# SABIC® LDPE 2102N3W

### Low Density Polyethylene

## Saudi Basic Industries Corporation (SABIC)

#### Message:

SABIC® LDPE 2102N3W is a general purpose grade with a high level of anti block and slip agent (E=erucamide). This grade offers good optical properties and a very good draw down ability. Application

SABIC<sup>®</sup> LDPE 2102N3W is typically used for packaging films for food and industrial goods and for lamination films. This grade is typically used when high draw down is required. The usual melt-2 film thickness can be reduced by 10-40%, maintaining an adequate CoF level. SABIC<sup>®</sup> LDPE 2102N3W can typically be used for food applications due to very low migration levels.

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

| General Information                   |                                  |  |             |  |  |
|---------------------------------------|----------------------------------|--|-------------|--|--|
| Additive                              | High caking resistance (800 ppm) |  |             |  |  |
|                                       | Erucamide Lubricating Ad         | Erucamide Lubricating Additive (600 ppm) |             |  |  |
|                                       |                                  |  |             |  |  |
| Features                              | Low density                      |  |             |  |  |
|                                       | High smoothness                  |  |             |  |  |
|                                       | High caking resistance           |  |             |  |  |
|                                       | Optical                          |  |             |  |  |
|                                       | Good stripping                   |  |             |  |  |
|                                       | General                          |  |             |  |  |
|                                       |                                  |  |             |  |  |
| Uses                                  | Blown Film                       |  |             |  |  |
|                                       | Packaging                        |  |             |  |  |
|                                       | Laminate                         |  |             |  |  |
|                                       | Industrial application           |  |             |  |  |
|                                       | Food packaging                   |  |             |  |  |
|                                       |                                  |  |             |  |  |
| Processing Method                     | Blow film                        |  |             |  |  |
| Physical                              | Nominal Value                    | Unit                                     | Test Method |  |  |
| Density                               | 0.921                            | g/cm³                                    | ISO 1183/A  |  |  |
| Melt Mass-Flow Rate (MFR) (190°C/2.16 |                                  |  |             |  |  |
| kg)                                   | 2.5                              | g/10 min                                 | ISO 1133    |  |  |
| Mechanical                            | Nominal Value                    | Unit                                     | Test Method |  |  |
| Coefficient of Friction (Blown Film)  | 0.20                             |  | ASTM D1894  |  |  |
| Films                                 | Nominal Value                    | Unit                                     | Test Method |  |  |
| Film Thickness - Tested               | 25                               | μm                                       |             |  |  |
| Tensile Modulus                       |                                  |  | ISO 527-3   |  |  |
| MD: 25 µm, blown film                 | 190                              | MPa                                      | ISO 527-3   |  |  |
| TD: 25 µm, blown film                 | 190                              | MPa                                      | ISO 527-3   |  |  |
| Tensile Stress                        |                                  |  | ISO 527-3   |  |  |

| Additional Information                | Nominal Value | Unit | Test Method     |
|---------------------------------------|---------------|------|-----------------|
| Haze (25.0 µm, Blown Film)            | 12            | %    | ASTM D1003A     |
| Optical                               | Nominal Value | Unit | Test Method     |
| Vicat Softening Temperature           | 90.0          | °C   | ISO 306/A       |
| Thermal                               | Nominal Value | Unit | Test Method     |
| TD : 25.0 μm                          | 20.0          | kN/m | ISO 6383-2      |
| MD : 25.0 µm                          | 50.0          | kN/m | ISO 6383-2      |
| Tear Strength <sup>1</sup>            |               |      | ISO 6383-2      |
| Re-blocking - Blown Film (25.0 µm)    | 10            | g    | Internal method |
| Blocking - Blown Film (25.0 μm)       |               | g    | Internal method |
| mpact Strength - Blown Film (25.0 µm) | 200           | J/cm | ASTM D4272      |
| mpact                                 | Nominal Value | Unit | Test Method     |
| TD: Broken, 25 µm, blown film         | > 500         | %    | ISO 527-3       |
| MD: Broken, 25 µm, blown film         | > 100         | %    | ISO 527-3       |
| Tensile Elongation                    |               |      | ISO 527-3       |
| TD: Broken, 25 μm, blown film         | 18.0          | MPa  | ISO 527-3       |
| MD: Broken, 25 µm, blown film         | 30.0          | MPa  | ISO 527-3       |
| TD: Yield, 25 µm, blown film          | 11.0          | MPa  | ISO 527-3       |
| MD: Yield, 25 µm, blown film          | 13.0          | MPa  | ISO 527-3       |

Film properties have been measured at film of 25 µm with a BUR of 3. The film has been produced on Kiefel IBC blown film line with 200 kg/h. Die size 200 mm, die gap 0.8 mm.

#### NOTE

1.

Blown Film

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