

SABIC® HDPE M453SE

High Density Polyethylene Copolymer

Saudi Basic Industries Corporation (SABIC)

Message:

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 processability, consistency and product properties, good stiffness/cold impact-balance, surface quality and weatherability properties. Typical applications. 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). This product is not intended for and must not be used in any pharmaceutical/medical applications.

General Information			
Additive	UV Stabilizer		
Features	Copolymer		
	Good Processability		
	Good Stiffness		
	Good Surface Finish		
	Good UV Resistance		
	Good Weather Resistance		
	High Density		
	Low Temperature Impact Resistance		
Uses	Crates		
	Household Goods		
	Industrial Containers		
	Pails		
	Pallets		
	Shipping Containers		
	Waste Containers		
Processing Method	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Density	0.953	g/cm ³	ISO 1183
Melt Mass-Flow Rate (MFR)			ISO 1133
190°C/2.16 kg	4.0	g/10 min	
190°C/5.0 kg	11	g/10 min	
Environmental Stress-Cracking Resistance			
¹ (60°C, 3.00 mm, Rhodacal-DS10, Compression Molded)	65.0	hr	Internal Method
Hardness	Nominal Value	Unit	Test Method
Shore Hardness (Shore D, Compression Molded)	61		ISO 868
Mechanical	Nominal Value	Unit	Test Method

Tensile Modulus (2.00 mm, Compression Molded)	1100	MPa	ISO 527-2/1BA/50
Tensile Stress			ISO 527-2/1BA/50
Yield, 2.00 mm, Compression Molded	26.0	MPa	
Break, 2.00 mm, Compression Molded	31.0	MPa	
Tensile Strain (Break, 2.00 mm, Compression Molded)	> 200	%	ISO 527-2/1BA/50
Flexural Modulus (2.00 mm, Compression Molded)	1200	MPa	ISO 178
Flexural Stress (2.00 mm, Compression Molded)	26.0	MPa	ISO 178
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact Strength (23°C, Compression Molded)	5.0	kJ/m ²	ISO 180/A
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature (0.45 MPa, Unannealed)	81.0	°C	ISO 75-2/B
Vicat Softening Temperature	124	°C	ISO 306/A
Melting Temperature (DSC)	132	°C	ISO 11357-3
Enthalpy Change	203	J/g	ISO 11357-3
Injection	Nominal Value	Unit	
Processing (Melt) Temp	232 to 260	°C	
Mold Temperature	20.0 to 40.0	°C	
Injection Pressure	93.0 to 103	MPa	
NOTE			
1.	2 MPa		

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