

# 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

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
<b>POLYMER PROPERTIES</b>			
<b>Melt Flow Rate (MFR)</b>			
at 190°C and 2.16 kg	4.0	g/10 min	ASTM D1238
<b>Density</b>			
at 23°C	923	kg/m <sup>3</sup>	ASTM D1505
<b>FORMULATION</b>			
Slip agent	☑	-	-
Anti block agent	☑	-	-
<b>MECHANICAL PROPERTIES</b>			
Dart Impact Strength <sup>(1)</sup>	2	g/μm	ASTM D1709
<b>OPTICAL PROPERTIES <sup>(1)</sup></b>			
Haze <sup>(1)</sup>	7	%	ASTM D1003
<b>Gloss</b>			
at 45°	60	-	ASTM D2457
<b>FILM PROPERTIES <sup>(1)</sup></b>			
<b>Tensile Properties</b>			
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
<b>Tear Resistance</b>			
MD	17	g/μm	ASTM D1922
TD	4	g/μm	ASTM D1922
<b>THERMAL PROPERTIES</b>			
Vicat Softening Temperature	91	°C	ASTM D1525

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

## 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.