

SABIC® HDPE CC453

HIGH DENSITY POLYETHYLENE

DESCRIPTION

SABIC HDPE CC453 is a High Density Polyethylene specially developed for the injection and compression molding of caps & closures for the packaging of beverages. This grade offers an ideal combination of impact strength, ESCR and meet organoleptic properties requirements.

TYPICAL APPLICATIONS

Caps & Closures for the packaging of Juice, water, milk and liquid dairy products.

TYPICAL PROPERTY VALUES

Revision 20260206

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
POLYMER PROPERTIES			
Melt Flow Rate (MFR)			
at 190°C and 2.16 kg ⁽¹⁾	4	g/10 min	ASTM D1238
Density at 23°C ⁽¹⁾	953	kg/m³	ASTM D1505
Sensory (Organoleptic properties)	Approved	-	SABIC method
MECHANICAL PROPERTIES			
Tensile Strength at Yield ⁽²⁾	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)	60	-	ASTM D2240
ESCR (100% Igepal), F50 ⁽³⁾	7	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

CHARACTERISTICS

Approved for organoleptic properties, complies with food contacts regulations, high impact strength, easy processing by injection and compression molding machines.

PROCESSING CONDITIONS

Typical processing conditions for CC453 are:

Melt temperature: 190 - 250°C

Mold temperature: 15 - 60°C

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CHEMISTRY THAT MATTERS™



FOOD REGULATION

CC453 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.

DISCLAIMER: This product is not intended for and must not be used in any pharmaceutical/medical applications.

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

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