

**ColorFast® FRA204***Americhem - Acrylonitrile Butadiene Styrene***General Information****Product Description**

High gloss, excellent impact ABS, V0/5VA-rated

**General**

|                   |                                              |                                                 |                 |
|-------------------|----------------------------------------------|-------------------------------------------------|-----------------|
| Material Status   | • Commercial: Active                         |                                                 |                 |
| Availability      | • Africa & Middle East<br>• Asia Pacific     | • Europe<br>• Latin America                     | • North America |
| Additive          | • Flame Retardant                            |                                                 |                 |
| Features          | • Excellent Colorability                     | • Flame Retardant                               |                 |
| Uses              | • Consumer Applications<br>• Household Goods | • Industrial Applications<br>• Industrial Parts |                 |
| UL File Number    | • E178307                                    |                                                 |                 |
| Forms             | • Pellets                                    |                                                 |                 |
| Processing Method | • Injection Molding                          |                                                 |                 |

**Properties <sup>1</sup>**

| Physical                                                          | Nominal Value    | Unit     | Test Method |
|-------------------------------------------------------------------|------------------|----------|-------------|
| Density / Specific Gravity                                        | 1.20             |          | ASTM D792   |
| Melt Mass-Flow Rate (MFR) (230°C/3.8 kg)                          | 10               | g/10 min | ASTM D1238  |
| Molding Shrinkage - Flow (0.125 in)                               | 3.0E-3 to 6.0E-3 | in/in    | ASTM D955   |
| Mechanical                                                        | Nominal Value    | Unit     | Test Method |
| Tensile Strength <sup>2</sup> (Yield)                             | 6000             | psi      | ASTM D638   |
| Tensile Strength <sup>2</sup> (Break)                             | 4400             | psi      | ASTM D638   |
| Tensile Elongation <sup>2</sup> (Yield)                           | 3.0              | %        | ASTM D638   |
| Tensile Elongation <sup>2</sup> (Break)                           | 10               | %        | ASTM D638   |
| Flexural Modulus <sup>2</sup>                                     | 330000           | psi      | ASTM D790   |
| Flexural Strength <sup>2</sup>                                    | 8900             | psi      | ASTM D790   |
| Impact                                                            | Nominal Value    | Unit     | Test Method |
| Notched Izod Impact                                               |                  |          | ASTM D256   |
| -22°F                                                             | 1.6              | ft-lb/in |             |
| 73°F                                                              | 5.0              | ft-lb/in |             |
| Hardness                                                          | Nominal Value    | Unit     | Test Method |
| Rockwell Hardness (R-Scale)                                       | 95               |          | ASTM D785   |
| Thermal                                                           | Nominal Value    | Unit     | Test Method |
| Deflection Temperature Under Load (264 psi, Unannealed, 0.250 in) | 165              | °F       | ASTM D648   |
| Flammability                                                      | Nominal Value    | Unit     | Test Method |
| Flame Rating                                                      |                  |          | UL 94       |
| 0.06 in                                                           | V-0              |          |             |
| 0.10 in                                                           | 5VA              |          |             |

**Processing Information**

| Injection            | Nominal Value | Unit |
|----------------------|---------------|------|
| Drying Temperature   | 160 to 180    | °F   |
| Drying Time          | 3.0 to 4.0    | hr   |
| Drying Time, Maximum | 8.0           | hr   |
| Suggested Shot Size  | 50 to 70      | %    |
| Rear Temperature     | 340 to 360    | °F   |
| Middle Temperature   | 390 to 410    | °F   |



|                        |                     |
|------------------------|---------------------|
| Front Temperature      | 410 to 430 °F       |
| Nozzle Temperature     | 380 to 430 °F       |
| Processing (Melt) Temp | 380 to 450 °F       |
| Mold Temperature       | 160 to 180 °F       |
| Back Pressure          | 50.0 to 100 psi     |
| Screw Speed            | 30 to 60 rpm        |
| Vent Depth             | 1.5E-3 to 2.0E-3 in |

Notes

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

<sup>2</sup> 2.0 in/min

