

Alkatuff® 438

Linear Low Density Polyethylene
Qenos Pty Ltd

Message:

438 is a hexene copolymer linear low density polyethylene, designed for a variety of general purpose applications. 438 is formulated with process aid and a stabilisation package but contains no slip or antiblock additives.

438 is intended for general purpose blending applications such as film for liners. 438 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).

438 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	Processing stabilizer		
	Processing aid		
Features	High smoothness		
	Copolymer		
	Anti-caking property		
	Compliance of Food Exposure		
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	0.922	g/cm ³	ASTM D1505
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	0.80	g/10 min	ASTM D1238
Mechanical	Nominal Value	Unit	Test Method
	0.50		
Coefficient of Friction (Blown Film)	0.50		ASTM D1894
Films	Nominal Value	Unit	Test Method
	25		
Film Thickness - Tested	50	µm	
secant modulus			ASTM D882

2% secant, MD: 25 µm	190	MPa	ASTM D882
2% secant, MD: 50 µm	200	MPa	ASTM D882
2% secant, TD: 25 µm	200	MPa	ASTM D882
2% secant, TD: 50 µm	230	MPa	ASTM D882
Tensile Strength			ASTM D882
MD: Yield, 25 µm	9.00	MPa	ASTM D882
MD: Yield, 50 µm	10.0	MPa	ASTM D882
TD: Yield, 25 µm	11.0	MPa	ASTM D882
TD: Yield, 50 µm	12.0	MPa	ASTM D882
MD: Break, 25 µm	47.0	MPa	ASTM D882
MD: Break, 50 µm	46.0	MPa	ASTM D882
TD: Break, 25 µm	41.0	MPa	ASTM D882
TD: Break, 50 µm	42.0	MPa	ASTM D882
Tensile Elongation			ASTM D882
MD: Break, 25 µm	900	%	ASTM D882
MD: Break, 50 µm	1100	%	ASTM D882
TD: Break, 25 µm	1000	%	ASTM D882
TD: Break, 50 µm	1100	%	ASTM D882
Dart Drop Impact			ASTM D1709
25 µm, blown film	160	g	ASTM D1709
50 µm, blown film	260	g	ASTM D1709
Elmendorf Tear Strength			ASTM D1922
MD : 25 µm	290	g	ASTM D1922
MD : 50 µm	670	g	ASTM D1922
TD : 25 µm	510	g	ASTM D1922
TD : 50 µm	1100	g	ASTM D1922
Optical	Nominal Value	Unit	Test Method
Gloss			ASTM D2457
25.0 µm, blown film	64		ASTM D2457
50.0 µm, blown film	67		ASTM D2457
Haze			ASTM D1003
25.0 µm, blown film	8.0	%	ASTM D1003
50.0 µm, blown film	10	%	ASTM D1003
Additional Information			

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

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