SABIC® LDPE HP4023WN

LOW DENSITY POLYETHYLENE

DESCRIPTION

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.

TYPICAL APPLICATIONS

HP4023WN can be used for high clarity laundry bags, textile wrapping films, produce bags, zip lock bags.

TYPICAL PROPERTY VALUES

Revision 20201103

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
POLYMER PROPERTIES			
Melt Flow Rate (MFR)			
at 190°C and 2.16 kg	4.0	g/10 min	ASTM D1238
Density			
at 23°C	923	kg/m³	ASTM D1505
FORMULATION			
Slip agent	☑	-	-
Anti block agent	☑	-	-
MECHANICAL PROPERTIES			
Dart Impact Strength (1)	2	g/µm	ASTM D1709
OPTICAL PROPERTIES (1)			
Haze (1)	7	%	ASTM D1003
Gloss			
at 45°	60	-	ASTM D2457
FILM PROPERTIES (1)			
Tensile Properties			
stress at break, MD	27	MPa	ASTM D882
stress at break, TD	11	MPa	ASTM D882
strain at break, MD	105	%	ASTM D882
strain at break, TD	440	%	ASTM D882
stress at yield, MD	12	MPa	ASTM D882
stress at yield, TD	10	MPa	ASTM D882
1% secant modulus, MD	195	MPa	ASTM D882
1% secant modulus, TD	180	MPa	ASTM D882
Tear Resistance			
MD	17	g/µm	ASTM D1922
TD	4	g/µm	ASTM D1922
THERMAL PROPERTIES			
Vicat Softening Temperature	91	°C	ASTM D1525

(1) Properties have been measured by producing 30 µm film with 2.5 BUR using 100% HP4023WN.

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PROCESSING CONDITIONS

Typical processing conditions for HP4023WN are:

Barrel temperature: 160 - 190°C, Blow up ratio: 2.0 – 3.0

STORAGE AND HANDLING

Polyethylene resin should be stored in a manner to prevent a direct exposure to sunlight and/or heat. The storage area should also be dry and preferably do not exceed 50°C. SABIC would not give warranty to bad storage conditions which may lead to quality deterioration such as color change, bad smell and inadequate product performance. It is advisable to process PE resin within 6 months after delivery.

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