



# Celcon® LW90-F2

## Celanese Corporation - Acetal (POM) Copolymer

Saturday, November 2, 2019

### General Information

#### Product Description

Celcon® LW90-F2 is an acetal copolymer formulated with a nominal 9 melt flow rate base polymer and a standard level of polytetrafluoroethylene filler (PTFE). It is designed for use in wear applications against plastic, metal, glass, or ceramic mating surfaces where silicone lubricants can not be tolerated.

#### General

|                 |                        |                 |                 |
|-----------------|------------------------|-----------------|-----------------|
| Material Status | • Commercial: Active   |                 |                 |
| Availability    | • Africa & Middle East | • Europe        | • North America |
| Additive        | • Asia Pacific         | • Latin America |                 |
| Features        | • PTFE Lubricant       |                 |                 |
| RoHS Compliance | • Wear Resistant       |                 |                 |
|                 | • Contact Manufacturer |                 |                 |

### ASTM & ISO Properties<sup>1</sup>

| Physical  | Nominal Value | Unit                   | Test Method     |
|---|---------------|------------------------|-----------------|
| Density   | 1.41          | g/cm <sup>3</sup>      | ISO 1183        |
| Melt Volume-Flow Rate (MVR) (190°C/2.16 kg)       | 8.00          | cm <sup>3</sup> /10min | ISO 1133        |
| Molding Shrinkage                                 |               |                        | ISO 294-4       |
| Across Flow                                       | 1.9           | %                      |                 |
| Flow  | 2.3           | %                      |                 |
| Mechanical  | Nominal Value | Unit                   | Test Method     |
| Tensile Modulus                                   | 384000        | psi                    | ISO 527-2/1A    |
| Tensile Stress (Yield)                            | 9140          | psi                    | ISO 527-2/1A/50 |
| Tensile Strain (Yield)                            | 9.0           | %                      | ISO 527-2/1A/50 |
| Flexural Modulus (73°F)                           | 377000        | psi                    | ISO 178         |
| Flexural Stress (3.5% Strain)                     | 10400         | psi                    | ISO 178         |
| Impact  | Nominal Value | Unit                   | Test Method     |
| Charpy Notched Impact Strength (73°F)             | 2.4           | ft·lb/in <sup>2</sup>  | ISO 179/1eA     |
| Charpy Unnotched Impact Strength                  |               |                        | ISO 179/1eU     |
| -22°F   | 57            | ft·lb/in <sup>2</sup>  |                 |
| 73°F  | 57            | ft·lb/in <sup>2</sup>  |                 |
| Notched Izod Impact Strength (73°F)               | 2.4           | ft·lb/in <sup>2</sup>  | ISO 180/1A      |
| Thermal   | Nominal Value | Unit                   | Test Method     |
| Heat Deflection Temperature (264 psi, Unannealed) | 208           | °F                     | ISO 75-2/A      |
| Vicat Softening Temperature                       | 322           | °F                     | ISO 306/B50     |
| Melting Temperature <sup>2</sup>                  | 331           | °F                     | ISO 11357-3     |
| Melting Temperature                               | 331           | °F                     |                 |
| CLTE - Flow                                       | 5.6E-5        | in/in/°F               | ISO 11359-2     |
| CLTE - Transverse                                 | 5.0E-5        | in/in/°F               | ISO 11359-2     |

### Processing Information

| Injection          | Nominal Value | Unit |
|--------------------|---------------|------|
| Drying Temperature | 212 to 248    | °F   |
| Drying Time        | 3.0 to 4.0    | hr   |
| Rear Temperature   | 338 to 356    | °F   |

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| Injection              | Nominal Value | Unit |
|------------------------|---------------|------|
| Middle Temperature     | 356 to 374    | °F   |
| Front Temperature      | 356 to 374    | °F   |
| Nozzle Temperature     | 374 to 392    | °F   |
| Processing (Melt) Temp | 356 to 392    | °F   |
| Mold Temperature       | 176 to 248    | °F   |
| Injection Rate         | Slow-Moderate |      |
| Back Pressure          | < 290         | psi  |

### Injection Notes

Zone4 temperature: 190 to 200°C

Hot runner temperature: 180 to 200°C

### Notes

<sup>1</sup> Typical properties: these are not to be construed as specifications.

<sup>2</sup> 10°C/min