

# SABIC® HDPE M40053S

High Density Polyethylene Copolymer

Saudi Basic Industries Corporation (SABIC)

Message:

M40053S is UV stabilized High Density Polyethylene grade with narrow molecular weight distribution suitable for injection molding applications. It has been designed to provide good balance of stiffness and impact at low temperatures and is also having good weatherability and surface properties. M40053S is specially developed for high demanding dust bin market, shipping containers for low temperature storage, industrial pails etc.

General Information			
Additive	UV stabilizer		
Features	Rigid, good		
	Low temperature impact resistance		
	Good weather resistance		
	Compliance of Food Exposure		
	Excellent appearance		
	Narrow molecular weight distribution		
Uses	Industrial application		
	Container		
	Barrel		
	Shipping container		
Forms	Particle		
Processing Method	Injection molding		
Physical	Nominal Value	Unit	Test Method
Density	0.953	g/cm <sup>3</sup>	ASTM D1505
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	4.0	g/10 min	ASTM D1238
Environmental Stress-Cracking Resistance			ASTM D1693B
10% Igepal, molded, F50	4.00	hr	ASTM D1693B
100% Igepal, molded, F50	7.00	hr	ASTM D1693B
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness (Shore D, Injection Molded)	60		ASTM D2240
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus - 1% Secant (Injection Molded)	900	MPa	ASTM D638
Tensile Strength			ASTM D638
Yield, injection molding	23.0	MPa	ASTM D638
Fracture, injection molding	21.0	MPa	ASTM D638
Tensile Elongation (Break, Injection Molded)	> 800	%	ASTM D638

Flexural Modulus (Injection Molded)	800	MPa	ASTM D790
Flexural Strength (Injection Molded)	21.0	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact (Injection Molded)	150	J/m	ASTM D256
Thermal	Nominal Value	Unit	Test Method
Brittleness Temperature	< -75.0	°C	ASTM D746
Vicat Softening Temperature	125	°C	ASTM D1525
Injection	Nominal Value	Unit	
Rear Temperature	232 - 260	°C	
Middle Temperature	232 - 260	°C	
Front Temperature	232 - 260	°C	
Mold Temperature	15.0 - 60.0	°C	
Injection Pressure	60.0 - 100	MPa	

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#### Recommended distributors for this material

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