



Wednesday, August 30, 2023

PRL ABS-FR

Polymer Resources Ltd. - Acrylonitrile Butadiene Styrene

Units 

English ▼

|        |                                 |
|--------|---------------------------------|
| Action | Legend ( <a href="#">Open</a> ) |
|        |                                 |

General Information

|                 |                                        |
|-----------------|----------------------------------------|
| General         |                                        |
| Material Status | • Commercial: Active                   |
| Availability    | • North America                        |
| Additive        | • Flame Retardant                      |
| Features        | • Flame Retardant • Self Extinguishing |
| RoHS Compliance | • RoHS Compliant                       |
| UL File Number  | • E113219                              |
| Forms           | • Pellets                              |

ASTM & ISO Properties <sup>1</sup>

|                                                                   |                  |           |                         |
|-------------------------------------------------------------------|------------------|-----------|-------------------------|
| Physical                                                          | Nominal Value    | Unit      | Test Method             |
| Density / Specific Gravity                                        | 1.22             |           | ASTM D792               |
| Melt Mass-Flow Rate (MFR) (230°C/3.8 kg)                          | 4.0 to 16        | g/10 min  | ASTM D1238              |
| Molding Shrinkage - Flow (0.125 in)                               | 5.0E-3 to 7.0E-3 | in/in     | ASTM D955               |
| Mechanical                                                        | Nominal Value    | Unit      | Test Method             |
| Tensile Modulus (0.125 in)                                        | 330000           | psi       | ASTM D638               |
| Tensile Strength (Yield, 0.125 in)                                | 5900             | psi       | ASTM D638               |
| Tensile Strength (Break, 0.125 in)                                | 5500             | psi       | ASTM D638               |
| Tensile Elongation (Yield, 0.125 in)                              | 2.2              | %         | ASTM D638               |
| Tensile Elongation (Break, 0.125 in)                              | 10               | %         | ASTM D638               |
| Flexural Modulus (0.125 in)                                       | 345000           | psi       | ASTM D790               |
| Flexural Strength (0.125 in)                                      | 9000             | psi       | ASTM D790               |
| Impact                                                            | Nominal Value    | Unit      | Test Method             |
| Charpy Notched Impact Strength (73°F)                             | 9.0              | ft·lb/in² | ISO 179/1eA             |
| Notched Izod Impact (73°F, 0.125 in)                              | 4.0              | ft·lb/in  | ASTM D256               |
| Notched Izod Impact Strength                                      |                  |           | ISO 180/1A              |
| -22°F                                                             | 3.0              | ft·lb/in² |                         |
| 73°F                                                              | 9.0              | ft·lb/in² |                         |
| Gardner Impact (0.125 in)                                         | 150              | in·lb     | ASTM D3029              |
| Hardness                                                          | Nominal Value    | Unit      | Test Method             |
| Rockwell Hardness (R-Scale)                                       | 100              |           | ASTM D785               |
| Thermal                                                           | Nominal Value    | Unit      | Test Method             |
| Deflection Temperature Under Load (66 psi, Unannealed, 0.125 in)  | 190              | °F        | ASTM D648               |
| Deflection Temperature Under Load (264 psi, Unannealed, 0.125 in) | 180              | °F        | ASTM D648               |
| Vicat Softening Temperature                                       | 195              | °F        | ASTM D1525 <sup>2</sup> |
| RTI Elec                                                          |                  |           | UL 746B                 |
| 0.06 in                                                           | 140              | °F        |                         |
| 0.12 in                                                           | 140              | °F        |                         |
| RTI Imp                                                           |                  |           | UL 746B                 |
| 0.06 in                                                           | 140              | °F        |                         |
| 0.12 in                                                           | 140              | °F        |                         |
| RTI Str                                                           |                  |           | UL 746B                 |
| 0.06 in                                                           | 140              | °F        |                         |
| 0.12 in                                                           | 140              | °F        |                         |
| Electrical                                                        | Nominal Value    | Unit      | Test Method             |
| Volume Resistivity                                                | 1.0E+16          | ohms·cm   | ASTM D257               |
| Flammability                                                      | Nominal Value    | Unit      | Test Method             |
| Flame Rating                                                      |                  |           | UL 94                   |

2023/8/30 下午6:00  
0.06 in, ALL

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Acrylonitrile Butadiene Styrene  
V-0  
V-0  
5VA

| Processing Information                                                            |               |      |
|-----------------------------------------------------------------------------------|---------------|------|
| Injection                                                                         | Nominal Value | Unit |
| Drying Temperature                                                                | 180 to 200    | °F   |
| Drying Time                                                                       | 2.0 to 4.0    | hr   |
| Drying Time, Maximum                                                              | 8.0           | hr   |
| Rear Temperature                                                                  | 340 to 360    | °F   |
| Middle Temperature                                                                | 390 to 410    | °F   |
| Front Temperature                                                                 | 410 to 430    | °F   |
| Processing (Melt) Temp                                                            | 400 to 450    | °F   |
| Mold Temperature                                                                  | 120 to 160    | °F   |
| Notes                                                                             |               |      |
| <sup>1</sup> Typical properties: these are not to be construed as specifications. |               |      |
| <sup>2</sup> Rate B (120°C/h), Loading 2 (50 N)                                   |               |      |

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