

## Technical Data Sheet

### *Alathon* M6080UV

High Density Polyethylene



#### Product Description

*Alathon* M6080UV is a narrow molecular weight distribution homopolymer that exhibits enhanced flow characteristics and good balance of stiffness and impact resistance. Typical applications include cases, tote bins, crates and trays. M6080UV contains a UV stabilizer for outdoor applications.

**Application** Crates; Pallets/Trays/Tote Bins

**Market** Rigid Packaging

**Processing Method** 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)                        | 7.9           | g/10 min           | 7.9           | g/10 min          | ASTM D1238  |
| Density                                                 | 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                                             | 8.6           | in                 | 21.8          | cm                | LYB Method  |
| <b>Mechanical</b>                                       |               |                    |               |                   |             |
| Flexural Modulus                                        |               |                    |               |                   |             |
| (1% Secant)                                             | 190000        | psi                | 1310          | MPa               | ASTM D790   |
| (2% Secant)                                             | 155000        | psi                | 1070          | MPa               | ASTM D790   |
| Flexural Young's Modulus                                | 205000        | psi                | 1410          | MPa               | ASTM D790   |
| Tensile Modulus, (1% Secant)                            | 123000        | psi                | 848           | MPa               | ASTM D638   |
| Tensile Young's Modulus                                 | 146000        | psi                | 1010          | MPa               | ASTM D638   |
| Tensile Stress at Break, (23 °C)                        | 2300          | psi                | 15.9          | MPa               | ASTM D638   |
| Tensile Stress at Yield, (23 °C)                        | 4250          | psi                | 29.3          | MPa               | ASTM D638   |
| Tensile Elongation at Break, (23 °C)                    | 380           | %                  | 380           | %                 | ASTM D638   |
| Tensile Elongation at Yield, (23 °C)                    | 11            | %                  | 11            | %                 | ASTM D638   |
| <b>Impact</b>                                           |               |                    |               |                   |             |
| Notched Izod Impact Strength, (23 °C)                   | 1.4           | ft-lb/in           | 75            | J/m               | ASTM D256   |
| Unnotched Impact Strength, (-18 °C)                     | No Break      |                    | No Break      |                   | ASTM D4812  |
| <b>Hardness</b>                                         |               |                    |               |                   |             |
| Shore Hardness, (Shore D, max)                          | 70            |                    | 70            |                   | ASTM D2240  |
| <b>Thermal</b>                                          |               |                    |               |                   |             |
| Vicat Softening Temperature                             | 264           | °F                 | 129           | °C                | ASTM D1525  |
| Low Temperature Brittleness, F <sub>50</sub>            | <-105         | °F                 | <-76          | °C                | ASTM D746   |
| Deflection Temperature Under Load, (66 psi, Unannealed) | 176           | °F                 | 80            | °C                | ASTM D648   |
| Melting Temperature                                     | 270.9         | °F                 | 132.7         | °C                | ASTM D3418  |
| Crystallization Temperature                             | 240.6         | °F                 | 115.9         | °C                | ASTM D3418  |