

## ColorFast® TPA100

Americhem - Acrylonitrile Butadiene Styrene

### General Information

#### Product Description

TPA100 is a medium flow injection molding grade of transparent ABS (acrylonitrile butadiene styrene) with good impact strength, toughness and clarity. It is intended for a wide range of applications.

#### General

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

### Properties <sup>1</sup>

| Physical                                                | Nominal Value    | Unit     | Test Method |
|---------------------------------------------------------|------------------|----------|-------------|
| Density / Specific Gravity                              | 1.07             |          | ASTM D792   |
| Melt Mass-Flow Rate (MFR) (220°C/10.0 kg)               | 26               | g/10 min | ASTM D1238  |
| Molding Shrinkage - Flow (0.125 in)                     | 4.0E-3 to 7.0E-3 | in/in    | ASTM D955   |
| Mechanical                                              | Nominal Value    | Unit     | Test Method |
| Tensile Strength <sup>2</sup> (Yield)                   | 6300             | psi      | ASTM D638   |
| Tensile Strength <sup>2</sup> (Break)                   | 4500             | psi      | ASTM D638   |
| Tensile Elongation <sup>2</sup> (Break)                 | 40               | %        | ASTM D638   |
| Flexural Modulus <sup>2</sup>                           | 310000           | psi      | ASTM D790   |
| Flexural Strength <sup>2</sup>                          | 10000            | psi      | ASTM D790   |
| Impact                                                  | Nominal Value    | Unit     | Test Method |
| Notched Izod Impact (73°F)                              | 2.6              | ft-lb/in | ASTM D256   |
| Hardness                                                | Nominal Value    | Unit     | Test Method |
| Rockwell Hardness (R-Scale)                             | 105              |          | ASTM D785   |
| Thermal                                                 | Nominal Value    | Unit     | Test Method |
| Deflection Temperature Under Load (264 psi, Unannealed) | 189              | °F       | ASTM D648   |
| Flammability                                            | Nominal Value    | Unit     | Test Method |
| Flame Rating (0.06 in)                                  | HB               |          | UL 94       |

### Processing Information

| Injection              | Nominal Value | Unit |
|------------------------|---------------|------|
| Drying Temperature     | 180           | °F   |
| Drying Time            | 2.0 to 4.0    | hr   |
| Rear Temperature       | 360 to 450    | °F   |
| Front Temperature      | 360 to 460    | °F   |
| Nozzle Temperature     | 370 to 460    | °F   |
| Processing (Melt) Temp | 380 to 470    | °F   |
| Mold Temperature       | 120 to 160    | °F   |
| Back Pressure          | 50.0 to 100   | psi  |
| Screw Speed            | 30 to 60      | rpm  |

### Notes

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

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

