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P.I. 01842120188

# **Technical Data Sheet**

# SIPOLPRENE® 48200

## **DESCRIPTION**

SIPOLPRENE® 48200 is an ether ester thermoplastic elastomer (TPC-ET), developed and manufactured by Sipol, with a nominal hardness of Shore D 48, a low modulus, and a rheological behaviour, which makes it suitable for injection molding and extrusion processing.

SIPOLPRENE® 48200 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	198
Crystallization temperature	ISO 11357-3	°C	152
Glass transition temperature	ISO 11357-2	°C	-18
Vicat A /50	ISO 306	°C	174

#### RHEOLOGICAL PROPERTIES

	PROPERTY	TEST METHOD	M.U.	VALUE	
MFI	230 °C, 2.16 Kg	ISO 1133	g/10 min	23	
MVR	230 °C, 2.16 Kg	ISO 1133	cm <sup>3</sup> /10min	19	

#### **MECHANICAL PROPERTIES**

PROPERTY	TEST METHOD	M.U.	TYPICAL VALUE
Shore D hardness, instantaneous / 15 s	ISO 868	Shore D	48/46
Stress at break	ISO 527	MPa	34
Elongation at break	ISO 527	%	560
Flexural modulus	ISO 178	MPa	150
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	23
Compression set (23°C)	ISO 815:1991	%	34
Compression set (70°C)	ISO 815:1991	%	61

# OTHER PROPERTIES

PROPERTY	TEST METHOD	M.U.	TYPICAL VALUE	
Density	ISO 1183	g/cm³	1,18	
Water absorption (23°C x 24 h immersion)	MI 08	%	0.4	

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

The information provided herein corresponds to our current knowledge on date of publication. This information may be subject to review, if further experience and knowledge become available. The data reported corresponds to typical values and should not be considered as specification limits, or as a basis for design calculations. This data sheet must not in any way be construed as a license or as an invitation or permission to violate any existing patents, the existence of which must be verified by the Customer. The application, use and processing of Sipol products and the quality of the final products obtained by the customer are completely out of our control. The Customer is responsible for verifying that the material is suitable for the specific application; any data given here does not relieve the Customer from conducting appropriate checks and testing. Sipol cannot foresee all possible variations in actual end-use conditions, and therefore offers no warranty and assumes no liability in connection with any use of this information.



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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
198	30 - 40	225	215	205	180-195

# Suggested temperature profile for extrusion

MELTING TEMPERATURE	MFI	FEEDING ZONE	COMPRESSION ZONE	METERING ZONE	HEAD/DIE
°C	g/10 min.	°C	°C	°C	°C
198	23 (230 °C, 2.16 Kg)	190 - 205	205 - 215	210 - 225	210 - 225

## **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.

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