

# Petrothene® GA501022

Linear Low Density Polyethylene

LyondellBasell Industries

## Message:

The Petrothene GA501 series of resins is pelletized linear low density polyethylene selected by customers for film extrusion applications that require excellent drawdown and toughness. These resins have excellent puncture resistance, elongation and heat seal strength. Typical applications include heavy duty shipping sacks, trash can liners, commercial and industrial packaging, as well as food and consumer packaging.

| General Information                       |                         |                   |             |
|---|-------------------------|-------------------|-------------|
| Additive                                  | Antiblock (7000 ppm)    |                   |             |
|   | Slip (1350 ppm)         |                   |             |
| Features                                  | Antiblocking            |                   |             |
|   | Food Contact Acceptable |                   |             |
|   | Good Drawdown           |                   |             |
|   | Good Heat Seal          |                   |             |
|   | Good Toughness          |                   |             |
|   | Puncture Resistant      |                   |             |
|   | Slip                    |                   |             |
| Uses                                      | Bags                    |                   |             |
|   | Food Packaging          |                   |             |
|   | Industrial Applications |                   |             |
|   | Liners                  |                   |             |
|   | Packaging               |                   |             |
| Agency Ratings                            | FDA 21 CFR 177.1520     |                   |             |
| Forms                                     | Pellets                 |                   |             |
| Processing Method                         | Film Extrusion          |                   |             |
| Physical                                  | Nominal Value           | Unit              | Test Method |
| Density                                   | 0.918                   | g/cm <sup>3</sup> | ASTM D1505  |
| Melt Mass-Flow Rate (MFR) (190°C/2.16 kg) | 1.0                     | g/10 min          | ASTM D1238  |
| Films                                     | Nominal Value           | Unit              | Test Method |
| Film Thickness - Tested <sup>1</sup>      | 25                      | µm                | ASTM D882   |
| Secant Modulus                            |                         |                   |             |
| 1% Secant, MD : 25 µm, Blown Film         | 186                     | MPa               |             |
| 1% Secant, TD : 25 µm, Blown Film         | 193                     | MPa               | ASTM D882   |
| Tensile Strength                          |                         |                   |             |
| MD : Break, 25 µm, Blown Film             | 45.5                    | MPa               |             |
| TD : Break, 25 µm, Blown Film             | 32.4                    | MPa               |             |

|                                      |                      |      |             |
|--------------------------------------|----------------------|------|-------------|
| Tensile Elongation                   |                      |      | ASTM D882   |
| MD : Break, 25 µm,Blown Film         | 580                  | %    |             |
| TD : Break, 25 µm,Blown Film         | 730                  | %    |             |
| Dart Drop Impact (25 µm, Blown Film) | 100                  | g    | ASTM D1709A |
| Elmendorf Tear Strength              |                      |      | ASTM D1922  |
| MD : 25 µm, Blown Film               | 130                  | g    |             |
| TD : 25 µm, Blown Film               | 330                  | g    |             |
| Thermal                              | Nominal Value        | Unit | Test Method |
| Vicat Softening Temperature          | 107                  | °C   | ASTM D1525  |
| Optical                              | Nominal Value        | Unit | Test Method |
| Gloss (45°, 25.4 µm, Blown Film)     | 40                   |      | ASTM D2457  |
| Haze (25.4 µm, Blown Film)           | 20                   | %    | ASTM D1003  |
| Additional Information               | Nominal Value        |      |             |
| Blow-up Ratio                        | 2.5:1                |      |             |
| Extrusion                            | Nominal Value        | Unit |             |
| Melt Temperature                     | 204 to 232           | °C   |             |
| NOTE                                 |                      |      |             |
| 1.                                   | Blow-Up Ratio: 2.5:1 |      |             |

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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

