

# Sindustris ABS LMA312

Acrylonitrile Butadiene Styrene

Sincerity Australia Pty Ltd.

## Message:

Sindustris ABS LMA312 is an acrylonitrile butadiene styrene (ABS) material. This product is available in the Asia-Pacific region and is processed by injection molding.

The main features of Sindustris ABS LMA312 are:

- flame retardant/rated flame
- low gloss

Typical application areas include:

- sheet
- disc/rack
- Automotive Industry

| General Information                              |                                 |                   |             |
|--------------------------------------------------|---------------------------------|-------------------|-------------|
| Features                                         | Gloss, low                      |                   |             |
|                                                  | General                         |                   |             |
| Uses                                             | Sheet                           |                   |             |
|                                                  | Application in Automobile Field |                   |             |
|                                                  | General                         |                   |             |
|                                                  | Bracket tray                    |                   |             |
| UL File Number                                   | E306922                         |                   |             |
| 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) (220°C/10.0 kg)        | 7.0                             | g/10 min          | ASTM D1238  |
| Molding Shrinkage - Flow (3.20 mm)               | 0.40 - 0.70                     | %                 | ASTM D955   |
| Water Absorption (23°C, 24 hr)                   | 0.19                            | %                 | ASTM D570   |
| Hardness                                         | Nominal Value                   | Unit              | Test Method |
| Rockwell Hardness (R-Scale)                      | 108                             |                   | ASTM D785   |
| Mechanical                                       | Nominal Value                   | Unit              | Test Method |
| Tensile Strength <sup>1</sup> (Yield, 3.20 mm)   | 51.0                            | MPa               | ASTM D638   |
| Tensile Elongation <sup>2</sup> (Break, 3.20 mm) | > 30                            | %                 | ASTM D638   |
| Flexural Modulus <sup>3</sup> (3.20 mm)          | 2550                            | MPa               | ASTM D790   |
| Flexural Strength <sup>4</sup> (3.20 mm)         | 73.5                            | MPa               | ASTM D790   |
| Impact                                           | Nominal Value                   | Unit              | Test Method |
| Notched Izod Impact                              |                                 |                   | ASTM D256   |
| -30°C, 3.20 mm                                   | 110                             | J/m               | ASTM D256   |
| -30°C, 6.40 mm                                   | 190                             | J/m               | ASTM D256   |
| 23°C, 3.20 mm                                    | 390                             | J/m               | ASTM D256   |

| 23°C, 6.40 mm                                                                                                               | 250           | J/m  | ASTM D256               |
|-----------------------------------------------------------------------------------------------------------------------------|---------------|------|-------------------------|
| Thermal                                                                                                                     | Nominal Value | Unit | Test Method             |
| Deflection Temperature Under Load (1.8 MPa, Unannealed, 6.40 mm)                                                            | 92.0          | °C   | ASTM D648               |
| Vicat Softening Temperature                                                                                                 | 100           | °C   | ASTM D1525 <sup>5</sup> |
| Flammability                                                                                                                | Nominal Value |      | Test Method             |
| Flame Rating                                                                                                                |               |      | UL 94                   |
| 0.800 mm                                                                                                                    | HB            |      | UL 94                   |
| 1.60 mm                                                                                                                     | HB            |      | UL 94                   |
| 2.50 mm                                                                                                                     | HB            |      | UL 94                   |
| 3.20 mm                                                                                                                     | HB            |      | UL 94                   |
| Injection                                                                                                                   | Nominal Value | Unit |                         |
| Drying Temperature                                                                                                          | 70.0 - 80.0   | °C   |                         |
| Drying Time                                                                                                                 | 3.0 - 4.0     | hr   |                         |
| Suggested Max Moisture                                                                                                      | 0.010         | %    |                         |
| Rear Temperature                                                                                                            | 180 - 200     | °C   |                         |
| Middle Temperature                                                                                                          | 190 - 210     | °C   |                         |
| Front Temperature                                                                                                           | 200 - 230     | °C   |                         |
| Nozzle Temperature                                                                                                          | 200 - 230     | °C   |                         |
| Processing (Melt) Temp                                                                                                      | 200 - 230     | °C   |                         |
| Mold Temperature                                                                                                            | 40.0 - 60.0   | °C   |                         |
| Back Pressure                                                                                                               | 29.4 - 58.8   | MPa  |                         |
| Screw Speed                                                                                                                 | 30 - 60       | rpm  |                         |
| Extrusion                                                                                                                   | Nominal Value | Unit |                         |
| Drying Temperature                                                                                                          | 70.0 - 80.0   | °C   |                         |
| Drying Time                                                                                                                 | 3.0 - 4.0     | hr   |                         |
| Suggested Max Moisture                                                                                                      | 0.010         | %    |                         |
| Cylinder Zone 1 Temp.                                                                                                       | 180 - 200     | °C   |                         |
| Cylinder Zone 2 Temp.                                                                                                       | 190 - 210     | °C   |                         |
| Cylinder Zone 3 Temp.                                                                                                       | 200 - 230     | °C   |                         |
| Cylinder Zone 4 Temp.                                                                                                       | 200 - 230     | °C   |                         |
| Adapter Temperature                                                                                                         | 200 - 230     | °C   |                         |
| Melt Temperature                                                                                                            | 200 - 230     | °C   |                         |
| Die Temperature                                                                                                             | 200 - 230     | °C   |                         |
| Take-Off Roll                                                                                                               | 60.0 - 100    | °C   |                         |
| Extrusion instructions                                                                                                      |               |      |                         |
| Roll Stack Temperature Top: 70 to 100°C Roll Stack Temperature Middle: 70 to 90°C Roll Stack Temperature Bottom: 60 to 90°C |               |      |                         |
| NOTE                                                                                                                        |               |      |                         |
| 1.                                                                                                                          | 50 mm/min     |      |                         |
| 2.                                                                                                                          | 50 mm/min     |      |                         |
| 3.                                                                                                                          | 15 mm/min     |      |                         |
| 4.                                                                                                                          | 15 mm/min     |      |                         |

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