

# 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
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## 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
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## Other properties

Density	1660 kg/m³	ISO 1183
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## 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
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## Additional information

### Injection molding

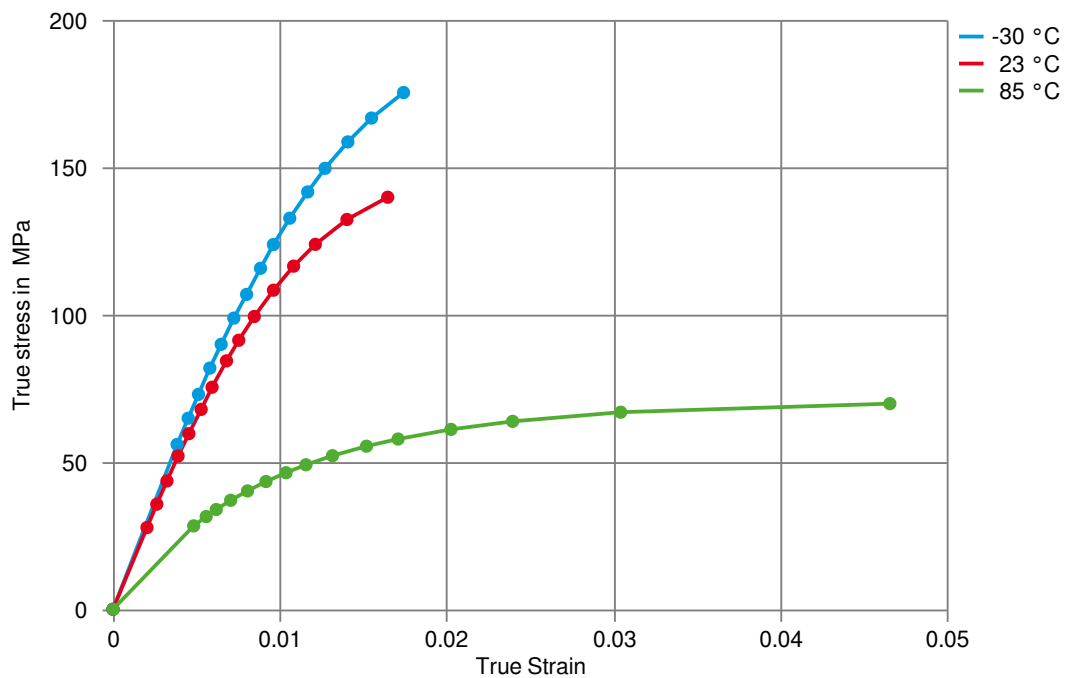
Rear Temperature 450-480 (230-250) deg F (deg C)  
Center Temperature 460-490(235-255) deg F (deg C)  
Front Temperature 470-500 (240-260) deg F (deg C)  
Nozzle Temperature 480-510 (250-265) deg F (deg C)  
Melt Temperature 460-510 (235-265) deg F (deg C)  
Mold Temperature 150-200(65-93) deg F (deg C)  
Back Pressure 0-50 psi  
Screw Speed Medium  
Injection Speed Fast

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.



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## True stress-strain



Printed: 2023-09-14



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## 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

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 Center Temperature 460-490(235-255) deg F (deg C)  
 Front Temperature 470-500 (240-260) deg F (deg C)  
 Nozzle Temperature 480-510 (250-265) deg F (deg C)  
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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

