

# SABIC® LDPE 2201H1W

Low Density Polyethylene

Saudi Basic Industries Corporation (SABIC)

Message:

SABIC® LDPE 2201H1W is a grade with a low level of anti block and a medium level of slip agent (E=erucamide). The grade has a very good draw down ability. Films based on 2201H1W combine toughness with high tear strength, good optical properties and low CoF.

Application

SABIC® LDPE 2201H1W is typically used for lamination films, high quality carrier bags and high quality packaging films.

SABIC® LDPE 2201H1W 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                                  | Low caking resistance (210 ppm)          |                   |             |
|   | Erucamide Lubricating Additive (450 ppm) |                   |             |
| Features                                  | Low caking resistance                    |                   |             |
|   | Low density                              |                   |             |
|   | Low friction coefficient                 |                   |             |
|   | Optical                                  |                   |             |
|   | Good stripping                           |                   |             |
|   | Good tear strength                       |                   |             |
|   | Good toughness                           |                   |             |
|   | Mobility Low to None                     |                   |             |
|   | Moderate smoothness                      |                   |             |
| Uses                                      | Blown Film                               |                   |             |
|   | Packaging                                |                   |             |
|   | Laminate                                 |                   |             |
|   | Bags                                     |                   |             |
|   | Non-specific food applications           |                   |             |
| Processing Method                         | Blow film                                |                   |             |
| Physical                                  | Nominal Value                            | Unit              | Test Method |
| Density                                   | 0.922                                    | g/cm <sup>3</sup> | ISO 1183/A  |
| Melt Mass-Flow Rate (MFR) (190°C/2.16 kg) | 0.85                                     | g/10 min          | ISO 1133    |
| Mechanical                                | Nominal Value                            | Unit              | Test Method |
| Coefficient of Friction (Blown Film)      | 0.15                                     |                   | ASTM D1894  |
| Films                                     | Nominal Value                            | Unit              | Test Method |
| Film Thickness - Tested                   | 50                                       | µm                |             |
| Tensile Modulus                           |  |                   | ISO 527-3   |
| MD: 50 µm, blown film                     | 170                                      | MPa               | ISO 527-3   |

| TD: 50 µm, blown film  | 170           | MPa  | ISO 527-3       |
|--|---------------|------|-----------------|
| Tensile Stress   |               |      | ISO 527-3       |
| MD: Yield, 50 µm, blown film   | 11.0          | MPa  | ISO 527-3       |
| TD: Yield, 50 µm, blown film   | 11.0          | MPa  | ISO 527-3       |
| MD: Broken, 50 µm, blown film  | 25.0          | MPa  | ISO 527-3       |
| TD: Broken, 50 µm, blown film  | 20.0          | MPa  | ISO 527-3       |
| Tensile Elongation   |               |      | ISO 527-3       |
| MD: Broken, 50 µm, blown film  | > 200         | %    | ISO 527-3       |
| TD: Broken, 50 µm, blown film  | > 500         | %    | ISO 527-3       |
| Impact   | Nominal Value | Unit | Test Method     |
| Impact Strength - Blown Film (50.0 µm)   | 250           | J/cm | ASTM D4272      |
| Blocking - Blown Film (50.0 µm)  | 50            | g    | Internal method |
| Re-blocking - Blown Film (50.0 µm)   |               | g    | Internal method |
| Tear Strength <sup>1</sup>   |               |      | ISO 6383-2      |
| MD : 50.0 µm   | 45.0          | kN/m | ISO 6383-2      |
| TD : 50.0 µm   | 45.0          | kN/m | ISO 6383-2      |
| Optical  | Nominal Value | Unit | Test Method     |
| Gloss (45°, 50.0 µm, Blown Film)   | 65            |      | ASTM D2457      |
| Haze (50.0 µm, Blown Film)   | 6.0           | %    | ASTM D1003A     |
| Additional Information   | Nominal Value | Unit | Test Method     |
| Film properties have been measured at film of 50 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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### Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533

Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China

