

SABIC® HDPE M453SE

HIGH DENSITY POLYETHYLENE

DESCRIPTION

SABIC® HDPE M453SE is typically used for the high demanding dustbin market. It is an UV stabilized HDPE copolymer grade. It typically shows a good combination of process ability, consistency and product properties, good stiffness/cold impact-balance, surface quality and weather ability properties.

SABIC® HDPE M453SE is typically used for the manufacture of injection molded dustbins (waste containers on wheels and household containers), crates & boxes (pallet boxes, pallets, boxes applied at low temperatures) and pails & container applications (industrial, shipping).

Processing conditions.

Typical molding conditions for SABIC® HDPE M453SE are: Melt temperature: 232 - 260 °C (450 - 500 °F); Mold temperature: 20 - 40 °C (70 - 104 °F); Injection pressure: 93 - 103 MPa (13500 - 15000 PSI)

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	4.0	dg/min	ISO 1133
at 190 °C and 5 kg	10.5	dg/min	ISO 1133
Density ⁽¹⁾	953	kg/m ³	ISO 1183
MECHANICAL PROPERTIES ^{(1) (2)}			
Tensile test ^{(3) (4)}			
stress at yield	26	MPa	ISO 527-2
stress at break	31	MPa	ISO 527-2
strain at break	200	%	ISO 527-2
tensile modulus	1100	MPa	ISO 527-2
Flexural test			
Flexural modulus	1200	MPa	ISO 178
Flexural strength	26	MPa	ISO 178
Izod impact notched			
at 23 °C	5	kJ/m ²	ISO 180/A
Hardness Shore D	61	-	ISO 868
THERMAL PROPERTIES			
Heat deflection temperature ^{(1) (2)}			
at 0.45 MPa (HDT/B)	81	°C	ISO 75-2
Vicat Softening Temperature ^{(1) (2)}			
at 10 N (VST/A)	124	°C	ISO 306
DSC test			
melting point	132	°C	ISO 11357-3
enthalpy change	203	J/g	ISO 11357-3