

# High Density Polyethylene Aramco HDPE F5101

## Product Description

Aramco HDPE F5101 is a bimodal and high molecular weight high density polyethylene resin and is typically used in for blown film process especially for thin film applications. This resin has broad molecular weight distribution that makes it easier to process. Films made from this resin typically exhibits high stiffness, excellent impact strength and toughness characteristics.

## Typical Applications

Shopping bags, trash bags, industrial liners.

This product is not intended for use in medical and pharmaceutical applications.

Physical Properties	Unit	Test Method	Value <sup>(1)</sup>		
Melt Flow Index (190°C/2.16kg)	g/10min	ASTM D1238	0.05		
Melt Flow Index (190°C/21.6kg)	g/10min	ASTM D1238	9.3		
Density	g/cm <sup>3</sup>	ASTM D792 Method A	0.951		
Film Properties <sup>(2)</sup>			Without Stabilizer <sup>(3)</sup>	With Stabilizer <sup>(3)</sup>	
Tensile Strength at Yield	MD	MPa	ASTM D882	35	35
	TD			30	30
Tensile Strength at Break	MD	MPa	ASTM D882	70	75
	TD			65	55
Tensile Elongation at Break	MD	%	ASTM D882	560	520
	TD			550	560
1% Secant Modulus	MD	MPa	ASTM D882	930	990
	TD			1030	1140
Elmendorf Tear Strength	MD	mN	ASTM D1922	170	110
	TD			385	765
Dart Drop Impact	g	ASTM D1709	325	245	
Thermal Properties <sup>(2)</sup>					
Vicat Softening Temperature @10N	°C	ASTM D1525	126		

(1) Typical values only, not to be construed as specification limits

(2) Blown film fabrication conditions: Extruder 50mmφ, Die 120mmφ, Die Gap 1.35mm, Temperature 200°C, Output 50kg/h, Blow-up ratio 4.0, Thickness 20μm, Neck Height 840mm

(3) With/without internal bubble stabilizer

**Processing conditions:** Recommended melt temperature: 180 – 220 °C

**Storage and handling:** Aramco HDPE F5101 should be stored in a dry cool place with adequate ventilation and protected from UV-light at temperature below 50 °C

**Food Contact and other Regulations:** Aramco HDPE F5101 resin is suitable for food contact applications. Detailed information is provided in Material Safety Datasheet and for additional specific information, please contact Aramco Trading for certificates.

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