**ABS 620**

Extrusion Grade

**Typical Material Properties**

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| General | Nominal Values | ASTM Test Method  (Other) |
| Specific Gravity | 1.10 | D 792 |
| Gloss, 60°, Sheet | 98 |  |
| Critical Strain (50/50 CO/OA), 73°F | 0.62% | (Stolki) |

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| Mechanical Properties |  |  |
| Tensile Stress at Yield, 73°F | 5,600 lb/in2 | D 638 |
| Tensile Stress at Fail, 73°F | 4,600 lb/in 2 | D 638 |
| Tensile Modulus, 73°F | 380,000 lb/in2 | D 638 |
| Elongation at Fail, 73°F | 45% | D 638 |
| Flexural Stress at Yield, 73°F | 10,200 lb/in2 | D 790 |
| Flexural Modulus, 73°F | 350,000 lb/in2 | D 790 |
| Impact Strength: |  | D 256 |
| 73°F |  |  |
| 0.125-in Thickness | 5.1 ft-lbs/in |  |
| 0°F |  |  |
| 0.125-in Thickness | 1.7 ft-lbs/in |  |
| Multiaxial Impact, Driven Dart  (0.5-in dart, 1.5" ring) |  | (Ceast) |
| 73°F |  |  |
| Emax | 25 ft-lbsf |  |
| Etot | 35 ft-lbsf |  |
| 0°F |  |  |
| Emax | 10 ft-lbsf |  |
| Etot | 11 ft-lbsf |  |

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| Thermal |  |  |
| Heat Deflection Temperature, Annealed |  | D 648 |
| 264 psi | 208°F |  |

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| Flammability\* |  |  |
| Flame Class Rating | (UL94) |  |
| 1.0 mm |  | HB |

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| Notes |  |  |
| \*Flammability results are based on small-scale laboratory tests for purposes of relative comparison and are not intended to reflect the hazards presented by this or any other material under actual fire conditions. | | |

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| Suggested Processing Conditions |
| Dryer |
| Lustran ABS can be successfully extruded into quality sheet when the total moisture by weight is 0.03% maximum. Suggested drying conditions are 3 to 4 hours at 180°-200°F (82°-90°C) dew point air. |
| Extruder |
| To obtain optimum sheet mechanical properties, the extruder profile should be set to deliver polymer with a stock temperature between 460° and 500°F (238° to 260°C). Maintaining constant regrind level and particle size to the extruder feedstock will provide optimum extrusion consistency at a given extrusion profile. |
| Screw Design |
| Single- or two-stage screws can be used to extrude these products although a two-stage screw with a vacuum vent is the preferred setup. For two-stage screws, a first-stage compression ratio of 2.5 to 2.7 and a pump ratio of 1.5 to 2.0 are recommended. |
| Die |
| Die temperature settings for Lustran Guardian ABS normally range between 410°-485°F (210°-250°C). The die should be adjusted to provide uniform polymer melt at the lips. Maintaining constant regrind level to the extruder feedstock will improve gauge consistency at a given temperature profile. |
| Roll Stack |
| Suggested polishing roll settings for Lustran Guardian ABS, for a standard down stack setup are: Top - 200°F (93°C); middle - 165°F (74°C); and bottom - 200°F (93°C). Specific settings will change depending on sheet gauge and linear speed. |