

ExxonMobil HDPE

HYA 600

Blow Molding Resin

Description

HYA 600 is a general purpose HDPE resin, characterized by very easy processability, an excellent balance of rigidity and impact strength and a good ESCR.

Applications

- bottles for household, industry and chemicals
- containers up to 30 L

Additive Package Thermal Stabilizer

HYA 600 Yes

Resin Properties Test Based On Typical Value / Unit

Melt Index (21.6 kg, 47.6 lb) ASTM D 1238 29 g/10 min
Melt Index (2.16 kg, 4.76 lb) ASTM D 1238 0.35 g/10 min
Density ExxonMobil Method 0.954 g/cm³
Vicat Softening Point ASTM D 1525 128 °C 262 °F

Molded Properties

Tensile Strength at Yield¹ ASTM D 638 27 MPa 3900 psi
Tensile Strength at Break¹ ASTM D 638 > 15 MPa > 2200 psi
Elongation at Break¹ ASTM D 638 > 450 %
1% Secant Modulus² ASTM D 638 900 MPa 130500 psi
IZOD Impact ASTM D 256 14 KJ/m² 6.7 ft-lb/in²
Shore Hardness, D ASTM D 2240 62
Environmental Stress Crack Resistance³ ASTM D 1693 22 hrs
Environmental Stress Crack Resistance⁴ ASTM D 1693 53 hrs

The molded properties have been measured on compression molded sheets, prepared according to ASTM D 4703.

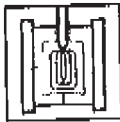
(1) Specimen type T4 / thickness 3 mm (118 mil) speed of testing 50 mm/min (1970 mil/min)⁵

(2) Specimen type T4 / thickness 3 mm (118 mil) speed of testing 5 mm/min (197 mil/min).

(3) Conditions B, F50, 10 % Igepal

(4) Conditions B, F50, 100 % Igepal

HYA 600 can - in principle - be used in food contact applications in various EU Member States and in the USA (FDA). Migration or use limitations may apply. Please contact your ExxonMobil Chemical representative for more detailed information and/or actual compliance certification documents for the specific grade of interest.



B5429

SABIC® HDPE

High density polyethylene for
blow moulding

Typical data

General Information

Properties	Units-SI	B5429	Test methods
Polymer properties			
Melt flow rate (MFR)			ASTM D 1238
at 190 °C and 2,16 kg	g/10 min	0.3	
at 190 °C and 21,6 kg ¹⁾	g/10 min	29	
Density ²⁾	kg/m ³	954	ASTM D 1505
ESCR (100% Igepal), F50 ²⁾	h	90	ASTM D 1693B
Mechanical properties ²⁾			
Tensile test			ASTM D 638
stress at yield	MPa	30	
stress at break	MPa	32	
strain at break	%	850	
secant modulus at 1% elongation	MPa	1150	
Hardness Shore D		67	ASTM D 2240
Izod Impact	J/m	200	ASTM D 256
Thermal properties ²⁾			
Vicat softening temperature			ASTM D 1525
at 10 N (VST/A)	°C	128	
Brittleness temperature	°C	< -75	ASTM D 746

The SABIC® HDPE product range for blow moulding and extrusion comprises a number of high density polyethylene grades with a wide spectrum of quality characteristics. Depending on their specific properties, these materials are suitable for production of:

- bottles, cans, containers and technical blow-moulded articles;
- extrusion products, such as sheet, profiles and tubes for pressureless applications.

A common characteristic of these materials is their broad molecular weight distribution, which ensures excellent behaviour during processing. Additional characteristics are a high purity of the polymer, high stability during processing and a good natural colour. These properties are directly linked with the unique production process of these materials.

The qualities of SABIC® HDPE materials for blow moulding and extrusion can be summarised as follows:

- excellent processability on various processing machines;
- high intrinsic toughness;
- carefully balanced combination of environmental stress cracking resistance and stiffness.

1) High load melt flow rate has been found to be more accurate reference.
2) Test specimens are prepared from compression moulded sheet made according to ASTM D 1828 Procedure C.

Internet: <http://www.SABIC-europe.com>

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