

# SABIC® LDPE HP4024WN

## LOW DENSITY POLYETHYLENE

### DESCRIPTION

HP4024WN is a Low Density Polyethylene grade suitable for producing general-purpose films and it gives excellent processability and optical properties with good mechanical properties. HP4024WN contains slip and antiblock additives.

### TYPICAL APPLICATIONS

HP4024WN can be used for high clarity laundry bags, textile wrapping films, produce bags, zip lock bags and master batch.

### TYPICAL PROPERTY VALUES

Revision 20170706

| PROPERTIES                               | TYPICAL VALUES                      | UNITS             | TEST METHODS |
|--|-------------------------------------|-------------------|--------------|
| <b>POLYMER PROPERTIES</b>                |                                     |                   |              |
| <b>Melt Flow Rate</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                               | <input checked="" type="checkbox"/> | -                 | -            |
| Anti block agent                         | <input checked="" type="checkbox"/> | -                 | -            |
| <b>MECHANICAL PROPERTIES</b>             |                                     |                   |              |
| Dart Impact Strength                     | 2                                   | g/μm              | ASTM D1709   |
| <b>OPTICAL PROPERTIES</b>                |                                     |                   |              |
| Haze                                     | 6                                   | %                 | ASTM D1003   |
| <b>Gloss</b>                             |                                     |                   |              |
| at 45°                                   | 68                                  | %                 | ASTM D2457   |
| <b>FILM PROPERTIES</b>                   |                                     |                   |              |
| <b>Tensile Properties <sup>(1)</sup></b> |                                     |                   |              |
| stress at break, MD                      | 32                                  | MPa               | ASTM D882    |
| stress at break, TD                      | 24                                  | MPa               | ASTM D882    |
| strain at break, MD                      | 265                                 | %                 | ASTM D882    |
| strain at break, TD                      | 600                                 | %                 | ASTM D882    |
| stress at yield, MD                      | 10                                  | MPa               | ASTM D882    |
| stress at yield, TD                      | 10                                  | MPa               | ASTM D882    |
| 1% secant modulus, MD                    | 277                                 | MPa               | ASTM D882    |
| 1% secant modulus, TD                    | 224                                 | MPa               | ASTM D882    |

| PROPERTIES                         | TYPICAL VALUES | UNITS | TEST METHODS |
|------------------------------------|----------------|-------|--------------|
| <b>Tear Resistance</b>             |                |       |              |
| MD                                 | 10             | g/μm  | ASTM D1922   |
| TD                                 | 14             | g/μm  | ASTM D1922   |
| <b>THERMAL PROPERTIES</b>          |                |       |              |
| <b>Vicat Softening Temperature</b> | 92             | °C    | ASTM D1525   |

(1) Properties have been measured by producing 30 μm film with 2.5 BUR using 100% HP4024N.

## PROCESSING CONDITIONS

Typical processing conditions for HP4024WN are:

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

## HEALTH, SAFETY AND FOOD CONTACT REGULATIONS

Detailed information is provided in the relevant Material Safety Datasheet and or Standard Food Declaration, Additional specific information can be requested via your local Sales Office.

DISCLAIMER: This product is not intended for and must not be used in any pharmaceutical/medical applications.

## 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.

## DISCLAIMER

The information contained herein may include typical properties of our products or their typical performances when used in certain typical applications. Actual properties of our products, in particular when used in conjunction with any third party material(s) or for any non-typical applications, may differ from typical properties.

It is the customer's responsibility to inspect and test our product(s) in order to satisfy itself as to the suitability of the product(s) for its and its customers particular purposes. The customer is responsible for the appropriate, safe and legal use, processing and handling of all product(s) purchased from us.

Nothing herein is intended to be nor shall it constitute a warranty whatsoever, in particular, warranty of merchantability or fitness for a particular purpose.

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