

# Trithene® TS 7003

Low Density Polyethylene

Petroquímica Triunfo

## Message:

Trithene®TS 7003 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 7003 are:

high molecular weight

Good processability

accessible food

Heat resistance

Typical application areas include:

Movie

food contact applications

General Information			
Features	Low friction coefficient		
	High molecular weight		
	Workability, good		
	Thermal stability, good		
	Compliance of Food Exposure		
Uses	Films		
Agency Ratings	ANVISA n°105/99		
	ASTM D 1248, I, 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	0.923	g/cm <sup>3</sup>	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	11.0	MPa	ASTM D638
Fracture, molding	17.0	MPa	ASTM D638
Tensile Elongation (Break, Compression Molded)	590	%	ASTM D638
Coefficient of Friction (vs. Itself - Dynamic, Blown Film)	0.15		ASTM D1894
Films	Nominal Value	Unit	Test Method
secant modulus			ASTM D882
5% secant, MD: 50 µm, blown film	115	MPa	ASTM D882
5% secant, TD: 50 µm, blown film	125	MPa	ASTM D882

Tensile Strength			ASTM D882
MD: Broken, 50 µm, blown film	27.0	MPa	ASTM D882
TD: Broken, 50 µm, blown film	23.5	MPa	ASTM D882
Tensile Elongation			ASTM D882
MD: Broken, 50 µm, blown film	300	%	ASTM D882
TD: Broken, 50 µm, blown film	630	%	ASTM D882
Dart Drop Impact (50 µm, Blown Film)	190	g	ASTM D1709A
Elmendorf Tear Strength			ASTM D1922
MD: 50 µm, blown film	300	g	ASTM D1922
TD: 50 µm, blown film	230	g	ASTM D1922
Thermal	Nominal Value	Unit	Test Method
Vicat Softening Temperature	94.0	°C	ASTM D1525
Optical	Nominal Value	Unit	Test Method
Gloss (60°, 50.0 µm, Blown Film)	64		ASTM D2457
Haze (50.0 µm, Blown Film)	18	%	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: 0.922 to 0.924 g/cm <sup>3</sup>			
Extrusion	Nominal Value	Unit	
Cylinder Zone 1 Temp.	160 - 170	°C	
Cylinder Zone 2 Temp.	165 - 175	°C	
Cylinder Zone 3 Temp.	170 - 190	°C	
Adapter Temperature	185 - 200	°C	
Extrusion instructions			

Recommended Blow Up Ratio: 2-3:1

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#### Recommended distributors for this material

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