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SABIC® HDPE P4200RT

HIGH DENSITY POLYETHYLENE FOR PIPE

DESCRIPTION

SABIC HDPE P4200RT is a high-density polyethylene (HDPE) with high melt viscosity for extrusion. The product provides excellent stress crack resistance properties (ESCR) combined with very good long-term hydrostatic strength, high heat & extremely high extraction stability. It fulfills the requirements of DIN 16833 / ISO 24033 for PE-RT Type II. The material is classified as MRS 10 (PE100) according to ISO 12162.

TYPICAL APPLICATIONS

Typical customer applications are underfloor heating and multilayer pipes for heating and plumbing. Further typical applications are High Voltage cable ducts, pipes for Oil & Gas exploration, district heating media pipes and casing pipes.
It provides good ESCR (environmental stress cracking resistance). It is weldable, has very good heat aging resistance & good organoleptic properties. This grade is suitable for drinking water applications.

TYPICAL PROPERTY VALUES

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
POLYMER PROPERTIES			
Melt Flow Rate (MFR) (1)			
@ 190°C & 5 kg load	0.45	g/10 min	ISO 1133
@ 190°C & 21.6 kg load	9.5	g/10 min	ISO 1133
Density			
@23°C	947	kg/m³	ISO 1183
MECHANICAL PROPERTIES			
Hardness Shore D (2)	59	-	ISO 868
Tensile Strength at Yield (3)	22	MPa	ISO 527-2
Tensile Elongation at Yield (3)	8	%	ISO 527-2
Tensile modulus (3)			
Tensile modulus (3)	850	MPa	ISO 899
Charpy Impact Notched @ 23°C (2)	24	kJ/m²	ISO 179
Charpy Impact Notched @ -30°C (2)	8	kJ/m²	ISO 179
MRS Classification (4)	10	MPa	EN ISO 13479
FNCT, (4.0 MPa, 2% Arkopal N100, 800 C)	>350	Hrs	ISO 16770
THERMAL PROPERTIES			
Vicat Softening Point @ 10N (VST/A)	120	°C	ISO 306
Vicat Softening Point @ 50N (VST/B)	70	°C	ISO 306
Oxidation Induction Time (210°C)	>40	Minutes	ISO 11357-6

(1) Typical values & not to be construed as specification limits.
(2) Based on compression-molded sheet
(3) Test specimen according to ISO 527-2 type 1 BA, thickness 2mm with 50mm/min test speed.
(4) MRS classification testing ongoing.