

SABIC® P4200RT

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 is designed to fulfill all the requirements of DIN 16833 / ISO 24033 for PE-RT Type II.

Physical Properties	Metric	English	Comments
Density	0.947 g/cc	0.0342 lb/in ³	ISO 1183
Oxidative Induction Time (OIT)	>= 40 min @Temperature 210 °C	>= 40 min @Temperature 410 °F	ISO 11357-6
Melt Flow	0.45 g/10 min @Load 5.00 kg, Temperature 190 °C	0.45 g/10 min @Load 11.0 lb, Temperature 374 °F	ISO 1133
	9.5 g/10 min @Load 21.6 kg, Temperature 190 °C	9.5 g/10 min @Load 47.6 lb, Temperature 374 °F	ISO 1133

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	59	59	Based on compression-molded sheet; ISO 868
Tensile Strength, Yield	22.0 MPa	3190 psi	Test specimen according to ISO 527-2 type 1 BA, thickness 2mm with 50mm/min test speed.; ISO 527-2
Elongation at Yield	8.0 %	8.0 %	Test specimen according to ISO 527-2 type 1 BA, thickness 2mm with 50mm/min test speed.; ISO 527-2
Charpy Impact, Notched	2.40 J/cm ²	11.4 ft-lb/in ²	Based on compression-molded sheet; ISO 179
	0.800 J/cm ² @Temperature -30.0 °C	3.81 ft-lb/in ² @Temperature -22.0 °F	Based on compression-molded sheet; ISO 179

Thermal Properties	Metric	English	Comments
Vicat Softening Point	70.0 °C	158 °F	@ 50N (VST/B); ISO 306
	120 °C	248 °F	@ 10N (VST/A); ISO 306

Descriptive Properties			
FNCT, (4.0 MPa, 2% Arkopal N100, 800 C)	>350 hrs		ISO 16770
MRS Classification	10 MPa		EN ISO 13479; MRS classification testing ongoing.
Tensile Modulus	850 kJ/m ²		ISO 899; Test specimen according to ISO 527-2 type 1 BA, thickness 2mm with 50mm/min test speed.