



M40053S

High Density Polyethylene for Injection molding

Product Description

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.

Typical Applications

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

Typical data

Properties	Unit	Value ⁽¹⁾	ASTM Method
Resin Properties			
Melt Flow Rate @ 190°C & 2.16 kg load	g/10 min.	4	D 1238
Density @ 23°C	kg/m ³	953	D 1505
Mechanical Properties⁽²⁾			
1% Secant Modulus	MPa	900	D 638
Tensile Strength @ Yield	MPa	23	D 638
Tensile Strength @ Break	MPa	21	D 638
Tensile Elongation @ Break	%	>800	D 638
Flexural Strength	MPa	21	D 790
Flexural Modulus	MPa	800	D 790
Izod Impact	J/m	150	D 256
Hardness (Shore D)	-	60	D 2240
ESCR (100% Igepal), F ₅₀ [*]	Hrs	7	D 1693B
ESCR (10% Igepal), F ₅₀ [*]	Hrs	4	
Thermal Properties			
Vicat Softening Point	°C	125	D 1525
Brittleness Temperature	°C	< -75	D 746

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

(2) Based on Injection molded specimens

* Based on Compression molded sheet

Processing Conditions

Typical processing conditions for M40053S are:

Barrel temperature: 232 - 260°C (450 - 500°F)

Mold temperature: 15 - 60°C (60 -140°F)

Injection pressure: 600 - 1000 Bar (8700 - 14500 psi)

Food Regulation

M40053S is suitable for Food contact application. Detailed information is provided in relevant Material Safety Datasheet and for additional specific information please contact SABIC local representative for certificate.

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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