

Technical Data Sheet

TECHNIPOL® Bio 1164

DESCRIPTION

TECHNIPOL® Bio 1164 is an aromatic - aliphatic copolyester, characterized by medium crystallinity, a low melting point and a content of renewable sources (inedible grade) of > 40%. 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 1164 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 ³	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 ³	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

