

# CYCOLOY™ C1200HF resin

Polycarbonate + ABS

SABIC Innovative Plastics

## Message:

PC+ABS, excellent flow/impact/high heat resistance. Low temperature ductility. For automotive, appliance and electrical components.

| General Information                                  |                                    |                   |                 |
|------------------------------------------------------|------------------------------------|-------------------|-----------------|
| UL YellowCard                                        | E45587-236932                      | E207780-228463    |                 |
| Features                                             | Impact resistance, good            |                   |                 |
|                                                      | Good liquidity                     |                   |                 |
|                                                      | Heat resistance, high              |                   |                 |
|                                                      | ductility                          |                   |                 |
| Uses                                                 | Electrical/Electronic Applications |                   |                 |
|                                                      | Home appliance components          |                   |                 |
|                                                      | Application in Automobile Field    |                   |                 |
| Processing Method                                    | Injection molding                  |                   |                 |
| Physical                                             | Nominal Value                      | Unit              | Test Method     |
| Specific Gravity                                     | 1.15                               | g/cm <sup>3</sup> | ASTM D792       |
| Melt Mass-Flow Rate (MFR) (260°C/5.0 kg)             | 19                                 | g/10 min          | ASTM D1238      |
| Molding Shrinkage - Flow (3.20 mm)                   | 0.50 - 0.70                        | %                 | Internal method |
| Mechanical                                           | Nominal Value                      | Unit              | Test Method     |
| Tensile Modulus <sup>1</sup>                         | 2280                               | MPa               | ASTM D638       |
| Tensile Strength <sup>2</sup> (Yield)                | 57.2                               | MPa               | ASTM D638       |
| Tensile Elongation <sup>3</sup>                      |                                    |                   | ASTM D638       |
| Yield                                                | 5.0                                | %                 | ASTM D638       |
| Fracture                                             | 100                                | %                 | ASTM D638       |
| Flexural Modulus <sup>4</sup> (50.0 mm Span)         | 2340                               | MPa               | ASTM D790       |
| Flexural Strength <sup>5</sup> (Yield, 50.0 mm Span) | 88.3                               | MPa               | ASTM D790       |
| Impact                                               | Nominal Value                      | Unit              | Test Method     |
| Notched Izod Impact                                  |                                    |                   | ASTM D256       |
| -30°C                                                | 480                                | J/m               | ASTM D256       |
| 23°C                                                 | 590                                | J/m               | ASTM D256       |
| Instrumented Dart Impact                             |                                    |                   | ASTM D3763      |
| -30°C, Total Energy                                  | 54.2                               | J                 | ASTM D3763      |
| 23°C, Total Energy                                   | 54.2                               | J                 | ASTM D3763      |
| Thermal                                              | Nominal Value                      | Unit              | Test Method     |
| Deflection Temperature Under Load                    |                                    |                   | ASTM D648       |
| 0.45 MPa, unannealed, 3.20mm                         | 129                                | °C                | ASTM D648       |

|                                  |                  |          |             |
|----------------------------------|------------------|----------|-------------|
| 1.8 MPa, unannealed, 3.20mm      | 113              | °C       | ASTM D648   |
| Vicat Softening Temperature      | 130              | °C       | ISO 306/B50 |
| CLTE - Flow (-40 to 40°C)        | 7.2E-5           | cm/cm/°C | ASTM E831   |
| RTI Elec                         | 105              | °C       | UL 746      |
| RTI Imp                          | 80.0             | °C       | UL 746      |
| RTI                              | 105              | °C       | UL 746      |
| Electrical                       | Nominal Value    |          | Test Method |
| Comparative Tracking Index (CTI) | PLC 2            |          | UL 746      |
| High Amp Arc Ignition (HAI)      | PLC 1            |          | UL 746      |
| Hot-wire Ignition (HWI)          | PLC 3            |          | UL 746      |
| Flammability                     | Nominal Value    |          | Test Method |
| Flame Rating (1.19 mm)           | HB               |          | UL 94       |
| Injection                        | Nominal Value    | Unit     |             |
| Drying Temperature               | 100 - 110        | °C       |             |
| Drying Time                      | 3.0 - 4.0        | hr       |             |
| Drying Time, Maximum             | 8.0              | hr       |             |
| Suggested Max Moisture           | 0.020            | %        |             |
| Suggested Shot Size              | 30 - 80          | %        |             |
| Hopper Temperature               | 60.0 - 80.0      | °C       |             |
| Rear Temperature                 | 250 - 290        | °C       |             |
| Middle Temperature               | 255 - 295        | °C       |             |
| Front Temperature                | 260 - 300        | °C       |             |
| Nozzle Temperature               | 275 - 300        | °C       |             |
| Processing (Melt) Temp           | 275 - 300        | °C       |             |
| Mold Temperature                 | 60.0 - 90.0      | °C       |             |
| Back Pressure                    | 0.300 - 0.700    | MPa      |             |
| Screw Speed                      | 40 - 70          | rpm      |             |
| Vent Depth                       | 0.038 - 0.076    | mm       |             |
| NOTE                             |                  |          |             |
| 1.                               | 50 mm/min        |          |             |
| 2.                               | Type 1, 50mm/min |          |             |
| 3.                               | Type 1, 50mm/min |          |             |
| 4.                               | 1.3 mm/min       |          |             |
| 5.                               | 1.3 mm/min       |          |             |

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