; ISO 868 |
| | <= 44 | <= 44 | ISO 868 |
| Tensile Strength at Break | 32.0 MPa | 4640 psi | ISO 527-1/-2 |
| Tensile Stress | 4.50 MPa | 653 psi | ISO 527-1/-2 |
| | @Strain 5.00 % | @Strain 5.00 % | |

| Mechanical Properties | Metric | English | Comments |
|-----------------------|--|--|---------------------|
| | @Strain 10.0 % | @Strain 10.0 % | ISO 527-1/-2 |
| | 11.8 MPa | 1710 psi | ISO 527-1/-2 |
| | @Strain 50.0 % | @Strain 50.0 % | |
| | 14.0 MPa | 2030 psi | ISO 527-1/-2 |
| | @Strain 100 % | @Strain 100 % | |
| | 23.0 MPa | 3340 psi | ISO 527-1/-2 |
| | @Strain 300 % | @Strain 300 % | |
| | 1.87 MPa | 271 psi | TPE; ISO 11403-1 -2 |
| | @Strain 5.67 %, Temperature 120 °C | @Strain 5.67 %, Temperature 248 °F | |
| | 2.23 MPa | 323 psi | TPE; ISO 11403-1 -2 |
| | @Strain 5.69 %, Temperature 100 °C | @Strain 5.69 %, Temperature 212 °F | |
| | 2.38 MPa | 345 psi | TPE; ISO 11403-1 -2 |
| | @Strain 5.57 %, Temperature 90.0 °C | @Strain 5.57 %, Temperature 194 °F | |
| | 3.07 MPa | 445 psi | TPE; ISO 11403-1 -2 |
| | @Strain 5.62 %, Temperature 60.0 °C | @Strain 5.62 %, Temperature 140 °F | |
| | 3.16 MPa | 458 psi | ISO 11403-1 -2 |
| | @Strain 5.00 %, Temperature 23.0 °C | @Strain 5.00 %, Temperature 73.4 °F | |
| | 3.24 MPa | 470 psi | TPE; ISO 11403-1 -2 |
| | @Strain 14.34 %, Temperature 120 °C | @Strain 14.34 %, Temperature 248 °F | |
| | 3.67 MPa | 532 psi | TPE; ISO 11403-1 -2 |
| | @Strain 5.61 %, Temperature 40.0 °C | @Strain 5.61 %, Temperature 104 °F | |
| | 3.93 MPa | 570 psi | TPE; ISO 11403-1 -2 |
| | @Strain 23.01 %, Temperature 120 °C | @Strain 23.01 %, Temperature 248 °F | |
| | 3.95 MPa | 573 psi | TPE; ISO 11403-1 -2 |
| | @Strain 14.39 %, Temperature 100 °C | @Strain 14.39 %, Temperature 212 °F | |
| | 4.31 MPa | 625 psi | |

| Mechanical Properties | Metric | English | TPE; ISO 11403-1 -2 Comments |
|-----------------------|---|--|---------------------------------|
| | @Strain 31.01 %, Temperature 120 °C | @Strain 31.01 %, Temperature 248 °F | |
| | 4.31 MPa | 625 psi | |
| | @Strain 14.09 %, Temperature 90.0 °C | @Strain 14.09 %, Temperature 194 °F | TPE; ISO 11403-1 -2 |
| | 4.60 MPa | 667 psi | |
| | @Strain 39.68 %, Temperature 120 °C | @Strain 39.68 %, Temperature 248 °F | TPE; ISO 11403-1 -2 |
| | 4.78 MPa | 693 psi | |
| | @Strain 22.42 %, Temperature 100 °C | @Strain 22.42 %, Temperature 212 °F | TPE; ISO 11403-1 -2 |
| | 4.88 MPa | 708 psi | |
| | @Strain 51.02 %, Temperature 120 °C | @Strain 51.02 %, Temperature 248 °F | TPE; ISO 11403-1 -2 |
| | 5.12 MPa | 743 psi | |
| | @Strain 61.69 %, Temperature 120 °C | @Strain 61.69 %, Temperature 248 °F | TPE; ISO 11403-1 -2 |
| | 5.21 MPa | 756 psi | |
| | @Strain 21.95 %, Temperature 90.0 °C | @Strain 21.95 %, Temperature 194 °F | TPE; ISO 11403-1 -2 |
| | 5.23 MPa | 759 psi | |
| | @Strain 6.30 %, Temperature 0.000 °C | @Strain 6.30 %, Temperature 32.0 °F | TPE; ISO 11403-1 -2 |
| | 5.31 MPa | 770 psi | |
| | @Strain 31.11 %, Temperature 100 °C | @Strain 31.11 %, Temperature 212 °F | TPE; ISO 11403-1 -2 |
| | 5.36 MPa | 777 psi | |
| | @Strain 73.03 %, Temperature 120 °C | @Strain 73.03 %, Temperature 248 °F | TPE; ISO 11403-1 -2 |
| | 5.48 MPa | 795 psi | |
| | @Strain 14.2 %, Temperature 60.0 °C | @Strain 14.2 %, Temperature 140 °F | TPE; ISO 11403-1 -2 |
| | 5.59 MPa | 811 psi | |
| | @Strain 8.22 %, Temperature 23.0 °C | @Strain 8.22 %, Temperature 73.4 °F | TPE; ISO 11403-1 -2 |
| | 5.60 MPa | 812 psi | |
| | @Strain 84.36 %, Temperature 120 °C | @Strain 84.36 %, Temperature 248 °F | TPE; ISO 11403-1 -2 |

