Celanese
The chemistry inside innovation™

# CELANEX® 6402 ECO-R

40% glass-fiber / mineral filled PBT+PET blend; with 25% post consumer recycled content; reduced warpage
Celanex 6402® ECO-R is a 40% Glass/ mineral filled polyester with 25% Post Consumer Recycled content. It is available in natural, black and various colors including metallic colors.

## Product information

| | | |
|---|---|---|
| Part Marking Code | (PBT+PET)-(GF+MD)40 | ISO 11469 |

## Rheological properties

| | | | |
|---|---|---|---|
| Melt mass-flow rate | 22 | g/10min | ISO 1133 |
| Melt mass-flow rate, Temperature | 265 | °C | |
| Melt mass-flow rate, Load | 2.16 | kg | |
| Moulding shrinkage range, parallel | 0.1 - 0.2 | % | ISO 294-4, 2577 |
| Moulding shrinkage range, normal | 0.4 - 0.6 | % | ISO 294-4, 2577 |

## Typical mechanical properties

| | | | |
|---|---|---|---|
| Tensile Modulus | 13500 | MPa | ISO 527-1/-2 |
| Stress at break, 5mm/min | 147 | MPa | ISO 527-1/-2 |
| Strain at break, 5mm/min | 2.1 | % | ISO 527-1/-2 |
| Flexural Modulus | 12500 | MPa | ISO 178 |
| Flexural Strength | 220 | MPa | ISO 178 |
| Charpy notched impact strength, 23°C | 7.5 | kJ/m² | ISO 179/1eA |

## Thermal properties

| | | | |
|---|---|---|---|
| Temp. of deflection under load, 1.8 MPa | 205 | °C | ISO 75-1/-2 |

## Other properties

| | | | |
|---|---|---|---|
| Density | 1660 | kg/m³ | ISO 1183 |

## Injection

| | | | |
|---|---|---|---|
| Drying Temperature | 121 | °C | |
| Drying Time, Dehumidified Dryer | 4 | h | |
| Processing Moisture Content | 0.02 | % | |
| Melt Temperature Optimum | 260 | °C | Internal |
| Max. mould temperature | 65 - 93 | °C | |
| Back pressure | | MPa | |

## Characteristics

| | |
|---|---|
| Additives | Release agent, Contains Recycle |

Celanese
The chemistry inside innovation™

# CELANEX® 6402 ECO-R

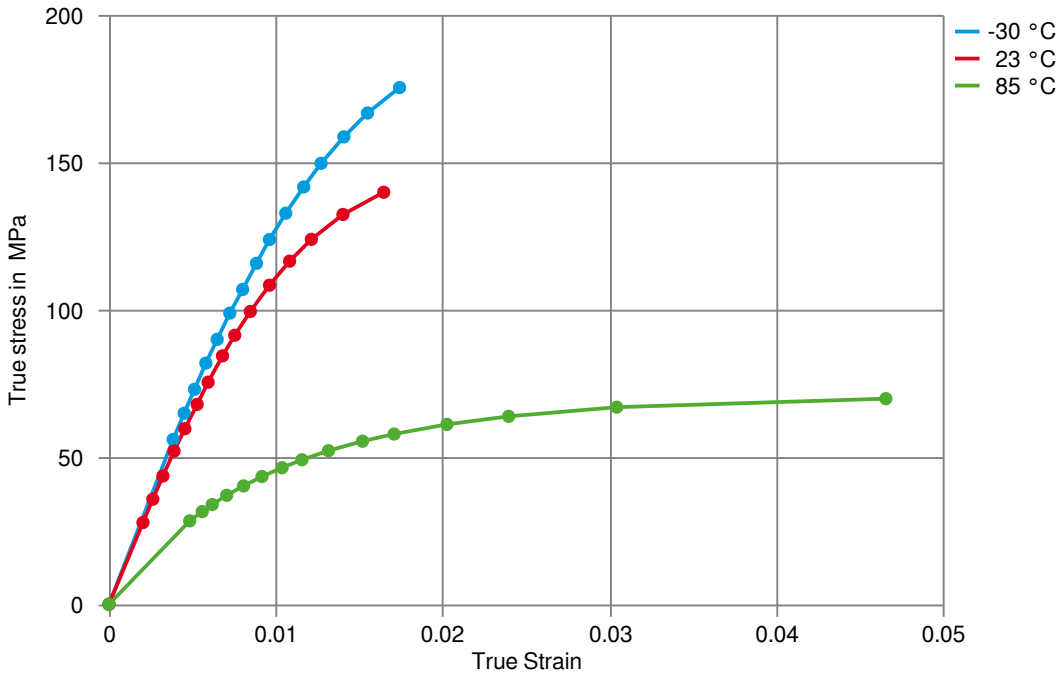
## Additional information

| | |
|---|---|
| Injection molding | Rear Temperature 450-480 (230-250) deg F (deg C)<br>Center Temperature 460-490(235-255) deg F (deg C)<br>Front Temperature 470-500 (240-260) deg F (deg C)<br>Nozzle Temperature 480-510 (250-265) deg F (deg C)<br>Melt Temperature 460-510 (235-265) deg F (deg C)<br>Mold Temperature 150-200(65-93) deg F (deg C)<br>Back Pressure 0-50 psi<br>Screw Speed Medium<br>Injection Speed Fast<br><br>Injection speed, injection pressure and holding pressure have to be optimized to the individual article geometry. To avoid material degradation during processing low back pressure and minimum screw speed have to be used. Overheating of the material has to be avoided, in particular for flame retardant grades. Up to 25% clean and dry regrind may be used. |

Celanese
The chemistry inside innovation™

# CELANEX® 6402 ECO-R

## True stress-strain



Celanese
The chemistry inside innovation™

# CELANEX® 6402 ECO-R

## Processing Texts

| | |
|---|---|
| Pre-drying | To avoid hydrolytic degradation during processing, CELANEX resins have to be dried to a moisture level equal to or less than 0.02%. Drying should be done in a dehumidifying hopper dryer capable of dewpoints <-40°F (-40°C) at 250°F (121°C) for 4 hours. |
| Longer pre-drying times/storage | For subsequent storage of the material in the dryer until processed (<= 60 h) it is necessary to lower the temperature to 100° C. |
| Injection molding | Rear Temperature 450-480 (230-250) deg F (deg C)<br>Center Temperature 460-490(235-255) deg F (deg C)<br>Front Temperature 470-500 (240-260) deg F (deg C)<br>Nozzle Temperature 480-510 (250-265) deg F (deg C)<br>Melt Temperature 460-510 (235-265) deg F (deg C)<br>Mold Temperature 150-200(65-93) deg F (deg C)<br>Back Pressure 0-50 psi<br>Screw Speed Medium<br>Injection Speed Fast<br><br>Injection speed, injection pressure and holding pressure have to be optimized to the individual article geometry. To avoid material degradation during processing low back pressure and minimum screw speed have to be used. Overheating of the material has to be avoided, in particular for flame retardant grades. Up to 25% clean and dry regrind may be used. |
| Injection molding Preprocessing | To avoid hydrolytic degradation during processing, CELANEX resins have to be dried to a moisture level equal to or less than 0.02%. Drying should be done in a dehumidifying hopper dryer capable of dewpoints <-30°F (-34°C) at 250°F (121°C) for minimum 4 hours. |

## Other Approvals

Other Approvals

| OEM | Specification | Additional Information |
|---|---|---|
| Ford | WRS-M4D625-A3 | Natural, Black, Standard colors |
| GM | GMW16873P-PBT+PET-M7GF33 | Natural & Black |