

## Cycloloy\* Resin FXC810SP

## Europe-Africa-Middle East: COMMERCIAL

CYCOLOY FXC810SP is a multi-purpose PC+ABS injection moulding grade, suitable for those applications that require speckle colour effects. The colour package may effect performance.

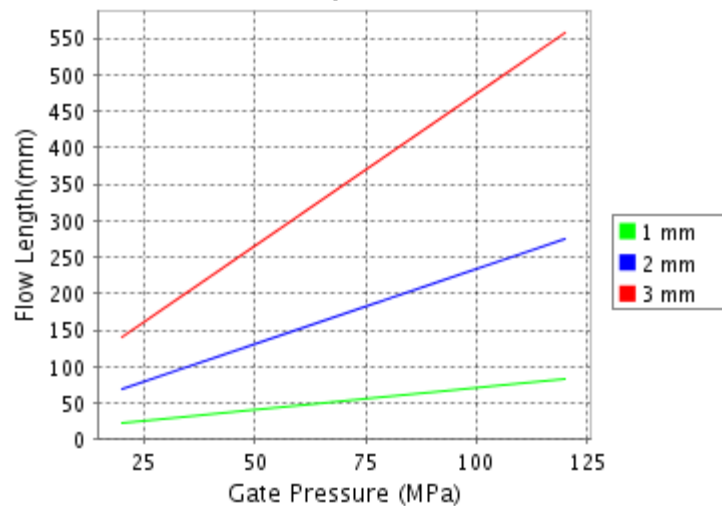
## Property

| TYPICAL PROPERTIES <sup>(1)</sup>                      |           |                         |              |
|--|-----------|-------------------------|--------------|
| MECHANICAL   | Value     | Unit                    | Standard     |
| Taber Abrasion, CS-17, 1 kg                            | 63        | mg/1000cy               | SABIC Method |
| Tensile Stress, yield, 50 mm/min                       | 55        | MPa                     | ISO 527      |
| Tensile Stress, break, 50 mm/min                       | 45        | MPa                     | ISO 527      |
| Tensile Strain, yield, 50 mm/min                       | 5         | %                       | ISO 527      |
| Tensile Strain, break, 50 mm/min                       | 9         | %                       | ISO 527      |
| Tensile Modulus, 1 mm/min                              | 2400      | MPa                     | ISO 527      |
| Flexural Stress, yield, 2 mm/min                       | 88        | MPa                     | ISO 178      |
| Flexural Modulus, 2 mm/min                             | 2500      | MPa                     | ISO 178      |
| Hardness, H358/30                                      | 99        | MPa                     | ISO 2039-1   |
| Hardness, Rockwell R                                   | 121       | -                       | ISO 2039-2   |
| IMPACT   | Value     | Unit                    | Standard     |
| Izod Impact, notched 80*10*3 +23°C                     | 25        | kJ/m <sup>2</sup>       | ISO 180/1A   |
| Izod Impact, notched 80*10*3 -30°C                     | 12        | kJ/m <sup>2</sup>       | ISO 180/1A   |
| Charpy 23°C, V-notch Edgew 80*10*3 sp=62mm             | 25        | kJ/m <sup>2</sup>       | ISO 179/1eA  |
| Charpy -30°C, V-notch Edgew 80*10*3 sp=62mm            | 12        | kJ/m <sup>2</sup>       | ISO 179/1eA  |
| THERMAL  | Value     | Unit                    | Standard     |
| Thermal Conductivity                                   | 0.2       | W/m-°C                  | ISO 8302     |
| CTE, -40°C to 40°C, flow                               | 8.E-05    | 1/°C                    | ISO 11359-2  |
| CTE, -40°C to 40°C, xflow                              | 8.E-05    | 1/°C                    | ISO 11359-2  |
| Vicat Softening Temp, Rate B/50                        | 128       | °C                      | ISO 306      |
| Vicat Softening Temp, Rate B/120                       | 130       | °C                      | ISO 306      |
| HDT/Be, 0.45MPa Edgew 120*10*4 sp=100mm                | 128       | °C                      | ISO 75/Be    |
| HDT/Ae, 1.8 MPa Edgew 120*10*4 sp=100mm                | 108       | °C                      | ISO 75/Ae    |
| Relative Temp Index, Elec                              | 105       | °C                      | UL 746B      |
| Relative Temp Index, Mech w/impact                     | 80        | °C                      | UL 746B      |
| Relative Temp Index, Mech w/o impact                   | 105       | °C                      | UL 746B      |
| PHYSICAL   | Value     | Unit                    | Standard     |
| Mold Shrinkage on Tensile Bar, flow (2)                | 0.4 - 0.6 | %                       | SABIC Method |
| Density  | 1.15      | g/cm <sup>3</sup>       | ISO 1183     |
| Water Absorption, (23°C/sat)                           | 0.6       | %                       | ISO 62       |
| Moisture Absorption (23°C / 50% RH)                    | 0.2       | %                       | ISO 62       |
| Melt Volume Rate, MVR at 260°C/5.0 kg                  | 22        | cm <sup>3</sup> /10 min | ISO 1133     |
| ELECTRICAL   | Value     | Unit                    | Standard     |
| Hot Wire Ignition {PLC}                                | 3         | PLC Code                | UL 746A      |
| High Ampere Arc Ign, surface {PLC}                     | 0         | PLC Code                | UL 746A      |
| Comparative Tracking Index (UL) {PLC}                  | 3         | PLC Code                | UL 746A      |
| FLAME CHARACTERISTICS                                  | Value     | Unit                    | Standard     |
| UL Compliant, 94HB Flame Class Rating (3)(4)           | 1.2       | mm                      | UL 94 by GE  |
| UL Compliant, 94HB Flame Class Rating 2nd value (3)(4) | 3         | mm                      | UL 94 by GE  |

## Processing

| Parameter                   | Value     | Unit |
|-----------------------------|-----------|------|
| Injection Molding           |           |      |
| Drying Temperature          | 100 - 110 | °C   |
| Drying Time                 | 2 - 4     | hrs  |
| Maximum Moisture Content    | 0.02      | %    |
| Melt Temperature            | 260 - 290 | °C   |
| Nozzle Temperature          | 240 - 280 | °C   |
| Front - Zone 3 Temperature  | 250 - 290 | °C   |
| Middle - Zone 2 Temperature | 250 - 290 | °C   |
| Rear - Zone 1 Temperature   | 230 - 260 | °C   |
| Hopper Temperature          | 60 - 80   | °C   |
| Mold Temperature            | 60 - 90   | °C   |

Source GMD, last updated:07/09/2002

**CALCULATED FLOW LENGTH INDICATION****Moldflow® Radial Flow Analysis****Cycloxy® FXC630MA****Melt Temperature : 250°C****Mold Temperature : 65°C**

**Note: Technical support is recommended if Gate Pressure is greater than 80 MPa. Contact your local representative.**

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THESE PROPERTY VALUES ARE NOT INTENDED FOR SPECIFICATION PURPOSES.

PLEASE CHECK WITH YOUR [\(LOCAL SALES OFFICE\)](#) FOR AVAILABILITY IN YOUR REGION

(1) Typical values only. Variations within normal tolerances are possible for various colors. All values are measured after at least 48 hours storage at 23°C/50% relative humidity. All properties, except the melt volume and melt flow rates, are measured on injection molded samples. All samples tested under ISO test standards are prepared according to ISO 294.

(2) Only typical data for selection purposes. Not to be used for part or tool design.

(3) This rating is not intended to reflect hazards presented by this or any other material under actual fire conditions.

(4) Internal measurements according to UL standards.

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