# Petrothene® GA601031

## Linear Low Density Polyethylene LyondellBasell Industries

#### Message:

The Petrothene GA601 series resins are pelletized linear low density polyethylenes selected by customers for applications that require maximum strength and toughness. These products offer excellent additive homogeneity, require no transfer equipment modification, and facilitate clean and safe handling. Typical applications include heavy duty shipping sacks, trash can liners, commercial and industrial packaging, as well as food and consumer packaging. The GA601 series resins offer enhanced film strength, drawdown, toughness and heat seal strength. In addition, these resins have excellent low temperature resistance for applications such as stretch film and frozen food packaging. The GA601 series resins can be purchased without additives or fully formulated with slip and antiblock.

| General Information               |                         |          |             |  |
|-----------------------------------|-------------------------|----------|-------------|--|
| Additive                          | Antiblock (6500 ppm)    |          |             |  |
| Features                          | Antiblocking            |          |             |  |
|                                   | Food Contact Acceptable |          |             |  |
|                                   | Good Drawdown           |          |             |  |
|                                   | Good Heat Seal          |          |             |  |
|                                   | Good Strength           |          |             |  |
|                                   | Good Toughness          |          |             |  |
| Uses                              | Bags                    |          |             |  |
|                                   | Film                    |          |             |  |
|                                   | Food Packaging          |          |             |  |
|                                   | Industrial Applications |          |             |  |
|                                   | Liners                  |          |             |  |
|                                   | Packaging               |          |             |  |
|                                   | Stretch Wrap            |          |             |  |
|                                   |                         |          |             |  |
| Agency Ratings                    | FDA 21 CFR 177.1520     |          |             |  |
| Forms                             | Pellets                 |          |             |  |
| Processing Method                 | Film Extrusion          |          |             |  |
| Physical                          | Nominal Value           | Unit     | Test Method |  |
| Density                           | 0.918                   | g/cm³    | 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           | 25                      | μm       |             |  |
| Secant Modulus                    |                         |          | ASTM D882   |  |
| 1% Secant, MD : 25 μm             | 200                     | MPa      |             |  |
| 1% Secant, TD : 25 μm             | 224                     | MPa      |             |  |
| Tensile Strength                  |                         |          | ASTM D882   |  |
| MD : Break, 25 μm                 | 55.8                    | MPa      |             |  |

| TD : Break, 25 µm                       | 42.1          | MPa  |             |
|---|---------------|------|-------------|
| Tensile Elongation                      |               |      | ASTM D882   |
| MD : Break, 25 µm                       | 580           | %    |             |
| TD : Break, 25 μm                       | 700           | %    |             |
| Dart Drop Impact (25 μm, Blown Film)    | 190           | g    | ASTM D1709A |
| Total Energy Impact (25 µm, Blown Film) | 2.44          | J    | ASTM D4272  |
| Elmendorf Tear Strength                 |               |      | ASTM D1922  |
| MD : 25 μm                              | 330           | g    |             |
| TD : 25 µm                              | 650           | g    |             |
| Thermal                                 | Nominal Value | Unit | Test Method |
| Vicat Softening Temperature             | 105           | °C   | ASTM D1525  |
| Optical                                 | Nominal Value | Unit | Test Method |
| Gloss (45°, 25.4 μm, Blown Film)        | 35            |      | ASTM D2457  |
| Haze (25.4 μm, Blown Film)              | 22            | %    | ASTM D1003  |
| Extrusion                               | Nominal Value | Unit |             |
| Melt Temperature                        | 204 to 232    | °C   |             |

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