

HDPE**HDPE ACP 5831D****HIGH DENSITY POLYETHYLENE (HDPE)**

This grade is a high-density polyethylene resin used in small blow-moulding applications such as thin-wall packaging, consumer goods and toys. It exhibits a very good combination of high stiffness and high stress-cracking resistance, is delivered in pellet form, demonstrates good organoleptic properties, contains antioxidants, and has a broad molecular weight distribution. This product is not intended for use in medical and pharmaceutical applications.

Typical Application

- Bottles for consumer goods
- Bottles for industrial use
- Jerry cans
- Sports, leisure and toy articles
- Thin-wall packaging

Product Characteristics

- High rigidity paired with high environmental stress crack resistance (ESCR)
- Broad molecular weight distribution
- Contains antioxidants; good organoleptic properties

Physical Properties

Properties	Test Method	Typical Value	Unit
Melt Flow Rate (190°C/2.16 kg)	ISO 1133-1	0.30	g/10 min
Melt Flow Rate (190°C/5.0 kg)	ISO 1133-1	1.2	g/10 min
Melt Flow Rate (190°C/21.6 kg)	ISO 1133-1	22	g/10 min
Density	ISO 1183-1	0.958	g/cm ³
Bulk Density	ISO 60	>0.500	g/cm ³
Tensile Modulus	ISO 527-1,-2	1350	MPa
Tensile Stress at Yield	ISO 527-1,-2	28	MPa
Tensile Strain at Yield	ISO 527-1,-2	7	%
Environmental Stress Crack Resistance, F50 (Cond. B, 10% Arkopal N100)	ASTM D1693	150	h
Full-Notch Creep Test (3.5 MPa, 2% Arkopal N100, 80°C)	ISO 16770	8	h
Charpy Impact Strength - Notched (-30°C, Type 1, Edgewise, Notch A)	ISO 179	6.5	kJ/m ²
Tensile Impact Strength - Notched (-30°C)	ISO 8256	75	kJ/m ²
Shore Hardness D (15 s)	ISO 868	64	-
Ball Indentation Hardness (H 132/30)	ISO 2039-1	60	MPa

Processing Guidelines

Recommended melt temperature range 180-210°C. Suitable for extrusion blow moulding of small-format thin-wall packaging, consumer goods and toys.

- 1. The nominal properties reported herein are typical of the product and do not reflect normal testing variance; they should not be used for specification purposes.*
- 2. Typical values per the producer's published family data; grade-specific certificate of analysis supplied per lot at order.*