

# DURACON® OL-10

Acetal (POM) Copolymer

Polyplastics Co., Ltd.

Message:

High Sliding, Oil Containing, Wear Resistant

| General Information                         |                          |                                        |             |
|---------------------------------------------|--------------------------|----------------------------------------|-------------|
| Additive                                    | PTFE lubricant           |                                        |             |
| Features                                    | Low friction coefficient |                                        |             |
|                                             | Good wear resistance     |                                        |             |
|                                             | Lubrication              |                                        |             |
| UL File Number                              | E45034                   |                                        |             |
| Forms                                       | Particle                 |                                        |             |
| Processing Method                           | Injection molding        |                                        |             |
| Part Marking Code (ISO 11469)               | >POM-PTFE                |                                        |             |
| Physical                                    | Nominal Value            | Unit                                   | Test Method |
| Density                                     | 1.41                     | g/cm <sup>3</sup>                      | ISO 1183    |
| Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)   | 10                       | g/10 min                               | ISO 1133    |
| Melt Volume-Flow Rate (MVR) (190°C/2.16 kg) | 9.00                     | cm <sup>3</sup> /10min                 | ISO 1133    |
| Water Absorption (23°C, 24 hr)              | 0.60                     | %                                      | ISO 62      |
| Hardness                                    | Nominal Value            | Unit                                   | Test Method |
| Rockwell Hardness (M-Scale)                 | 70                       |                                        | ISO 2039-2  |
| Mechanical                                  | Nominal Value            | Unit                                   | Test Method |
| Tensile Modulus                             | 2350                     | MPa                                    | ISO 527-2   |
| Tensile Stress                              | 48.0                     | MPa                                    | ISO 527-2   |
| Nominal Tensile Strain at Break             | 46                       | %                                      | ISO 527-2   |
| Flexural Modulus                            | 2200                     | MPa                                    | ISO 178     |
| Flexural Stress                             | 70.0                     | MPa                                    | ISO 178     |
| Coefficient of friction-Dynamic             |                          |                                        | JIS K7218   |
| -- 1                                        | 0.300                    |                                        | JIS K7218   |
| -- 2                                        | 0.190                    |                                        | JIS K7218   |
| Color Number                                | CF2001                   |                                        |             |
| Specific Wear                               |                          |                                        | JIS K7218   |
| -- 3                                        |                          | 10 <sup>-3</sup> mm <sup>3</sup> /N·km | JIS K7218   |
| -- 4                                        | 12.0                     | 10 <sup>-3</sup> mm <sup>3</sup> /N·km | JIS K7218   |
| -- 5                                        | 30.0                     | 10 <sup>-3</sup> mm <sup>3</sup> /N·km | JIS K7218   |
| -- 6                                        | 0.400                    | 10 <sup>-3</sup> mm <sup>3</sup> /N·km | JIS K7218   |
| Impact                                      | Nominal Value            | Unit                                   | Test Method |

| Charpy Notched Impact Strength                                                                                                                                       | 5.8           | kJ/m <sup>2</sup> | ISO 179/1eA     |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|-------------------|-----------------|
| Thermal                                                                                                                                                              | Nominal Value | Unit              | Test Method     |
| Heat Deflection Temperature (1.8 MPa, Unannealed)                                                                                                                    | 82.0          | °C                | ISO 75-2/A      |
| Linear thermal expansion coefficient                                                                                                                                 |               |                   | Internal method |
| Flow: 23 to 55°C                                                                                                                                                     | 1.2E-4        | cm/cm/°C          | Internal method |
| Lateral: 23 to 55°C                                                                                                                                                  | 1.2E-4        | cm/cm/°C          | Internal method |
| Electrical                                                                                                                                                           | Nominal Value | Unit              | Test Method     |
| Surface Resistivity                                                                                                                                                  | 2.0E+16       | ohms              | IEC 60093       |
| Volume Resistivity                                                                                                                                                   | 5.0E+14       | ohms·cm           | IEC 60093       |
| Flammability                                                                                                                                                         | Nominal Value | Unit              | Test Method     |
| Flame Rating                                                                                                                                                         | HB            |                   | UL 94           |
| Injection                                                                                                                                                            | Nominal Value | Unit              |                 |
| Drying Temperature                                                                                                                                                   | 80.0 - 90.0   | °C                |                 |
| Drying Time                                                                                                                                                          | 3.0 - 4.0     | hr                |                 |
| Processing (Melt) Temp                                                                                                                                               | 190 - 210     | °C                |                 |
| Mold Temperature                                                                                                                                                     | 60.0 - 80.0   | °C                |                 |
| Injection Pressure                                                                                                                                                   | 49.0 - 98.0   | MPa               |                 |
| Screw Speed                                                                                                                                                          | 100 - 150     | rpm               |                 |
| Injection instructions                                                                                                                                               |               |                   |                 |
| Injection Speed: 5-50mm/s (0.3-3m/min)Molding Cycle:<br>Injection Holding Pressure: Gate sealing time + alpha<br>Cooling: Plasticizing time or ejection capable time |               |                   |                 |

#### NOTE

1. vs M90-44, pressure 0.06MPa, 15cm/s
2. vs C-Steel, pressure 0.98MPa, 30cm/s
3. vs C-Steel, steel side, pressure 0.98MPa, 30cm/s
4. vs M90-44, material side, pressure 0.06MPa, 15cm/s
5. vs M90-44, M90-44 side, pressure 0.06MPa, 15cm/s
6. vs C-Steel, material side, pressure 0.98MPa, 30cm/s

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