

**PRODUCT NAME: LDPE HP4024WN**
**Supplier: SABIC®**
**Product Identification & 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.

**Physical Properties**

| Property                                  | Typical Values | Units             | Test Methods |
|---|----------------|-------------------|--------------|
| Density/Specific Gravity                  | 923            | kg/m <sup>3</sup> | ASTM D1505   |
| Melt Flow Rate (MFR) at 190°C and 2.16 kg | 4              | g/10 min          | ASTM D1238   |

**Formulation**

|                  |   |
|------------------|---|
| Slip agent       | ✓ |
| Anti block agent | ✓ |

**Optical Properties**

| Property      | Typical Values | Units | Test Methods |
|---------------|----------------|-------|--------------|
| Haze          | 6              | %     | ASTM D1003   |
| Gloss at 45°C | 68             | -     | ASTM D2457   |

**Mechanical Properties**

| Property        | Typical Values | Units | Test Methods |
|-----------------|----------------|-------|--------------|
| Dart Impact F50 | 2              | g/μm  | ASTM D1709   |

**Film Properties**

| Property                  | Typical Values | Units | Test Methods |
|---------------------------|----------------|-------|--------------|
| <b>Tensile Properties</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    |

| Property               | Typical Values | Units | Test Methods |
|------------------------|----------------|-------|--------------|
| 1% secant modulus, MD  | 277            | Mpa   | ASTM D882    |
| 1% secant modulus, TD  | 224            | Mpa   | ASTM D882    |
| <b>Tear Resistance</b> |                |       |              |
| MD                     | 10             | g/μm  | ASTM D1922   |
| TD                     | 14             | g/μm  | ASTM D1922   |

## Thermal Properties

| Property                    | Typical Values | Units | Test Methods |
|-----------------------------|----------------|-------|--------------|
| Vicat softening temperature | 92             | °C    | ASTM D1525   |

## Processing Conditions

Typical processing conditions for HP4024WN 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 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 polyethylene resin within 6 months after delivery.

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