

Alkatuff® 401

Linear Low Density Polyethylene
Qenos Pty Ltd

Message:

401 is a hexene copolymer linear low density polyethylene, designed for a variety of film applications. 401 is formulated with antiblock, stabilisation and a high level of slip additive.

401 is formulated with additional slip additive for manufacture at 25µm and below. It can be used in applications such as garbage bags and other light gauge applications. 401 is not recommended for use in outdoor applications (especially applications where there may be prolonged exposure to sunlight, eg. agricultural films) without the addition of appropriate Hindered Amine based Light Stabilisers (HALS).

401 is suitable for food contact applications and conforms to the requirements of the United States Food and Drug Administration CFR 21 177.1520, paragraph (c), item 3.1.

General Information			
Additive	High smoothness		
	Anti-caking agent		
Features	High smoothness		
	Anti-caking property		
	Compliance of Food Exposure		
	General		
Uses	Films		
	Bags		
Agency Ratings	FDA 21 CFR 177.1520(c) 3.1		
Forms	Particle		
Processing Method	Film extrusion		
Physical	Nominal Value	Unit	Test Method
Density	0.925	g/cm ³	ASTM D1505
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	1.0	g/10 min	ASTM D1238
Mechanical	Nominal Value	Unit	Test Method
	0.12		
Coefficient of Friction (Blown Film)	0.14		ASTM D1894
Films	Nominal Value	Unit	Test Method
	50		
Film Thickness - Tested	100	µm	
secant modulus			ASTM D882

2% secant, MD: 50 µm	230	MPa	ASTM D882
2% secant, MD: 100 µm	210	MPa	ASTM D882
2% secant, TD: 50 µm	240	MPa	ASTM D882
2% secant, TD: 100 µm	220	MPa	ASTM D882
Tensile Strength			ASTM D882
MD: Yield, 50 µm	10.0	MPa	ASTM D882
MD: Yield, 100 µm	10.0	MPa	ASTM D882
TD: Yield, 50 µm	12.0	MPa	ASTM D882
TD: Yield, 100 µm	12.0	MPa	ASTM D882
MD: Break, 50 µm	32.0	MPa	ASTM D882
MD: Break, 100 µm	30.0	MPa	ASTM D882
TD: Break, 50 µm	32.0	MPa	ASTM D882
TD: Break, 100 µm	23.0	MPa	ASTM D882
Tensile Elongation			ASTM D882
MD: Break, 50 µm	1000	%	ASTM D882
MD: Break, 100 µm	750	%	ASTM D882
TD: Break, 50 µm	1000	%	ASTM D882
TD: Break, 100 µm	800	%	ASTM D882
Dart Drop Impact			ASTM D1709
50 µm, blown film	240	g	ASTM D1709
100 µm, blown film	140	g	ASTM D1709
Elmendorf Tear Strength			ASTM D1922
MD : 50 µm	630	g	ASTM D1922
MD : 100 µm	290	g	ASTM D1922
TD : 50 µm	1100	g	ASTM D1922
TD : 100 µm	520	g	ASTM D1922
Optical	Nominal Value	Unit	Test Method
Gloss			ASTM D2457
50.0 µm, blown film	66		ASTM D2457
100 µm, blown film	68		ASTM D2457
Haze			ASTM D1003
50.0 µm, blown film	12	%	ASTM D1003
100 µm, blown film	8.0	%	ASTM D1003
Additional Information			

Film properties taken from blown film processed at a blow up ratio of 3.5:1.

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