

## Technical Data Sheet

### *Alathon* L5005V

High Molecular Weight High Density Polyethylene

#### Product Description

*Alathon* L5005V is a high molecular weight high density copolymer that provides broad bimodal molecular weight distribution, high stiffness and good heat seal response and strength. L5005V is selected by customers for use in merchandise bags, grocery sacks, trash can liners, produce bags and roll stock. Materials of animal origin are not used as plasticizers, additives or raw materials in L5005V.

**Application** Bags & Pouches; Can Liners; Retail Carryout Bags; Specialty Film

**Market** Flexible Packaging

**Processing Method** Blown Film

| Typical Properties               | Nominal Value | English Units     | Nominal Value | SI Units          | Test Method |
|----------------------------------|---------------|-------------------|---------------|-------------------|-------------|
| <b>Physical</b>                  |               |                   |               |                   |             |
| Melt Flow Rate, (190 °C/2.16 kg) | 0.06          | g/10 min          | 0.06          | g/10 min          | ASTM D1238  |
| Density, (23 °C)                 | 0.949         | g/cm <sup>3</sup> | 0.949         | g/cm <sup>3</sup> | ASTM D1505  |
| <b>Film</b>                      |               |                   |               |                   |             |
| Dart Drop Impact Strength, F50   | 340           | g                 | 340           | g                 | ASTM D1709  |
| Tensile Strength at Break        |               |                   |               |                   |             |
| MD                               | 12200         | psi               | 84.1          | MPa               | ASTM D882   |
| TD                               | 8300          | psi               | 57.2          | MPa               | ASTM D882   |
| Tensile Strength at Yield        |               |                   |               |                   |             |
| MD                               | 5000          | psi               | 34.5          | MPa               | ASTM D882   |
| TD                               | 4200          | psi               | 29.0          | MPa               | ASTM D882   |
| Tensile Elongation at Break      |               |                   |               |                   |             |
| MD                               | 320           | %                 | 320           | %                 | ASTM D882   |
| TD                               | 390           | %                 | 390           | %                 | ASTM D882   |
| Secant Modulus                   |               |                   |               |                   |             |
| MD                               | 137000        | psi               | 945           | MPa               | ASTM D882   |
| TD                               | 152000        | psi               | 1050          | MPa               | ASTM D882   |
| Elmendorf Tear Strength          |               |                   |               |                   |             |
| MD                               | 11            | g                 | 11            | g                 | ASTM D1922  |
| TD                               | 76            | g                 | 76            | g                 | ASTM D1922  |

## Notes

Film data obtained from sample produced on an Alpine 200 mm line equipped with a three layer die (40/35/25), three extruders (65 mm/75 mm/50 mm), internal bubble cooling, die gap of 1.5 mm, neck height of 8 x DD, blow up ratio of 4:1, film thickness of 0.8 mil and operating at 500 lbs/hr.

These are typical property values not to be construed as specification limits.

## Processing Techniques

Specific recommendations for resin type and processing conditions can only be made when the end use, required properties and fabrication equipment are known.

## Company Information

For further information regarding the LyondellBasell company, please visit <http://www.lyb.com/>.

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