

Technical Data Sheet

SIPOLPRENE® 25170

DESCRIPTION

SIPOLPRENE® 25170 is an ether ester thermoplastic elastomer (TPC-ET), developed and manufactured by Sipol, with a nominal hardness of Shore D 28, a medium modulus, and a rheological behaviour, which makes it suitable for injection moulding and extrusion processing.

SIPOLPRENE® 25170 comes in a natural colour with a standard stabilisation package, fully in compliance with American FDA and European EU 10/2011 Food Contact Regulations. Black colour and/or UV stabilised and/or heat stabilised are all available in dry blend version on request.

THERMAL PROPERTIES

PROPERTY	TEST METHOD	M.U.	TYPICAL VALUE
Melting temperature	ISO 11357-3	°C	173
Crystallization temperature	ISO 11357-3	°C	105
Glass transition temperature	ISO 11357-2	°C	-65
Vicat A /50	ISO 306	°C	73

RHEOLOGICAL PROPERTIES

PROPERTY	TEST METHOD	M.U.	VALUE
MFI 200°C, 2.16kg	ISO 1133	g/10 min	12
MVR 200°C, 2.16kg	ISO 1133	g/10 min	11

MECHANICAL PROPERTIES

PROPERTY	TEST METHOD	M.U.	TYPICAL VALUE
Shore D hardness, instantaneous / 15 s	ISO 868	Shore D	28/25
Stress at break	ISO 527	MPa	23
Elongation at break	ISO 527	%	830
Flexural modulus	ISO 178	MPa	25
Izod impact resistance/notched (23°C)	ISO 180	J/m	No break
Izod impact resistance/notched (-40°C)	ISO 180	J/m	No break
Abrasion resistance (Vertical load 5N)	ISO 4649	mm ³	45
Compression set (23°C)	ISO 815:1991	%	26
Compression set (70°C)	ISO 815:1991	%	67

OTHER PROPERTIES

PROPERTY	TEST METHOD	M.U.	TYPICAL VALUE
Density	ISO 1183	g/cm ³	1,09
Water absorption (23°C x 24 h immersion)	MI 08	%	0.8

Technical Data Sheet

SIPOLPRENE® 25170

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
173	20 - 30	200	190	180	155-170

Suggested temperature profile for extrusion

MELTING TEMPERATURE	MFI	FEEDING ZONE	COMPRESSION ZONE	METERING ZONE	HEAD/DIE
°C	g/10 min.	°C	°C	°C	°C
173	12 (200 °C, 2.16 Kg)	160 - 180	175 - 185	180 - 195	180 - 195

DRYING CONDITIONS

Drying recommended = Yes
Drying temperature = 90 °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 12 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.