

# EMERGE™ PC 8702-15 (EU)

Advanced Resin

Trinseo

## Message:

EMERGE™ PC 8702-15 Advanced Resin is an ignition-resistant , 20% glass reinforced, polycarbonate resin containing no bromine, chlorine , or phosphate additives. It is an easy flow resin with a mold release system designed for thin wall injection moulding applications.

Applications:

Electrical parts

Structural parts

| General Information                                       |                                    |                   |              |
|-----------------------------------------------------------|------------------------------------|-------------------|--------------|
| UL YellowCard                                             | E213639-100879760                  |                   |              |
| Filler / Reinforcement                                    | Glass Fiber,20% Filler by Weight   |                   |              |
| Additive                                                  | Mold Release                       |                   |              |
| Features                                                  | Bromine Free                       |                   |              |
|                                                           | Chlorine Free                      |                   |              |
|                                                           | Flame Retardant                    |                   |              |
|                                                           | Good Flow                          |                   |              |
| Uses                                                      | Electrical/Electronic Applications |                   |              |
|                                                           | Structural Parts                   |                   |              |
| Forms                                                     | Pellets                            |                   |              |
| Physical                                                  | Nominal Value                      | Unit              | Test Method  |
| Density                                                   | 1.33                               | g/cm <sup>3</sup> | ISO 1183/B   |
| Melt Mass-Flow Rate (MFR) (300°C/1.2 kg)                  | 15                                 | g/10 min          | ISO 1133     |
| Molding Shrinkage                                         |                                    |                   | ISO 294-4    |
| Across Flow                                               | 0.20 to 0.40                       | %                 |              |
| Flow                                                      | 0.20 to 0.40                       | %                 |              |
| Mechanical                                                | Nominal Value                      | Unit              | Test Method  |
| Tensile Modulus (4.00 mm, Injection Molded)               | 5800                               | MPa               | ISO 527-2/1  |
| Tensile Stress                                            |                                    |                   | ISO 527-2/50 |
| Yield, 4.00 mm, Injection Molded                          | 100                                | MPa               |              |
| Break, 4.00 mm, Injection Molded                          | 90.0                               | MPa               |              |
| Tensile Strain (Break, 4.00 mm, Injection Molded)         | 3.5                                | %                 | ISO 527-2/50 |
| Flexural Modulus <sup>1</sup> (4.00 mm, Injection Molded) | 5500                               | MPa               | ISO 178      |
| Flexural Stress <sup>2</sup> (4.00 mm, Injection Molded)  | 150                                | MPa               | ISO 178      |
| Impact                                                    | Nominal Value                      | Unit              | Test Method  |

| Charpy Notched Impact Strength (23°C, Injection Molded) | 8.8           | kJ/m <sup>2</sup> | ISO 179/1eA    |
|---------------------------------------------------------|---------------|-------------------|----------------|
| Notched Izod Impact Strength (23°C, Injection Molded)   | 8.3           | kJ/m <sup>2</sup> | ISO 180/A      |
| Thermal                                                 | Nominal Value | Unit              | Test Method    |
| Heat Deflection Temperature                             |               |                   |                |
| 0.45 MPa, Unannealed                                    | 143           | °C                | ISO 75-2/B     |
| 0.45 MPa, Annealed                                      | 148           | °C                | ISO 75-2/B     |
| 1.8 MPa, Unannealed                                     | 138           | °C                | ISO 75-2/A     |
| 1.8 MPa, Annealed                                       | 143           | °C                | ISO 75-2/A     |
| Vicat Softening Temperature                             | 150           | °C                | ISO 306/B50    |
| Ball Indentation Temperature                            | > 135         | °C                | IEC 60335-1    |
| CLTE                                                    |               |                   | ASTM D696      |
| Flow : -40 to 80°C                                      | 5.2E-5        | cm/cm/°C          |                |
| Transverse : -40 to 80°C                                | 2.5E-5        | cm/cm/°C          |                |
| Electrical                                              | Nominal Value | Unit              | Test Method    |
| Surface Resistivity                                     | 3.0E+14       | ohms              | IEC 60093      |
| Volume Resistivity (1.80 mm)                            | 1.0E+16       | ohms·cm           | IEC 60093      |
| Electric Strength (1.60 mm)                             | 27            | kV/mm             | IEC 60243-1    |
| Dielectric Constant                                     |               |                   | IEC 60250      |
| 1.60 mm, 10 Hz                                          | 3.10          |                   |                |
| 1.60 mm, 1 MHz                                          | 3.10          |                   |                |
| Comparative Tracking Index (3.00 mm, Solution A)        | 175           | V                 | IEC 60112      |
| Flammability                                            | Nominal Value | Unit              | Test Method    |
| Flame Rating <sup>3</sup>                               |               |                   | UL 94          |
| 0.750 mm                                                | V-2           |                   |                |
| 1.60 mm                                                 | V-0           |                   |                |
| Glow Wire Ignition Temperature <sup>4</sup>             |               |                   | IEC 60695-2-13 |
| 1.00 mm                                                 | 960           | °C                |                |
| 2.00 mm                                                 | 960           | °C                |                |
| 3.00 mm                                                 | 960           | °C                |                |
| Oxygen Index <sup>5</sup>                               | 35            | %                 | ISO 4589-2     |
| Injection                                               | Nominal Value | Unit              |                |
| Drying Temperature                                      | 120           | °C                |                |
| Drying Time                                             | 3.0 to 4.0    | hr                |                |
| Processing (Melt) Temp                                  | 300           | °C                |                |
| Mold Temperature                                        | 60.0          | °C                |                |
| NOTE                                                    |               |                   |                |
| 1.                                                      | 2.0 mm/min    |                   |                |
| 2.                                                      | 2.0 mm/min    |                   |                |

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