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ISPLEN[®]
POLYPROPYLENE

ISPLEN[®] PR-210 X6E

RANDOM COPOLYMER

APPLICATIONS	<i>Pressure pipe for hot and cold water</i>
HIGHLIGHTS	<i>- High thermal stability. -Excelent chemical resistance. -Excellent weldability</i>
MELT FLOW RATE (230°C, 2.16 Kg)	0.30 g/10 min.

DESCRIPTION

ISPLEN[®] PR-210 X6E is a random ethylene-propylene copolymer with a high molecular weight. Due to averagely good flow properties and very high mechanical properties is a suitable grade to be processed into pipes.

STABILIZATION

ISPLEN[®] PR-210 X6E is a statistic (random) copolymer which contains a specific formulation for high thermal resistant and water extraction purposes allowing polymer stability during normal conditions of processing and use. Other additives may be included.

COLOURING

ISPLEN grades are supplied in natural colour but they can be easily coloured with pigments steady at processing temperatures, using dry-colouring or masterbatch techniques.

FOODSTUFF REGULATIONS

ISPLEN[®] PR-210 X6E are approved for food contact under certain legislation. For more information about specific country regulation, please, contact with our local representative or the Technical Service.

PROCESSING

ISPLEN[®] PR-210 X6E can be easily processed using extruders either of the single or twin-screw type, with suitable head for produce pipes. Single screw extruders should have the following characteristics:

Length/diameter ratio: 24 to 32.
Compression ratio: 3 to 4.
Screw: with torpedo and metering section with constant pitch and flight depth.

TYPICAL EXTRUSION CONDITIONS

The following temperature profile is suggested as a guide. Conditions will depend on size and wall thickness of the pipe produced and extrusion equipment used.

4 BARREL ZONES	CROSSHEAD 3 ZONES	MELT TEMPER.
From: 190/190/195/195 °C	200/200/200 °C	205 °C
To: 200/205/210/215 °C	220/220/220 °C	225 °C

Cooling

To minimize internal stresses, it is advisable to install a system to keep such temperature to avoid a too sudden cooling and let sufficiently length or time to allow a complete homogeneity

PHYSICAL PROPERTIES ISPLEN^Ø PR-210 X6E

PROPERTY	UNIT	TEST METHOD	TYPICAL VALUE
A) GENERAL			
Melt Index 230 °C, 2.16 Kg	g/10 min	ISO 1133	0.3
230°C, 5 Kg	g/10 min	ISO 1133	1.2
190°C, 5 Kg	g/10 min	ISO 1133	0.6
Density	g/cm ³	ISO 1183	0.903
B) MECHANICAL			
Tensile Yield Stress	MPa	ISO 527	22
Tensile Yield Strain	%	ISO 527	10
Flexural Modulus	MPa	ISO 178	850
C) INTERNAL PRESSURE RESISTANCE			
Long-term hydrostatic strength for 50 years at 20°C	MPa	ISO TR 9080	≥ 8.0
D) OTHERS			
Izod Impact Strength 23 °C (0°C), notched	KJ/m ²	ISO 180/1A	18 (3)
Rockwell Hardness (10 N)	-	ASTM D 2240	71
Vicat Softening Point (9.8 N)	°C	ISO 306	133
HDT (455 kPa)	°C	ASTM D 648	65

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This information is offered in good faith and meant only as a guide. The transformer or user will be, in each case, responsible for the processing conditions and the final use of the product. Freedom under patents, copyright and registered designs cannot be assumed.

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