

# Makrolon® SF810

Polycarbonate

Covestro - Polycarbonates

## Message:

MVR (300 °C/1.2 kg) 6.0 cm<sup>3</sup>/10 min; structural foam; glass fiber reinforced; flame retardant; easy release; injection molding; in combination with an appropriate blowing agent for the production of structural foam moldings

| General Information                                      |                                  |                  |                  |
|----------------------------------------------------------|----------------------------------|------------------|------------------|
| UL YellowCard                                            | E41613-101013202                 | E41613-101013260 | E41613-101013261 |
| Filler / Reinforcement                                   | Glass Fiber,10% Filler by Weight |                  |                  |
| Additive                                                 | Flame Retardant                  |                  |                  |
| Features                                                 | Flame Retardant                  |                  |                  |
|                                                          | Good Mold Release                |                  |                  |
| Uses                                                     | Structural Foam                  |                  |                  |
| RoHS Compliance                                          | RoHS Compliant                   |                  |                  |
| Processing Method                                        | Injection Molding                |                  |                  |
| Physical                                                 | Nominal Value                    | Unit             | Test Method      |
| Density (23°C)                                           | 1.27                             | g/cm³            | ISO 1183         |
| Melt Volume-Flow Rate (MVR) (300°C/1.2 kg)               | 6.00                             | cm³/10min        | ISO 1133         |
| Molding Shrinkage <sup>1</sup>                           |                                  |                  | ISO 294-4        |
| Across Flow : 2.00 mm                                    | 0.45                             | %                |                  |
| Flow : 2.00 mm                                           | 0.60                             | %                |                  |
| Water Absorption                                         |                                  |                  | ISO 62           |
| Saturation, 23°C                                         | 0.26                             | %                |                  |
| Equilibrium, 23°C, 50% RH                                | 0.10                             | %                |                  |
| Mechanical                                               | Nominal Value                    | Unit             | Test Method      |
| Tensile Modulus (23°C)                                   | 3800                             | MPa              | ISO 527-2/1      |
| Tensile Stress                                           |                                  |                  |                  |
| Yield, 23°C                                              | 64.0                             | MPa              | ISO 527-2/50     |
| Break, 23°C                                              | 45.0                             | MPa              | ISO 527-2/5      |
| Tensile Strain                                           |                                  |                  |                  |
| Yield, 23°C                                              | 4.0                              | %                | ISO 527-2/50     |
| Break, 23°C                                              | 15                               | %                | ISO 527-2/5      |
| Flexural Modulus <sup>2</sup> (23°C)                     | 3600                             | MPa              | ISO 178          |
| Flexural Stress <sup>3</sup> (23°C)                      | 105                              | MPa              | ISO 178          |
| Flexural Strain at Flexural Strength <sup>4</sup> (23°C) | 5.8                              | %                | ISO 178          |
| Thermal                                                  | Nominal Value                    | Unit             | Test Method      |
| Heat Deflection Temperature                              |                                  |                  |                  |
| 0.45 MPa, Unannealed                                     | 140                              | °C               | ISO 75-2/B       |

| 1.8 MPa, Unannealed                     | 135           | °C       | ISO 75-2/A  |
|-----------------------------------------|---------------|----------|-------------|
| Vicat Softening Temperature             | 145           | °C       | ISO 306/B50 |
| CLTE                                    |               |          | ISO 11359-2 |
| Flow : 23 to 55°C                       | 4.0E-5        | cm/cm/°C |             |
| Transverse : 23 to 55°C                 | 6.5E-5        | cm/cm/°C |             |
| Electrical                              | Nominal Value | Unit     | Test Method |
| Surface Resistivity                     | 1.0E+16       | ohms     | IEC 60093   |
| Volume Resistivity (23°C)               | 1.0E+16       | ohms·cm  | IEC 60093   |
| Electric Strength (23°C, 1.00 mm)       | 36            | kV/mm    | IEC 60243-1 |
| Relative Permittivity                   |               |          | IEC 60250   |
| 23°C, 100 Hz                            | 3.20          |          |             |
| 23°C, 1 MHz                             | 3.20          |          |             |
| Comparative Tracking Index (Solution A) | 175           | V        | IEC 60112   |
| Flammability                            | Nominal Value | Unit     | Test Method |
| Oxygen Index <sup>5</sup>               | 35            | %        | ISO 4589-2  |
| NOTE                                    |               |          |             |
| 1.                                      | 60x60x2 mm    |          |             |
| 2.                                      | 2.0 mm/min    |          |             |
| 3.                                      | 2.0 mm/min    |          |             |
| 4.                                      | 2 mm/min      |          |             |
| 5.                                      | Procedure A   |          |             |

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