

TECHNICAL DATA SHEET

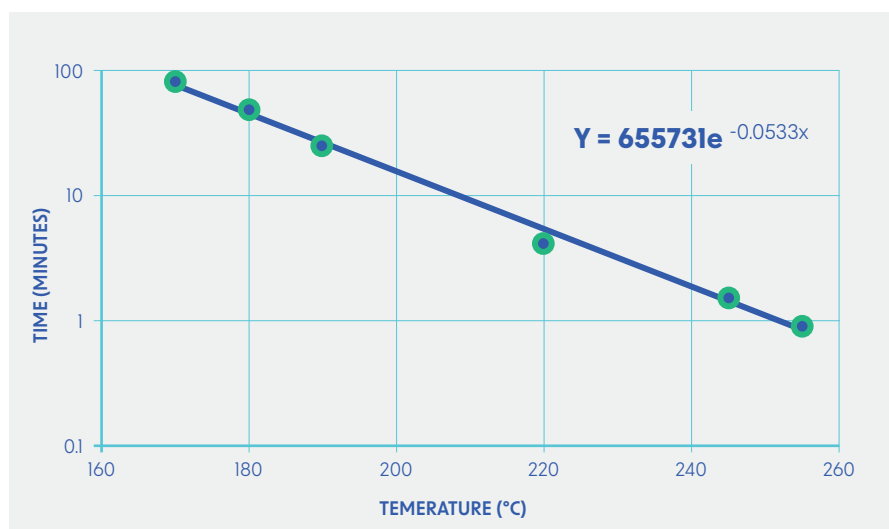
METOL 160 CBT OLIGOMER POWDER (CATALYSED)



Product Description

METOL 160 oligomer powder is a low melt temperature (140°C), low melt Viscosity (30cPS) thermoplastic powdered oligomer, based on PBT, which can be processed by common polymer processing techniques such as rotational moulding and traditional composite techniques such as vacuum bagging, press moulding and pultrusion. METOL 160 contains a heat activated catalyst which converts the low molecular weight oligomer into high molecular weight, engineering thermoplastic PBT. The polymerisation time is a function of catalyst type and concentration as well as processing temperature.

A typical polymerisation curve



INFINITE APPLICATIONS, ENDLESS POSSIBILITIES



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100% Recyclable

Description and Typical Properties METOL 160

Product Description METOL 160	Polybutylene Terephthalate Oligomer with Polymerisation Catalyst
CAS# (Polymer)	263244-54-8
Appearance	White powder or pellets
Melting temperature range	120°C-200°C
Heat of melting	64 J/g
Melt Viscosity	30 cPS
Density (Solid)	1.30 g/cm ³
Density (Liquid melt)	1.14 g/cm ³
Water Content	<1000 ppm
Heat Capacity	1.25 J/g (solid) 1.96J/g (liquid)
Typical Processing Temperature	180°C to 250°C

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Mechanical and Physical Properties

Once METOL 160 oligomer is polymerised the polymer exhibits the same mechanical and physical properties of PBT as shown in the table below.

METOL 160 Mechanical and physical properties*	
Melting Temp	220-267°C
Tensile Modulus	1.9-3.0 GPa
Tensile Strength (@ yield)	58 MPa
Elongation at Break	50-300 %
Compressive Strength (rupture or yield)	60-100 MPa
Flexural Strength (yield)	80-115 MPa
Coefficient of Linear Thermal Expansion	60-95 10 ⁻⁶ 1/°C
Heat Deflection Temp (flexural load) @ 1.81 MPa	50-85°C
@ 0.45 MPa	116-190°C
With 30% Glass @ 1.81 MPa	193-204°C
With 30% Glass @ 0.45 MPa	199-216°C
Specific Gravity	1.31-1.38
Water Absorption (3.2mm thick specimen) 24hr @ saturation	0.08-0.09%
	0.4-0.5%
Dielectric Strength (3.2mm, 1/8" thick spec.) short time	420-550 v./mil

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Typical Properties of PBT Thermoplastic Polyester (Polymerised METOL)

*Projection moulded parts



Storage and Handling

METOL 160 powder can be handled by the same methods used for other polymer powders and should be stored in a cool, dry place. Companies should use good industrial hygiene practices and provide adequate ventilation to prevent an accumulation of airborne powder.

Further information is provided on the METOL 160 MSDS datasheet.

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