

# 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 20170519

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

## HEALTH, SAFETY AND FOOD CONTACT REGULATIONS

Detailed information is provided in the relevant Material Safety Datasheet or Standard Food Declarations, Additional specific information can be requested via your local Sales Office.

## 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.

## DISCLAIMER

The information contained herein may include typical properties of our products or their typical performances when used in certain typical applications. Actual properties of our products, in particular when used in conjunction with any third party material(s) or for any non-typical applications, may differ from typical properties.

It is the customer's responsibility to inspect and test our product(s) in order to satisfy itself as to the suitability of the product(s) for its and its customers particular purposes. The customer is responsible for the appropriate, safe and legal use, processing and handling of all product(s) purchased from us.

Nothing herein is intended to be nor shall it constitute a warranty whatsoever, in particular, warranty of merchantability or fitness for a particular purpose.

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