

# SD POLYCA™ IM6110

Polycarbonate + ABS

Sumika Styron Polycarbonate Limited

## Message:

SD POLYCA™ IM6000 series are PC/ABS alloy grades. These grades have excellent properties of both polycarbonate and ABS resins such as high impact strength, heat stability and good processing latitude in injection molding. We prepare variety of products to cover your applications.

| General Information                        |                         |                        |             |
|--------------------------------------------|-------------------------|------------------------|-------------|
| UL YellowCard                              | E123529-221490          |                        |             |
| Features                                   | Impact resistance, high |                        |             |
|                                            | Workability, good       |                        |             |
|                                            | Thermal stability, good |                        |             |
| Uses                                       | Electrical housing      |                        |             |
| Appearance                                 | Opacity                 |                        |             |
| Processing Method                          | Injection molding       |                        |             |
| Part Marking Code                          | >PC+ABS                 |                        |             |
| Physical                                   | Nominal Value           | Unit                   | Test Method |
| Density                                    | 1.13                    | g/cm <sup>3</sup>      | ISO 1183    |
| Melt Volume-Flow Rate (MVR) (250°C/5.0 kg) | 6.00                    | cm <sup>3</sup> /10min | ISO 1133    |
| Molding Shrinkage                          |                         |                        | ASTM D955   |
| Flow                                       | 0.50 - 0.70             | %                      | ASTM D955   |
| Transverse flow                            | 0.50 - 0.70             | %                      | ASTM D955   |
| Water Absorption (23°C, 24 hr)             | 0.20                    | %                      | ASTM D570   |
| Hardness                                   | Nominal Value           | Unit                   | Test Method |
| Rockwell Hardness (R-Scale)                | 118                     |                        | ASTM D785   |
| Mechanical                                 | Nominal Value           | Unit                   | Test Method |
| Tensile Modulus                            | 2300                    | MPa                    | ISO 527-2   |
| Tensile Strength                           |                         |                        |             |
| --                                         | 49.0                    | MPa                    | ASTM D638   |
| --                                         | 52.0                    | MPa                    | ISO 527-2   |
| Tensile Elongation                         |                         |                        |             |
| Fracture                                   | 110                     | %                      | ASTM D638   |
| Fracture                                   | 100                     | %                      | ISO 527-2   |
| Flexural Modulus                           |                         |                        |             |
| --                                         | 1960                    | MPa                    | ASTM D790   |
| --                                         | 2300                    | MPa                    | ISO 178     |
| Flexural Strength                          |                         |                        |             |
| --                                         | 73.0                    | MPa                    | ASTM D790   |
| --                                         | 70.0                    | MPa                    | ISO 178     |

| Impact                                | Nominal Value | Unit              | Test Method |
|---------------------------------------|---------------|-------------------|-------------|
| Charpy Notched Impact Strength (23°C) | 50            | kJ/m <sup>2</sup> | ISO 179     |
| Notched Izod Impact (23°C)            | 640           | J/m               | ASTM D256   |
| Thermal                               | Nominal Value | Unit              | Test Method |
| Deflection Temperature Under Load     |               |                   |             |
| 0.45 MPa, not annealed                | 128           | °C                | ASTM D648   |
| 1.8 MPa, not annealed                 | 110           | °C                | ASTM D648   |
| 1.8 MPa, not annealed                 | 100           | °C                | ISO 75-2/A  |
| Linear thermal expansion coefficient  |               |                   | ASTM D696   |
| Flow                                  | 7.0E-5        | cm/cm/°C          | ASTM D696   |
| Lateral                               | 7.0E-5        | cm/cm/°C          | ASTM D696   |

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