



## POLYLAC® PA-727

CHI MEI CORPORATION - Acrylonitrile Butadiene Styrene

Sunday, November 3, 2019

### General Information

| General                   |                                                                                                       |                                                         |                       |
|---------------------------|-------------------------------------------------------------------------------------------------------|---------------------------------------------------------|-----------------------|
| Material Status           | • Commercial: Active                                                                                  |                                                         |                       |
| Availability              | • Africa & Middle East<br>• Asia Pacific                                                              | • Europe<br>• Latin America                             | • North America       |
| Features                  | • Platable                                                                                            |                                                         |                       |
| RoHS Compliance           | • RoHS Compliant                                                                                      |                                                         |                       |
| Automotive Specifications | • CHRYSLER MS-DB-197<br>CPN2220 Color: Natural<br>• CHRYSLER MS-DB-197<br>CPN2220 Color: H9174B2 Gray | • DELPHI DX300010 Color:<br>Natural<br>• GM GMP.ABS.007 | • GM GMW15572P-ABS-T5 |
| Resin ID (ISO 1043)       | • >ABS<                                                                                               |                                                         |                       |

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

| Physical                                    | Nominal Value | Unit                   | Test Method  |
|---------------------------------------------|---------------|------------------------|--------------|
| Density / Specific Gravity <sup>2</sup>     | 1.04          |                        | ASTM D792    |
| Density (73°F)                              | 1.05          | g/cm <sup>3</sup>      | ISO 1183     |
| Melt Mass-Flow Rate (200°C/5.0 kg)          | 1.6           | g/10 min               | ASTM D1238   |
| Melt Volume-Flow Rate (MVR) (220°C/10.0 kg) | 19            | cm <sup>3</sup> /10min | ISO 1133     |
| Molding Shrinkage                           | 0.40 to 0.70  | %                      | ISO 294-4    |
| Mechanical                                  | Nominal Value | Unit                   | Test Method  |
| Tensile Strength <sup>3</sup> (Yield)       | 6590          | psi                    | ASTM D638    |
| Tensile Stress (Yield)                      | 6670          | psi                    | ISO 527-2/50 |
| Tensile Stress (Break)                      | 4930          | psi                    | ISO 527-2/50 |
| Tensile Elongation <sup>3</sup> (Break)     | 40            | %                      | ASTM D638    |
| Tensile Strain (Break)                      | 25            | %                      | ISO 527-2/50 |
| Flexural Modulus <sup>4</sup>               | 250000        | psi                    | ASTM D790    |
| Flexural Modulus <sup>5</sup>               | 290000        | psi                    | ISO 178      |
| Flexural Strength <sup>4</sup>              | 10300         | psi                    | ASTM D790    |
| Flexural Stress <sup>5</sup>                | 10300         | psi                    | ISO 178      |
| Impact                                      | Nominal Value | Unit                   | Test Method  |
| Charpy Notched Impact Strength              |               |                        | ISO 179      |
| -22°F                                       | 5.7           | ft-lb/in <sup>2</sup>  |              |
| 73°F                                        | 12            | ft-lb/in <sup>2</sup>  |              |
| Notched Izod Impact                         |               |                        | ASTM D256    |
| 73°F, 0.126 in                              | 5.3           | ft-lb/in               |              |
| 73°F, 0.252 in                              | 4.7           | ft-lb/in               |              |
| Notched Izod Impact Strength                |               |                        | ISO 180/1A   |
| -22°F                                       | 5.2           | ft-lb/in <sup>2</sup>  |              |
| 73°F                                        | 11            | ft-lb/in <sup>2</sup>  |              |
| Hardness                                    | Nominal Value | Unit                   | Test Method  |
| Rockwell Hardness (R-Scale)                 | 113           |                        | ASTM D785    |

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| Thermal                                                  | Nominal Value | Unit     | Test Method             |
|----------------------------------------------------------|---------------|----------|-------------------------|
| Deflection Temperature Under Load<br>264 psi, Unannealed | 189           | °F       | ASTM D648               |
| Heat Deflection Temperature (264 psi, Unannealed)        | 181           | °F       | ISO 75-2/A              |
| Deflection Temperature Under Load (264 psi, Annealed)    | 207           | °F       | ASTM D648               |
| Heat Deflection Temperature (264 psi, Annealed)          | 212           | °F       | ISO 75-2/A              |
| Vicat Softening Temperature                              | 223           | °F       | ASTM D1525 <sup>6</sup> |
| Vicat Softening Temperature                              |               |          |                         |
| --                                                       | 221           | °F       | ISO 306/A50             |
| --                                                       | 208           | °F       | ISO 306/B50             |
| CLTE - Flow                                              | 4.9E-5        | in/in/°F | ISO 11359-2             |
| Flammability                                             | Nominal Value | Unit     | Test Method             |
| Flame Rating (0.06 in)                                   | HB            |          | UL 94                   |

### Processing Information

| Injection          | Nominal Value | Unit |
|--------------------|---------------|------|
| Drying Temperature | 176 to 185    | °F   |
| Drying Time        | 3.0 to 4.0    | hr   |
| Rear Temperature   | 356 to 428    | °F   |
| Middle Temperature | 374 to 446    | °F   |
| Front Temperature  | 374 to 446    | °F   |
| Mold Temperature   | 86 to 158     | °F   |

### Notes

<sup>1</sup> Typical properties: these are not to be construed as specifications.

<sup>2</sup> 23°C

<sup>3</sup> 0.24 in/min

<sup>4</sup> 0.11 in/min

<sup>5</sup> 0.079 in/min

<sup>6</sup> Rate A (50°C/h), Loading 1 (10 N)