**Inj-03 ABS**

General purpose high-impact, high-gloss injection molding grade of ABS

**Typical Material Properties**

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| General |  |  |
| Material Status | Commercial: Active |  |
| Availability | North America |  |
| Features | General Purpose | High Gloss |
|  | High Impact Resistance |  |
| Uses | Appliances | Housings |
|  | Consumer Applications | Toys |
| Appearance | Black | Natural Color |
| Processing Method | Injection Molding |  |

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| Physical Properties | Nominal Values | Test Method |
| Specific Gravity | 1.05  | ASTM D792 |
| Melt Mass-Flow Rate (MFR) |  | ASTM D1238  |
| 220°C/10.0 kg | 12 g/10 min |  |
| 230°C/3.8 kg | 5.0 g/10 min |  |
| Molding Shrinkage - Flow | 4.0E-3 to 6.0E-3 in/in | ASTM D955 |

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| Hardness |  |  |
| Rockwell Hardness (R-Scale) | 109  | ASTM D638 |

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| Mechanical Properties |  |  |
| Tensile Modulus | 370000 psi | ASTM D638 |
| Tensile Strength (Yield) | 6090 psi | ASTM D638 |
| Tensile Elongation (Break) | > 30 % | ASTM D638 |
| Flexural Modulus | 377000 psi | ASTM D790 |
| Flexural Strength (Yield) | 10400 psi | ASTM D790 |

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| Impact |  |  |
| Notched Izod Impact |  | ASTM D256 |
| -40°F, 0.126 in | 1.2 ft·lb/in |  |
| 73°F, 0.126 in | 7.0 ft·lb/in |  |
| 73°F, 0.500 in | 3.9 ft·lb/in |  |

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| Thermal |  |  |
| Deflection Temperature Under Load |  | ASTM D648 |
| 66 psi, Unannealed, 0.500 in | 198 °F |   |
| 66 psi, Annealed, 0.500 in | 210 °F |  |
| 264 psi, Unannealed, 0.500 in | 185 °F |  |
| 264 psi, Annealed, 0.500 in, Compression Molded | 216 °F |  |
| 264 psi, Annealed, 0.500 in | 201 °F |  |
| Vicat Softening Temperature | 223 °F | ASTM D1525 |
| CLTE - Flow | 5.0E-5 in/in/°F | ASTM D696 |

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| Flammability |  |  |
| Flame Rating |  | UL 94 |
| 0.0591 in | HB  |  |
| 0.118 in | HB |  |

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| Injection | Nominal Value |
| Drying Temperature | 160 to 171 °F |
| Drying Time | 4.0 hr |
| Dew Point | 84.2 °F |
| Suggested Max Moisture | 0.10 % |
| Rear Temperature | 455 to 480 °F |
| Middle Temperature | 466 to 489 °F |
| Front Temperature | 475 to 500 °F |
| Nozzle Temperature | 475 to 500 °F |
| Processing (Melt) Temp | 475 to 525 °F |
| Mold Temperature | 109 to 151 °F |
| Injection Pressure | 9990 to 16000 psi |
| Back Pressure | 0.00 to 24.9 psi |
| Clamp Tonnage | 2.2 to 4.5 tons/in² |
| Cushion | < 0.250 in |
| Injection Notes |  |
| Alternative Drying Recommendation | 82.0 - 88.0 °C @ 7200 sec. |

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| Notes |
| 1These links provide you with access to supplier literature. We work hard to keep them up to date; however you may find the most current literature from the supplier. |