

## Petroquimica Triunfo Trithene® TS 3003 LDPE - Film Grade

Category : Polymer , Film , Thermoplastic , Polyethylene (PE) , LDPE

### Material Notes:

The Trithene® TS 3003 resin is a low-density, high molecular weight polyethylene that offers high mechanical strength and excellent optical properties. The product shows high modulus of elasticity, that it offers the property of recovering the original shape when finished the deformation strength. Additionally, because of its molecular structure, Trithene® TS 3003 resin shows excellent performance in conventional extruders and low energy consumption during processing, allowing the production of films with high thickness uniformity and good appearance. The additive package warrants thermal stability, low blocking, and adequate coefficient of friction - COF, which are required to allow high productivity on the extrusion, printing and finishing lines. This product complies with ASTM standard D1248-IIA5 and the requirements of Brazilian and corresponding legislation of Mercosul and it is in conformity with FDA Regulations 21 CFR 177.1520 (c) 2.1, to contact with foodstuff. Applications: Film for sleeve label to different kinds of bottles (soft drink, milk, mineral water, eatable oil, lubricants and hygiene products and cleanness). Shrink film with high gloss and mechanical strength. Grade for very stiff and transparent film. Resin Properties: Compressed molded plate. Method ASTM D-1928, procedure C. Film obtained on a 50mm blow film line with barrier screw, 25:1 L/D, 1.0mm die gap, 50µm gauge, 2.3:1 BUR. Information provided by Dax Resinas

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_Petroquimica-Triunfo-Trithene-TS-3003-LDPE-Film-Grade.php](http://www.lookpolymers.com/polymer_Petroquimica-Triunfo-Trithene-TS-3003-LDPE-Film-Grade.php)

Physical Properties	Metric	English	Comments
Density	0.925 - 0.927 g/cc	0.0334 - 0.0335 lb/in <sup>3</sup>	ASTM D1505
Thickness	50.0 microns	1.97 mil	
Melt Index of Compound	0.23 - 0.30 g/10 min @Load 2.16 kg, Temperature 190 °C	0.23 - 0.30 g/10 min @Load 4.76 lb, Temperature 374 °F	ASTM D1238

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	16.0 MPa	2320 psi	ASTM D638
Tensile Strength, Yield	12.0 MPa	1740 psi	ASTM D638
Film Elongation at Break, MD	325 %	325 %	ASTM D882
Film Elongation at Break, TD	675 %	675 %	ASTM D882
Elongation at Break	620 %	620 %	ASTM D638
Secant Modulus, MD	0.125 GPa	18.1 ksi	5%; ASTM D882
Secant Modulus, TD	0.130 GPa	18.9 ksi	5%; ASTM D882
Coefficient of Friction, Dynamic	0.090	0.090	ASTM D1894
Elmendorf Tear Strength, MD	6.80 g/micron	173 g/mil	ASTM D1922

Mechanical Properties	Metric	English	Comments
Dart Drop Test	200 g	0.441 lb	(method A); ASTM D1709
Film Tensile Strength at Break, MD	27.0 MPa	3920 psi	ASTM D882
Film Tensile Strength at Break, TD	24.0 MPa	3480 psi	ASTM D882

Thermal Properties	Metric	English	Comments
Melting Point	114 °C	237 °F	ASTM D3418

Optical Properties	Metric	English	Comments
Gloss	96 %	96 %	@ 60° Gardner; ASTM D2457
Transmission, Visible	90 %	90 %	transparent; thickness not quantified

Processing Properties	Metric	English	Comments
Processing Temperature	160 - 175 °C	320 - 347 °F	Plasticizing Zone
	170 - 185 °C	338 - 365 °F	Mixture Zone
Feed Temperature	150 - 175 °C	302 - 347 °F	
Adapter Temperature	180 - 195 °C	356 - 383 °F	
Die Opening	0.0800 - 0.100 cm	0.0315 - 0.0394 in	
Blow-up Ratio (BUR)	3.0	3.0	Recommended

## Contact Songhan Plastic Technology Co.,Ltd.

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