

PRODUCT INFORMATION

PIBIFLEX B5050 MWR NERO

PIBIFLEX B5050 MWR NERO is a nominal 40 Shore D thermoplastic polyester elastomer with medium modulus. It is designed for blow molding or processing techniques requiring high viscosity. It exhibits excellent mechanical properties at elevated temperatures, and superior fatigue, abrasion and grease/fluids resistance.

**ISO short
Form**

ISO 18064: TPC-ET
Pellets

Key Features

- High viscosity
- Unfilled
- Good oil and grease resistance
- Improved heat resistance
- Designed for blow moulding and extrusion applications
- Excellent flex-fatigue properties
- Hydrolysis resistant

Process

- EXTRUSION
- BLOW MOULDING

Property	Method	Unit	Value	Condition	State
PHYSICAL					
Density (+23 °C)	ISO 1183	g/cm ³	1,14		
Humidity absorption (+23 °C/50% RH)	ISO 62	%	0,6		
Melting temperature (10 °C/min)	ISO 11357	°C	200		
Melt Flow Rate MFR (230 °C - 2,16 kg)	ISO 1133	g/10 min	1,5		
MECHANICAL					
Shore D hardness, 1 s	ISO 48	Shore D	41		
Tensile modulus	ISO 527	MPa	42		
Elongation at break	ISO 37	%	> 500		
Tensile stress at break	ISO 37	MPa	33		

The listed data are in the normal range of product properties, they should not be used to establish specification nor as the basis of design. Values are valid for natural coloured version only.

Unless specified to the contrary, the given values have been established on standardized test specimens at room temperature. The figures should be regarded as guide values only and not as binding minimum values. Please note that, under certain conditions, the properties can be affected to a considerable extent by the design of the mold/die, the processing conditions, pigments and any other additives.

All information, recommendation or technical advice provided by TARO PLAST S.p.A. are given in good faith but without warranty, to the best of its knowledge and based on current procedures in effect. Our advice does not release you from the obligation to check its validity and to test our products as to their suitability for the intended processes and uses. The application, use and processing methods and conditions of our products and the products manufactured by you on the basis of our technical advice are beyond our control and, therefore, entirely under your own responsibility.

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Flexural modulus (+23 °C)	ISO 178	MPa	90
IZOD impact strength notched (+23 °C)	ASTM D256/A	J/m	NB
IZOD impact strength notched (-30 °C)	ASTM D256/A	J/m	NB
CHARPY notched impact (+23 °C)	ISO 179/1eA	kJ/m ²	NB
CHARPY notched impact (-30 °C)	ISO 179/1eA	kJ/m ²	NB
Tear strength	ISO 34-1	kN/m	110

FLAMMABILITY

Limiting oxygen index (LOI)	ISO 4589-1/-2	%	20
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BLOW MOULDING	Value
Drying Temperature (Desiccant Dryer)	100 - 110 °C
Drying Time (Desiccant Dryer)	2 - 4 h
Suggested Max Moisture	< 0,05 %
Suggested Max Regrind	< 20 %
Hopper Temperature	20 - 50 °C
Feed Temperature	150 - 170 °C
Rear Temperature	210 - 230 °C
Middle Temperature	220 - 240 °C
Front Temperature	230 - 245 °C
Die Temperature	235 - 250 °C

Notes All TPC-ET (Pibiflex/Riteflex) compounds must be stored indoors at a temperature below 40°C / 105°F avoiding humidity and direct sunlight as well. Despite a longer shelf storage life without loss of properties, we recommend using the material within 6 months from the production date. During processing, a dehumidifying hopper dryer is recommended at a temperature of 60 to 80°C. The processing parameters like processing temperatures are a recommendation and can be adjusted in function of injection machine or extruder size, part geometry and design. To avoid hydrolytic degradation during processing, all TPC-ET (Pibiflex/Riteflex) resins have to be dried to a moisture level equal to or less than 0,05%. Drying should be done in a dehumidifying hopper dryer capable of dewpoints <-40°C (-40°F) at 107°C (225°F) for 4 hours. For subsequent storage of the material in the dryer until processed (<= 60 h) it is necessary to lower the temperature to 100°C.

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Drying Time (Desiccant Dryer)	2 - 4 h
Suggested Max Moisture	< 0,05 %
Suggested Max Regrind	< 20 %
Melt Temperature	170 - 190 °C
Hopper Temperature	20 - 50 °C
Feed Temperature	150 - 170 °C
Rear Temperature	220 - 230 °C
Middle Temperature	230 - 240 °C
Front Temperature	230 - 240 °C
Die Temperature	230 - 250 °C

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