

# UMG ALLOY® TC-80A

Polycarbonate + ABS

UMG ABS, Ltd.

## Message:

UMG ALLOY® TC-80A is a Polycarbonate + ABS (PC+ABS) material. It is available in Asia Pacific or North America for injection molding. Primary attribute of UMG ALLOY® TC-80A: RoHS Compliant.

| General Information                               |                   |                        |             |
|---------------------------------------------------|-------------------|------------------------|-------------|
| RoHS Compliance                                   | RoHS Compliant    |                        |             |
| UL File Number                                    | E47016            |                        |             |
| Forms                                             | Pellets           |                        |             |
| Processing Method                                 | Injection Molding |                        |             |
| Physical                                          | Nominal Value     | Unit                   | Test Method |
| Density (23°C)                                    | 1.13              | g/cm <sup>3</sup>      | ISO 1183    |
| Melt Volume-Flow Rate (MVR) (220°C/10.0 kg)       | 5.00              | cm <sup>3</sup> /10min | ISO 1133    |
| Molding Shrinkage - Flow (23°C)                   | 0.50 to 0.70      | %                      | ISO 294-4   |
| Hardness                                          | Nominal Value     | Unit                   | Test Method |
| Rockwell Hardness (R-Scale, 23°C)                 | 107               |                        | ISO 2039-2  |
| Mechanical                                        | Nominal Value     | Unit                   | Test Method |
| Tensile Modulus (23°C)                            | 1900              | MPa                    | ISO 527-2   |
| Tensile Stress (23°C)                             | 48.0              | MPa                    | ISO 527-2   |
| Flexural Modulus <sup>1</sup> (23°C)              | 2200              | MPa                    | ISO 178     |
| Flexural Stress <sup>2</sup> (23°C)               | 79.0              | MPa                    | ISO 178     |
| Impact                                            | Nominal Value     | Unit                   | Test Method |
| Charpy Notched Impact Strength                    |                   |                        | ISO 179     |
| -30°C                                             | 30                | kJ/m <sup>2</sup>      |             |
| 23°C                                              | 50                | kJ/m <sup>2</sup>      |             |
| Thermal                                           | Nominal Value     | Unit                   | Test Method |
| Heat Deflection Temperature (1.8 MPa, Unannealed) | 107               | °C                     | ISO 75-2/Af |
| CLTE - Flow                                       | 8.0E-5            | cm/cm/°C               | ISO 11359-2 |
| Injection                                         | Nominal Value     | Unit                   |             |
| Drying Temperature                                | 110               | °C                     |             |
| Drying Time                                       | 3.0 to 4.0        | hr                     |             |
| Rear Temperature                                  | 210 to 230        | °C                     |             |
| Middle Temperature                                | 230 to 250        | °C                     |             |
| Front Temperature                                 | 230 to 270        | °C                     |             |
| Nozzle Temperature                                | 220 to 250        | °C                     |             |
| Processing (Melt) Temp                            | 230 to 280        | °C                     |             |
| Mold Temperature                                  | 60.0 to 80.0      | °C                     |             |

|                    |              |     |
|--------------------|--------------|-----|
| Injection Pressure | 70.0 to 140  | MPa |
| Injection Rate     | Moderate     |     |
| Back Pressure      | 5.00 to 15.0 | MPa |
| Screw Speed        | 50 to 100    | rpm |
| NOTE               |              |     |
| 1.                 | 2.0 mm/min   |     |
| 2.                 | 2.0 mm/min   |     |

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