

SABIC® HP4023WN

HP4023WN is an antioxidant free low density polyethylene grade suitable for producing general-purpose films. It contains slip and antiblock additives. It gives excellent processability and optical properties with good mechanical properties.

Physical Properties	Metric	English	Comments
Density	0.923 g/cc	0.0333 lb/in ³	ASTM D1505
Melt Flow	4.0 g/10 min @Load 2.16 kg, Temperature 190 °C	4.0 g/10 min @Load 4.76 lb, Temperature 374 °F	ASTM D1238
Mechanical Properties	Metric	English	Comments
Film Tensile Strength at Yield, MD	12.0 MPa	1740 psi	Properties have been measured by producing 30 µm film with 2.5 BUR using 100% HP4023WN.; ASTM D882
Film Tensile Strength at Yield, TD	10.0 MPa	1450 psi	Properties have been measured by producing 30 µm film with 2.5 BUR using 100% HP4023WN.; ASTM D882
Film Elongation at Break, MD	105 %	105 %	Properties have been measured by producing 30 µm film with 2.5 BUR using 100% HP4023WN.; ASTM D882
Film Elongation at Break, TD	440 %	440 %	Properties have been measured by producing 30 µm film with 2.5 BUR using 100% HP4023WN.; ASTM D882
Elmendorf Tear Strength, MD	17.0 g/micron	432 g/mil	Properties have been measured by producing 30 µm film with 2.5 BUR using 100% HP4023WN.; ASTM D1922
Elmendorf Tear Strength, TD	4.00 g/micron	102 g/mil	Properties have been measured by producing 30 µm film with 2.5 BUR using 100% HP4023WN.; ASTM D1922
Dart Drop	2.00 g/micron	50.8 g/mil	Properties have been measured by producing 30 µm film with 2.5 BUR using 100% HP4023WN.; ASTM D1709
Film Tensile Strength at Break, MD	27.0 MPa	3920 psi	Properties have been measured by producing 30 µm film with 2.5 BUR using 100% HP4023WN.; ASTM D882

Film Tensile Strength at Break, TD	11.0 MPa	1600 psi	Properties have been measured by producing 30 µm film with 2.5 BUR using 100% HP4023WN.; ASTM D882
1% Secant Modulus, MD	195 MPa	28300 psi	Properties have been measured by producing 30 µm film with 2.5 BUR using 100% HP4023WN.; ASTM D882
1% Secant Modulus, TD	180 MPa	26100 psi	Properties have been measured by producing 30 µm film with 2.5 BUR using 100% HP4023WN.; ASTM D882

Thermal Properties	Metric	English	Comments
Vicat Softening Point	91.0 °C	196 °F	ASTM D1525

Optical Properties	Metric	English	Comments
Haze	7.0 % @Thickness 0.0300 mm	7.0 % @Thickness 0.00118 in	2.5 BUR using 100% HP4023WN.; ASTM D1003

Gloss	60 %	60 %	45°; Properties have been measured by producing 30 µm film with 2.5 BUR using 100% HP4023WN.; ASTM D2457
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Descriptive Properties	
Anti block agent	True
Slip agent	True