

SABIC® HDPE M40053S

HIGH DENSITY POLYETHYLENE

DESCRIPTION

M40053S is a 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.

TYPICAL APPLICATIONS

M40053S is specially developed for high demanding dust bin market, shipping containers for low temperature storage, industrial pails etc.

TYPICAL PROPERTY VALUES

Revision 20201103

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
POLYMER PROPERTIES			
Melt Flow Rate (MFR)			
at 190°C and 2.16 kg	4	g/10 min	ASTM D1238
Density at 23°C ⁽¹⁾	953	kg/m ³	ASTM D1505
MECHANICAL PROPERTIES			
1% Secant Modulus	900	MPa	ASTM D638
Tensile Strength at Yield	23	MPa	ASTM D638
Tensile Strength at Break	21	MPa	ASTM D638
Tensile Elongation at Break	>800	%	ASTM D638
Flexural Strength	21	MPa	ASTM D790
Flexural Modulus	800	MPa	ISO 178/1A
Izod Impact Strength	150	J/m	ASTM D256
Hardness (Shore D) ⁽²⁾	60	-	ASTM D2240
ESCR (100% Igepal), F50 ⁽³⁾	7	Hrs	ASTM D1693B
ESCR (10% Igepal), F50	4	Hrs	ASTM D1693B
THERMAL PROPERTIES			
Vicat Softening Point	125	°C	ASTM D1525
Brittleness Temperature	<-75	°C	ASTM D746

(1) Typical values: not to be construed as specification limits.

(2) Based on Injection molded specimens.

(3) Based on compression molded sheet

PROCESSING CONDITIONS

Typical processing conditions for M40053S are:

Melt temperature: 190 - 250°C

Mold temperature: 15 - 60°C

Injection pressure: 600 - 1000 Bar



STORAGE AND HANDLING

Polyethylene material should be stored in a manner to prevent a direct exposure to sunlight and/or heat. The storage area should also be dry and preferably don't exceed 50°C. SABIC would not give warranty to bad storage conditions which may lead to quality deterioration such as color change, bad smell and inadequate product performance. It is advisable to process PE resin within 6 months after delivery.

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