Petrothene® GA503

Linear Low Density Polyethylene

LyondellBasell Industries

Message:

GA503 is a medium density, butene copolymer LLDPE resin with high draw for stiff, thin blown films. GA503 contains an antioxidant package to minimize discoloration and eliminate die build-up.
Regulatory Status:
GA503 series resins meet the requirements of the Food and Drug Administration 21 CFR 177.1520, Subpart C, Item 3.1. This regulation allows the use of this olefin polymer in" …articles or components or articles intended for use in contact with food." Specific limitations or conditions of use may apply. Contact your Equistar sales representative for more information.
Processing Techniques:
GA503 provides high output at low melt temperatures and without high pressure, high torque or shear-induced melt fracture. For improved drawdown without bubble breaks, GA503 can be blended with LDPE. It can also be blended with high performance LLDPE grades to reduce torque and horsepower requirements. Specific recommendations for type of resin and extrusion conditions can be made only when the end use, required properties and processing equipment are known. For further suggestions, please contact your Equistar sales representative.

General Information	
Additive	Processing Aids (480 ppm) [GA503027]
	Anti-caking agent (7000 ppm) [GA503027]
	Anti-caking agent (1300 ppm) [GA503028]
	Antioxidation
	Slip agent (800 ppm) [GA503028]
	Slip agent (1500 ppm) [GA503027]
Features	Butene comonomer
	Rigid, good
	Copolymer
	Antioxidation
	Good stripping
	Compliance of Food Exposure
	Medium density
Uses	Films
Agency Ratings	FDA 21 CFR 177.1520(c) 3.1
Forms	Particle
Processing Method	Film extrusion
	Blow film

Physical	Nominal Value	Unit	Test Method
Density	0.925	g/cm³	ASTM D1505
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	3.5	g/10 min	ASTM D1238
Films	**Nominal Value**	**Unit**	**Test Method**
secant modulus			ASTM D882

1% secant, MD: 13 µm	252	MPa	ASTM D882
1% secant, MD: 38 µm	307	MPa	ASTM D882
1% secant, TD: 13 µm	255	MPa	ASTM D882
1% secant, TD: 38 µm	314	MPa	ASTM D882
Tensile Strength			ASTM D882
MD: Broken, 13 µm	9.65	MPa	ASTM D882
MD: Fracture, 38 µm	33.1	MPa	ASTM D882
TD: Broken, 13 µm	7.24	MPa	ASTM D882
TD: Fracture, 38 µm	23.4	MPa	ASTM D882
Tensile Elongation			ASTM D882
MD: Broken, 13 µm	500	%	ASTM D882
MD: Fracture, 38 µm	390	%	ASTM D882
TD: Broken, 13 µm	630	%	ASTM D882
TD: Fracture, 38 µm	740	%	ASTM D882
Dart Drop Impact			ASTM D1709
13 µm, blown film	30	g	ASTM D1709
38 µm, blown film	110	g	ASTM D1709
Elmendorf Tear Strength			ASTM D1922
MD : 13 µm	40	g	ASTM D1922
MD : 38 µm	100	g	ASTM D1922
TD : 13 µm	180	g	ASTM D1922
TD : 38 µm	220	g	ASTM D1922
Optical	**Nominal Value**	**Unit**	**Test Method**
Gloss			ASTM D2457
45 °, 12.7 µm, blown film	60		ASTM D2457
45 °, 38.1 µm, blown film	25		ASTM D2457
Haze			ASTM D1003
12.7 µm, blown film	25	%	ASTM D1003
38.1 µm, blown film	30	%	ASTM D1003
Additional Information			

Film properties taken from blown film produced at a 2.5:1 BUR, 360°F melt temperature, using an 8 in die with 0.025 in die gap, at 150 lb/hr.

Recommended distributors for this material

Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533

Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China


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