Trithene® TS 3003

Low Density Polyethylene

Petroquimica Triunfo

Message:

Trithene®TS 3003 is a low density polyethylene material. This product is available in Latin America and is processed by film extrusion.
Trithene®The main features of TS 3003 are:
high molecular weight
High stiffness
Good processability
accessible food
Good dimensional stability
Typical application areas include:
packing
Movie
food contact applications

General Information			
Features	Good dimensional stability Low friction coefficient Rigidity, high High elasticity High molecular weight Optical Workability, good Thermal stability, good Compliance of Food Exposure		
Uses	Packaging Films		
Agency Ratings	ANVISA n°105/99 ASTM D 1248, II, Class A, Cat. 5 FDA 21 CFR 177.1520(c) 2.1		
Forms	Particle		
Processing Method	Film extrusion		
Physical	**Nominal Value**	**Unit**	**Test Method**
Density	0.926	g/cm³	ASTM D1505
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	0.27	g/10 min	ASTM D1238
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Strength			ASTM D638
Yield, molding	12.0	MPa	ASTM D638
Fracture, molding	16.0	MPa	ASTM D638

Tensile Elongation (Break, Compression Molded)	620	%	ASTM D638
Coefficient of Friction (vs. Itself - Dynamic, Blown Film)	0.090		ASTM D1894
Films	**Nominal Value**	**Unit**	**Test Method**
secant modulus			ASTM D882
5% secant, MD: 50 µm, blown film	125	MPa	ASTM D882
5% secant, TD: 50 µm, blown film	130	MPa	ASTM D882
Tensile Strength			ASTM D882
MD: Broken, 50 µm, blown film	27.0	MPa	ASTM D882
TD: Broken, 50 µm, blown film	24.0	MPa	ASTM D882
Tensile Elongation			ASTM D882
MD: Broken, 50 µm, blown film	330	%	ASTM D882
TD: Broken, 50 µm, blown film	680	%	ASTM D882
Dart Drop Impact (50 µm, Blown Film)	200	g	ASTM D1709A
Elmendorf Tear Strength			ASTM D1922
MD: 50 µm, blown film	340	g	ASTM D1922
TD: 50 µm, blown film	280	g	ASTM D1922
Thermal	**Nominal Value**	**Unit**	
Melting Temperature	114	°C	
Optical	**Nominal Value**	**Unit**	**Test Method**
Gloss (60°, 50.0 µm, Blown Film)	96		ASTM D2457
Haze (50.0 µm, Blown Film)	8.0	%	ASTM D1003

Additional Information

Film properties taken from 50 µm blown film produced on a 50 mm extruder, L/D=25, die gap=1.0 mm, BUR=2.3:1Melt Mass-Flow Rate, ASTM D1238, 190°C/2.16 kg: 0.23 to 0.30 g/10 minDensity, ASTM D1505: 0.925 to 0.927 g/cm³

Extrusion	Nominal Value	Unit
Cylinder Zone 1 Temp.	150 - 165	°C
Cylinder Zone 2 Temp.	160 - 175	°C
Cylinder Zone 3 Temp.	170 - 185	°C
Adapter Temperature	180 - 195	°C
Melt Temperature	180 - 210	°C

Extrusion instructions

Recommended Blow Up Ratio: 2-3:1Recommended Die Gap: 0.8 to 1.0 mm

Recommended distributors for this material

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