

# ASTALAC™ ABS MGP22

Acrylonitrile Butadiene Styrene

Marplex Australia Pty. Ltd.

## Message:

ASTALAC™ ABS MGP22 is a high melt flow and high impact strength grade of ABS which is designed for injection moulding applications requiring excellent toughness and abuse resistance whilst maintaining a balance of product rigidity, heat resistance and mouldability. Typical applications include automotive grilles and appliques, telecommunications housings and appliance cases.

Note: The letters "UV" included as a suffix indicates UV stabilisation has been added [ ie: ASTALAC™ ABS MGP22UV ].

| General Information                              |                         |                   |             |
|--------------------------------------------------|-------------------------|-------------------|-------------|
| Features                                         | Good Moldability        |                   |             |
|                                                  | Good Stiffness          |                   |             |
|                                                  | Good Toughness          |                   |             |
|                                                  | High Flow               |                   |             |
|                                                  | High Impact Resistance  |                   |             |
|                                                  | Medium Heat Resistance  |                   |             |
| Uses                                             | Appliances              |                   |             |
|                                                  | Automotive Applications |                   |             |
|                                                  | Housings                |                   |             |
| Processing Method                                | Injection Molding       |                   |             |
| Physical                                         | Nominal Value           | Unit              | Test Method |
| Specific Gravity                                 | 1.04                    | g/cm <sup>3</sup> | ASTM D792   |
| Melt Mass-Flow Rate (MFR)                        |                         |                   | ASTM D1238  |
| 220°C/10.0 kg                                    | 24                      | g/10 min          |             |
| 230°C/3.8 kg                                     | 6.0                     | g/10 min          |             |
| Molding Shrinkage - Flow (3.00 mm)               | 0.60                    | %                 | ASTM D955   |
| Water Absorption (24 hr)                         | 0.12                    | %                 | ASTM D570   |
| Hardness                                         | Nominal Value           | Unit              | Test Method |
| Rockwell Hardness (R-Scale)                      | 100                     |                   | ASTM D785   |
| Mechanical                                       | Nominal Value           | Unit              | Test Method |
| Tensile Strength <sup>1</sup> (3.20 mm)          | 39.0                    | MPa               | ASTM D638   |
| Tensile Elongation <sup>2</sup> (Break, 3.20 mm) | 40                      | %                 | ASTM D638   |
| Flexural Modulus <sup>3</sup> (3.20 mm)          | 2050                    | MPa               | ASTM D790   |
| Flexural Strength <sup>4</sup> (3.20 mm)         | 63.0                    | MPa               | ASTM D790   |
| Impact                                           | Nominal Value           | Unit              | Test Method |
| Notched Izod Impact (3.20 mm)                    | 300                     | J/m               | ASTM D256   |
| Gardner Impact (3.20 mm)                         | 40.0                    | J                 | ASTM D3029  |
| Thermal                                          | Nominal Value           | Unit              | Test Method |
| Deflection Temperature Under Load                |                         |                   | ASTM D648   |

| 1.8 MPa, Unannealed, 3.20 mm             | 75.0             | °C                 |                         |
|------------------------------------------|------------------|--------------------|-------------------------|
| 1.8 MPa, Unannealed, 6.40 mm             | 80.0             | °C                 |                         |
| 1.8 MPa, Unannealed, 12.7 mm             | 87.0             | °C                 |                         |
| Vicat Softening Temperature              | 104              | °C                 | ASTM D1525 <sup>5</sup> |
| CLTE - Flow                              | 8.5E-5           | cm/cm/°C           | ASTM D696               |
| Flammability                             | Nominal Value    | Unit               | Test Method             |
| Flame Rating (1.60 mm)                   | HB               |                    | UL 94                   |
| Glow Wire Ignition Temperature (1.60 mm) | 550              | °C                 | AS/NZS 60695            |
| Injection                                | Nominal Value    | Unit               |                         |
| Drying Temperature                       | 85.0 to 90.0     | °C                 |                         |
| Drying Time                              | 3.0 to 6.0       | hr                 |                         |
| Rear Temperature                         | 205 to 225       | °C                 |                         |
| Middle Temperature                       | 215 to 235       | °C                 |                         |
| Front Temperature                        | 225 to 245       | °C                 |                         |
| Processing (Melt) Temp                   | 220 to 250       | °C                 |                         |
| Mold Temperature                         | 40.0 to 70.0     | °C                 |                         |
| Injection Pressure                       | 60.0 to 140      | MPa                |                         |
| Injection Rate                           | Moderate         |                    |                         |
| Back Pressure                            | 0.100 to 0.500   | MPa                |                         |
| Screw Speed                              | 40 to 60         | rpm                |                         |
| Clamp Tonnage                            | 3.0 to 6.0       | kN/cm <sup>2</sup> |                         |
| NOTE                                     |                  |                    |                         |
| 1.                                       | 5.0 mm/min       |                    |                         |
| 2.                                       | 5.0 mm/min       |                    |                         |
| 3.                                       | 1.3 mm/min       |                    |                         |
| 4.                                       | 1.3 mm/min       |                    |                         |
| 5.                                       | Loading 1 (10 N) |                    |                         |

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