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# CELCON® TX-31

CELCON®

A polymer modified wear resistance grade (an easy-flow grade) for general injection molding. Suitable for applications requiring reduced wear noise and a strong friction and wear resistance without sacrificing mechanical proeprties.

## Product information

| | | | |
|---|---|---|---|
| Resin Identification | POM | | ISO 1043 |
| Part Marking Code | >POM< | | ISO 11469 |

## Rheological properties

| | | | |
|---|---|---|---|
| Melt mass-flow rate | 30 | g/10min | ISO 1133 |
| Melt mass-flow rate, Temperature | 190 | °C | |
| Melt mass-flow rate, Load | 2.16 | kg | |
| Moulding shrinkage, parallel | 2.0 | % | ISO 294-4, 2577 |

## Typical mechanical properties

| | | | |
|---|---|---|---|
| Tensile modulus | 2550 | MPa | ISO 527-1/-2 |
| Tensile stress at yield, 50mm/min | 56 | MPa | ISO 527-1/-2 |
| Tensile strain at yield, 50mm/min | 8 | % | ISO 527-1/-2 |
| Nominal strain at break | 35 | % | ISO 527-1/-2 |
| Flexural modulus | 2400 | MPa | ISO 178 |
| Flexural strength | 80 | MPa | ISO 178 |
| Charpy notched impact strength, 23°C | 7 | kJ/m² | ISO 179/1eA |
| Charpy notched impact strength, -30°C | 4.5 | kJ/m² | ISO 179/1eA |
| Poisson's ratio | 0.38[C] | | |

[C]: Calculated

## Thermal properties

| | | | |
|---|---|---|---|
| Melting temperature, 10°C/min | 165 | °C | ISO 11357-1/-3 |
| Temperature of deflection under load, 1.8 MPa | 89 | °C | ISO 75-1/-2 |
| Coefficient of linear thermal expansion (CLTE), parallel | 130 | E-6/K | ISO 11359-1/-2 |

## Electrical properties

| | | | |
|---|---|---|---|
| Volume resistivity | 1E12 | Ohm.m | IEC 62631-3-1 |
| Surface resistivity | 1E16 | Ohm | IEC 62631-3-2 |

## Physical/Other properties

| | | | |
|---|---|---|---|
| Humidity absorption, 2mm | 0.2 | % | Sim. to ISO 62 |
| Density | 1390 | kg/m³ | ISO 1183 |

## Injection

| | | |
|---|---|---|
| Drying Recommended | no | |
| Drying Temperature | 100 | °C |
| Drying Time, Dehumidified Dryer | 3 - 4 | h |
| Processing Moisture Content | ≤0.2 | % |
| Melt Temperature Optimum | 195 | °C |
| Min. melt temperature | 180 | °C |
| Max. melt temperature | 210 | °C |

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| | | |
|---|---|---|
| Screw tangential speed | ≤0.3 | m/s |
| Mold Temperature Optimum | 70 | °C |
| Min. mould temperature | 60 | °C |
| Max. mould temperature | 80 | °C |
| Hold pressure range | 60 - 120 | MPa |

## Characteristics

| | |
|---|---|
| Processing | Injection Moulding |
| Delivery form | Pellets |
| Special characteristics | Low wear / Low friction |

## Automotive

| OEM | STANDARD | ADDITIONAL INFORMATION |
|---|---|---|
| Hyundai | MS237-05 Type C | Ulsan, Korea |



Revised: 2025-01-23 Source: Celanese Materials Database