

SABIC® HDPE F4520

HIGH DENSITY POLYETHYLENE

DESCRIPTION

SABIC® HDPE F4520 is typically used for blow molding packaging up to 20 l, combining medium stiffness with a good ESCR. This grade is typically used for packaging of aggressive detergents and technical articles such as spare fuel tanks, air- and cable ducts.

This product is not intended for and must not be used in any pharmaceutical/medical applications.

TYPICAL PROPERTY VALUES

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
POLYMER PROPERTIES			
Melt Flow Rate (MFR)			
at 190 °C and 2.16 kg	0.16	dg/min	ISO 1133
at 190 °C and 5 kg	0.89	dg/min	ISO 1133
at 190 °C and 21.6 kg	20	dg/min	ISO 1133
Density	945	kg/m ³	ASTM D1505
MECHANICAL PROPERTIES			
Tensile test ⁽¹⁾ ⁽²⁾			
stress at yield	22	MPa	ISO 527-2
stress at break	31	MPa	ISO 527-2
strain at break	1000	%	ISO 527-2
tensile modulus	800	MPa	ISO 527-2
Flexural test			
Flexural modulus	850	MPa	ISO 178
Flexural strength	22	MPa	ISO 178
Izod impact notched			
at 23 °C	12	kJ/m ²	ISO 180/A
at -30 °C	5	kJ/m ²	ISO 180/A
Hardness Shore D	59	-	ISO 868
ESCR ⁽³⁾	40	h	ASTM D1693
ESCR (Strain Hardening), Gp	23	MPa	ISO 18488
ESCR (10% Igepal CO-630), F50	150	h	ASTM D1693B
THERMAL PROPERTIES			
Heat deflection temperature ⁽⁴⁾ ⁽⁵⁾			
at 0.45 MPa (HDT/B)	73	°C	ISO 75-2
Vicat Softening Temperature			
at 10 N (VST/A)	126	°C	ISO 306
DSC test			
melting point	130	°C	ISO 11357-3
enthalpy change	181	J/g	ISO 11357-3