

## Technical Data Sheet

### TECHNIPOL® Bio 1160

#### DESCRIPTION

TECHNIPOL® Bio 1160 is an aromatic - aliphatic copolyester, characterized by medium crystallinity and a low melting point. Due to its formulation, it can be used in biodegradable and compostable compounds. Furthermore it exhibits a good compatibility with other biodegradable polymers as polylactic acid and starch. It can be used as support polymer for master-batches both in granules and in powder form. Usable for injection molding.

TECHNIPOL® Bio 1160 is certified OK Compost INDUSTRIAL and OK Compost HOME by TÜV Austria.

#### THERMAL PROPERTIES

PROPERTY	TEST METHOD	M.U.	TYPICAL VALUE
Melting temperature	ISO 11357-3	°C	115
Crystallization temperature	ISO 11357-3	°C	70
Glass transition temperature	ISO 11357-2	°C	-35
Vicat A /50	ISO 306	°C	69

#### RHEOLOGICAL PROPERTIES

PROPERTY	TEST METHOD	M.U.	VALUE
MFI 160°C, 2.16kg	ISO 1133	g/10 min	20
MVR 160°C, 2.16kg	ISO 1133	g/10 min	16

#### MECHANICAL PROPERTIES

PROPERTY	TEST METHOD	M.U.	TYPICAL VALUE
Shore D hardness, instantaneous / 15 s	ISO 868	-	34/32
Stress at break	ISO 527	MPa	17
Elongation at break	ISO 527	%	365
Flexural modulus	ISO 178	MPa	60
Abrasion resistance (Vertical load 5N)	ISO 4649	mm <sup>3</sup>	75
Izod impact resistance/notched (23°C)	ISO 180	J/m	No break
Izod impact resistance/notched (-40°C)	ISO 180	J/m	No break
Compression set (23°C)	ISO 815:1991	%	34
Compression set (70°C)	ISO 815:1991	%	48

#### OTHER PROPERTIES

PROPERTY	TEST METHOD	M.U.	TYPICAL VALUE
Density	ISO 1183	g/cm <sup>3</sup>	1,23
Water absorption (23°C x 24 h immersion)	MI 08	%	0.75

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#### PROCESSING CONDITIONS

Suggested temperature profile for injection molding

MELTING TEMPERATURE	MOLD TEMPERATURE	NOZZLE	FRONT ZONE 3	CENTER ZONE 2	REAR ZONE 1
°C	°C	°C	°C	°C	°C
115	20 - 30	120	115	110	105

Suggested temperature profile for extrusion

MELTING TEMPERATURE	MFI	FEEDING ZONE	COMPRESSION ZONE	METERING ZONE	HEAD/DIE
°C	g/10 min.	°C	°C	°C	°C
115	20 (160°C, 2.16 Kg)	95 - 105	105 - 125	110 - 130	110 - 130

#### DRYING CONDITIONS

Drying recommended = Yes  
 Drying temperature = 60 °C  
 Drying time, dehumidifier dryer = 2-3 h  
 Processing moisture content = 0,15%

#### PACKAGING

25 kg bags equipped with an aluminum film barrier against moisture action.  
 500 kg cardboard octabins equipped with an inner PE liner.  
 500 Kg and 1000 Kg big bags.

#### STORAGE

Product is stable for 6 months when stored unopened in its original packaging, kept in a cool and dry place and protected from light. When stocked around 5 – 10°C or below, it is recommended to keep it at 15 – 20°C for at least for 24 hours before using it.

#### CERTIFICATIONS