| Mechanical Properties | Metric Pa | English | Comments |
|-----------------------|---|---|---------------------|
| | @Strain 39.81 %, Temperature 100 °C | @Strain 39.81 %, Temperature 212 °F | TPE; ISO 11403-1 -2 |
| | 5.80 MPa | 841 psi | |
| | @Strain 30.47 %, Temperature 90.0 °C | @Strain 30.47 %, Temperature 194 °F | TPE; ISO 11403-1 -2 |
| | 5.92 MPa | 859 psi | |
| | @Strain 6.08 %, Temperature -20.0 °C | @Strain 6.08 %, Temperature -4.00 °F | TPE; ISO 11403-1 -2 |
| | 5.97 MPa | 866 psi | |
| | @Strain 101.04 %, Temperature 120 °C | @Strain 101.04 %, Temperature 248 °F | TPE; ISO 11403-1 -2 |
| | 6.01 MPa | 872 psi | |
| | @Strain 50.52 %, Temperature 100 °C | @Strain 50.52 %, Temperature 212 °F | TPE; ISO 11403-1 -2 |
| | 6.17 MPa | 895 psi | |
| | @Strain 38.34 %, Temperature 90.0 °C | @Strain 38.34 %, Temperature 194 °F | TPE; ISO 11403-1 -2 |
| | 6.24 MPa | 905 psi | |
| | @Strain 112.37 %, Temperature 120 °C | @Strain 112.37 %, Temperature 248 °F | TPE; ISO 11403-1 -2 |
| | 6.31 MPa | 915 psi | |
| | @Strain 61.89 %, Temperature 100 °C | @Strain 61.89 %, Temperature 212 °F | TPE; ISO 11403-1 -2 |
| | 6.57 MPa | 953 psi | |
| | @Strain 49.48 %, Temperature 90.0 °C | @Strain 49.48 %, Temperature 194 °F | TPE; ISO 11403-1 -2 |
| | 6.58 MPa | 954 psi | |
| | @Strain 14.2 %, Temperature 40.0 °C | @Strain 14.2 %, Temperature 104 °F | TPE; ISO 11403-1 -2 |
| | 6.60 MPa | 957 psi | |
| | @Strain 126.38 %, Temperature 120 °C | @Strain 126.38 %, Temperature 248 °F | TPE; ISO 11403-1 -2 |
| | 6.62 MPa | 960 psi | |
| | @Strain 73.27 %, Temperature 100 °C | @Strain 73.27 %, Temperature 212 °F | TPE; ISO 11403-1 -2 |
| | 6.66 MPa | 966 psi | |
| | | | TPE; ISO 11403-1 -2 |

| Mechanical Properties | Metric @Strain 22.79 %, Temperature 60.0 °C | English @Strain 22.79 %, Temperature 140 °F | Comments |
|-----------------------|---|---|---------------------|
| | 6.91 MPa | 1000 psi | TPE; ISO 11403-1 -2 |
| | @Strain 60.62 %, Temperature 90.0 °C | @Strain 60.62 %, Temperature 194 °F | |
| | 6.92 MPa | 1000 psi | TPE; ISO 11403-1 -2 |
| | @Strain 84.64 %, Temperature 100 °C | @Strain 84.64 %, Temperature 212 °F | |
| | 7.08 MPa | 1030 psi | TPE; ISO 11403-1 -2 |
| | @Strain 145.72 %, Temperature 120 °C | @Strain 145.72 %, Temperature 248 °F | |
| | 7.23 MPa | 1050 psi | TPE; ISO 11403-1 -2 |
| | @Strain 71.1 %, Temperature 90.0 °C | @Strain 71.1 %, Temperature 194 °F | |
| | 7.35 MPa | 1070 psi | TPE; ISO 11403-1 -2 |
| | @Strain 31.38 %, Temperature 60.0 °C | @Strain 31.38 %, Temperature 140 °F | |
| | 7.39 MPa | 1070 psi | TPE; ISO 11403-1 -2 |
| | @Strain 101.37 %, Temperature 100 °C | @Strain 101.37 %, Temperature 212 °F | |
| | 7.56 MPa | 1100 psi | TPE; ISO 11403-1 -2 |
| | @Strain 82.24 %, Temperature 90.0 °C | @Strain 82.24 %, Temperature 194 °F | |
| | 7.69 MPa | 1120 psi | TPE; ISO 11403-1 -2 |
| | @Strain 168.4 %, Temperature 120 °C | @Strain 168.4 %, Temperature 248 °F | |
| | 7.70 MPa | 1120 psi | TPE; ISO 11403-1 -2 |
| | @Strain 112.08 %, Temperature 100 °C | @Strain 112.08 %, Temperature 212 °F | |
| | 7.77 MPa | 1130 psi | TPE; ISO 11403-1 -2 |
| | @Strain 39.31 %, Temperature 60.0 °C | @Strain 39.31 %, Temperature 140 °F | |
| | 7.97 MPa | 1160 psi | TPE; ISO 11403-1 -2 |
| | @Strain 22.79 %, Temperature 40.0 °C | @Strain 22.79 %, Temperature 104 °F | |
| | 8.08 MPa | 1170 psi | TPE; ISO 11403-1 -2 |
| | @Strain 98.63 %, Temperature 90.0 °C | @Strain 98.63 %, Temperature 194 °F | |

| Mechanical Properties | 8.11 MPa Metric | 1180 psi English | Comments |
|-----------------------|---|---|---------------------|
| | @Strain 126.13 %, Temperature 100 °C | @Strain 126.13 %, Temperature 212 °F | TPE; ISO 11403-1 -2 |
| | 8.24 MPa | 1200 psi | |
| | @Strain 50.54 %, Temperature 60.0 °C | @Strain 50.54 %, Temperature 140 °F | |

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