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# **Technical Data Sheet**

# SIPOLPRENE® 35180

## DESCRIPTION

SIPOLPRENE® 35180 is an ether ester thermoplastic elastomer (TPC-ET), developed and manufactured by Sipol, with a nominal hardness of Shore D 35, a low modulus, and a rheological behaviour, which makes it suitable for injection molding and extrusion processing. SIPOLPRENE® 35180 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	177
Crystallization temperature	ISO 11357-3	°C	116
Glass transition temperature	ISO 11357-2	°C	-46
Vicat A /50	ISO 306	°C	111

### RHEOLOGICAL PROPERTIES

	PROPERTY	TEST METHOD	M.U.	VALUE
MFI	230 °C, 2.16 Kg	ISO 1133	g/10 min	34
MVR	230 °C, 2.16 Kg	ISO 1133	cm³/10min	31

#### **MECHANICAL PROPERTIES**

PROPERTY	TEST METHOD	M.U.	TYPICAL VALUE
Shore D hardness, instantaneous / 15 s	ISO 868	Shore D	35/33
Stress at break	ISO 527	MPa	28
Elongation at break	ISO 527	%	630
Flexural modulus	ISO 178	MPa	60
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	mm³	26
Compression set (23°C)	ISO 815:1991	%	25
Compression set (70°C)	ISO 815:1991	%	68

## **OTHER PROPERTIES**

PROPERTY	TEST METHOD	M.U.	TYPICAL VALUE
Density	ISO 1183	g/cm³	1,11
Water absorption (23°C x 24 h immersion)	MI 08	%	0.70

Version N°: 3.EN	Revision n° 0	Revision date: 18/03/2022

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## SIPOLPRENE® 35180

### 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
177	20 - 30	205	195	185	160-175

## Suggested temperature profile for extrusion

MELTING TEMPERATURE	MFI	FEEDING ZONE	COMPRESSION ZONE	METERING ZONE	HEAD/DIE
°C	g/10 min.	°C	°C	°C	°C
177	34 (230 °C, 2.16 Kg)	165 - 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  $5 - 10^{\circ}$ C or below, it is recommended to keep it at  $15 - 20^{\circ}$ C for at least for 24 hours before using it.

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