

**Alathon H6017**

High Density Polyethylene

**Product Description**

Alathon H6017 provides good processing characteristics and exhibits excellent toughness and color as well as low odor and good molded-part stability. Typical applications include housewares, caps, closures and various food containers.

**Regulatory Status**

For regulatory compliance information, see Alathon H6017 [Product Stewardship Bulletin \(PSB\)](#) and [Safety Data Sheet \(SDS\)](#).

|                          |                            |
|--------------------------|----------------------------|
| <b>Status</b>            | Commercial: Active         |
| <b>Availability</b>      | North America              |
| <b>Application</b>       | Containers; Lids; Overcaps |
| <b>Market</b>            | Rigid Packaging            |
| <b>Processing Method</b> | Injection Molding          |

| Typical Properties                                      | Nominal Value | English Units      | Nominal Value | SI Units          | Test Method |
|---------------------------------------------------------|---------------|--------------------|---------------|-------------------|-------------|
| <b>Physical</b>                                         |               |                    |               |                   |             |
| Melt Flow Rate, (190 °C/2.16 kg)                        | 18            | g/10 min           | 18            | g/10 min          | ASTM D1238  |
| Density, (23 °C)                                        | 0.960         | g/cm <sup>3</sup>  | 0.960         | g/cm <sup>3</sup> | ASTM D1505  |
| Bulk Density                                            | 37-39         | lb/ft <sup>3</sup> | 593-625       | kg/m <sup>3</sup> | ASTM D1895  |
| Spiral Flow                                             | 11.1          | in                 | 28.2          | cm                | LYB Method  |
| <b>Mechanical</b>                                       |               |                    |               |                   |             |
| Flexural Modulus                                        |               |                    |               |                   |             |
| (1% Secant)                                             | 199000        | psi                | 1370          | MPa               | ASTM D790   |
| (2% Secant)                                             | 162000        | psi                | 1120          | MPa               | ASTM D790   |
| Flexural Young's Modulus                                | 214000        | psi                | 1480          | MPa               | ASTM D790   |
| Tensile Modulus, (1% Secant)                            | 126000        | psi                | 869           | MPa               | ASTM D638   |
| Tensile Young's Modulus                                 | 145000        | psi                | 1000          | MPa               | ASTM D638   |
| Tensile Stress at Break, (23 °C)                        | 4300          | psi                | 29.6          | MPa               | ASTM D638   |
| Tensile Elongation at Break, (23 °C)                    | 12            | %                  | 12            | %                 | ASTM D638   |
| <b>Impact</b>                                           |               |                    |               |                   |             |
| Notched Izod Impact Strength, (23 °C)                   | 0.74          | ft-lb/in           | 39            | J/m               | ASTM D256   |
| Unnotched Impact Strength, (-18 °C)                     | 10            | ft-lb/in           | 550           | J/m               | ASTM D4812  |
| <b>Hardness</b>                                         |               |                    |               |                   |             |
| Shore Hardness, (Shore D, max)                          | 72            |                    | 72            |                   | ASTM D2240  |
| <b>Thermal</b>                                          |               |                    |               |                   |             |
| Vicat Softening Temperature                             | 262           | °F                 | 128           | °C                | ASTM D1525  |
| Low Temperature Brittleness, F <sub>50</sub>            | <-105         | °F                 | <-76          | °C                | ASTM D746   |
| Deflection Temperature Under Load, (66 psi, Unannealed) | 165           | °F                 | 74            | °C                | ASTM D648   |
| Melting Temperature                                     | 271.4         | °F                 | 133           | °C                | ASTM D3418  |
| Crystallization Temperature                             | 240.3         | °F                 | 115.7         | °C                | ASTM D3418  |

## Notes

Conditions of Tensile Stress and Elongation values are: 50 mm/min, Type IV specimen.

Conditions of Flexural Modulus values are: 0.5 inches/min or 12.5 mm/min.

Conditions of Tensile Modulus values are: 50 mm/min, Type I Specimen.

Spiral Flow measures the number of inches of flow produced when molten resin is injected into a long, spiral channel (0.0625" insert), at a constant injection pressure of 1000 psi with a melt temperature of 440 °F.

Deflection Temperature Under Load and Low Temperature Brittleness data are for control and development work and are not intended for use in design or predicting performance at elevated or sub-ambient temperatures.

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

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