

# Celcon® CF802

Acetal (POM) Copolymer

Celanese Corporation

## Message:

Celcon® acetal copolymer grade CF802 is a conductive, fuel compatible general purpose acetal copolymer. Celcon® CF802 has been developed to dissipate static electricity from fuel handling systems.

Please note Celcon® CF802 has special processing considerations to ensure static dissipation properties. Use minimum back pressure and slowest screw speed possible in retracting screw during cooling portion of cycle. Large gate size (>2 mm) recommended. Pneumatic conveying of material long distances is not recommended.

| General Information                               |                                            |                   |                 |
|---------------------------------------------------|--------------------------------------------|-------------------|-----------------|
| Features                                          | Electrostatic discharge protection         |                   |                 |
|                                                   | Fuel resistance                            |                   |                 |
|                                                   | General                                    |                   |                 |
| Uses                                              | General                                    |                   |                 |
| RoHS Compliance                                   | Contact manufacturer                       |                   |                 |
| Multi-Point Data                                  | Isothermal Stress vs. Strain (ISO 11403-1) |                   |                 |
| Physical                                          | Nominal Value                              | Unit              | Test Method     |
| Density                                           | 1.47                                       | g/cm <sup>3</sup> | ISO 1183        |
| Molding Shrinkage                                 |                                            |                   | ISO 294-4       |
| Vertical flow direction                           | 1.6                                        | %                 | ISO 294-4       |
| Flow direction                                    | 1.7                                        | %                 | ISO 294-4       |
| Mechanical                                        | Nominal Value                              | Unit              | Test Method     |
| Tensile Modulus                                   | 3000                                       | MPa               | ISO 527-2/1A/1  |
| Tensile Stress (Yield)                            | 62.0                                       | MPa               | ISO 527-2/1A/50 |
| Tensile Strain (Yield)                            | 10                                         | %                 | ISO 527-2/1A/50 |
| Tensile Creep Modulus                             |                                            |                   | ISO 899-1       |
| 1 hr                                              | 2130                                       | MPa               | ISO 899-1       |
| 1000 hr                                           | 1050                                       | MPa               | ISO 899-1       |
| Flexural Modulus (23°C)                           | 3100                                       | MPa               | ISO 178         |
| Impact                                            | Nominal Value                              | Unit              | Test Method     |
| Charpy Notched Impact Strength                    |                                            |                   | ISO 179/1eA     |
| -30°C                                             | 4.0                                        | kJ/m <sup>2</sup> | ISO 179/1eA     |
| 23°C                                              | 4.0                                        | kJ/m <sup>2</sup> | ISO 179/1eA     |
| Charpy Unnotched Impact Strength                  |                                            |                   | ISO 179/1eU     |
| -30°C                                             | 70                                         | kJ/m <sup>2</sup> | ISO 179/1eU     |
| 23°C                                              | 70                                         | kJ/m <sup>2</sup> | ISO 179/1eU     |
| Notched Izod Impact (23°C)                        | 4.8                                        | kJ/m <sup>2</sup> | ISO 180/1A      |
| Thermal                                           | Nominal Value                              | Unit              | Test Method     |
| Heat Deflection Temperature (1.8 MPa, Unannealed) | 100                                        | °C                | ISO 75-2/A      |

|                                                                    |               |          |             |
|--------------------------------------------------------------------|---------------|----------|-------------|
| Melting Temperature <sup>1</sup>                                   | 167           | °C       | ISO 11357-3 |
| Linear thermal expansion coefficient                               |               |          | ISO 11359-2 |
| Flow                                                               | 1.0E-4        | cm/cm/°C | ISO 11359-2 |
| Lateral                                                            | 1.2E-4        | cm/cm/°C | ISO 11359-2 |
| Electrical                                                         | Nominal Value | Unit     | Test Method |
| Surface Resistivity                                                | 2.0E+3        | ohms     | IEC 60093   |
| Volume Resistivity                                                 |               |          |             |
| --                                                                 | 1.0E+3        | ohms·cm  | ASTM D257   |
| --                                                                 | 3.0E+2        | ohms·cm  | IEC 60093   |
| Injection                                                          | Nominal Value | Unit     |             |
| Drying Temperature                                                 | 80.0 - 100    | °C       |             |
| Drying Time                                                        | 3.0           | hr       |             |
| Rear Temperature                                                   | 170 - 180     | °C       |             |
| Middle Temperature                                                 | 175 - 185     | °C       |             |
| Front Temperature                                                  | 180 - 190     | °C       |             |
| Nozzle Temperature                                                 | 190 - 200     | °C       |             |
| Processing (Melt) Temp                                             | 180 - 200     | °C       |             |
| Mold Temperature                                                   | 80.0 - 120    | °C       |             |
| Injection Pressure                                                 | 60.0 - 120    | MPa      |             |
| Holding Pressure                                                   | 60.0 - 120    | MPa      |             |
| Back Pressure                                                      | 0.00 - 0.500  | MPa      |             |
| Injection instructions                                             |               |          |             |
| Manifold Temperature: 190 to 200°CZone 4 Temperature: 185 to 195°C |               |          |             |
| NOTE                                                               |               |          |             |
| 1.                                                                 | 10°C/min      |          |             |

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