Vanguard® 345

High yield shrink film

Vanguard® 345, the newest addition to our family of High Performance Shrink Films, provides a high yield, cost effective alternative to heavier gauge films. This thin, but amazingly tough film has unsurpassed shrink capabilities and outstanding clarity and gloss. V345 is an excellent choice for your next down gauging project.

Film Highlights

- Tough, coextruded, crosslinked polyolefin material in a high yield gauge

- Optical qualities to showcase any retail application

- Strong durable seals on a wide range of wrapping equipment and sealing systems

- Very high shrink percentage with good burn through resistance

- Typical applications include printed materials, office supplies, software, toys & games

VANGUARD PACKAGING FILMS DIVISION

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Vanguard® 345 High Yield Shrink Film

Property	ASTM Test Method	Value
Gauge		45
Yield (square inches per pound)		66,500
Roll length - Centerfolded		5,830 feet
Roll length - Singlewound		11,660 feet
Minimum Use Temperature		-40 (^{o}F)
Maximum Storage Temp		90 (^{o}F)
Shrink Air Temperature		240-350 (^{o}F)
Haze (%)	D1003	2.2
Gloss (%)	D2457	140
Tensile Strength (psi)	D822	20,500
Coefficient of Friction (film to film - static) (film to film - kinetic)	D1894	0.15 0.15
Unrestrained Shrink % (@ 250°F film temp)	D2732	75
Impact Strength (in-lbs)	D3420	8
Stiffness Modulus (psi)	D882	45,000
Elongation at Break (%)	D882	130
Tear strength (gms/ply)	D1922	11
WVTR (gms/100si/24hr)	F1249	1.9
OTR (cc/100si/24hr)	D3985	905

This information represents our best judgment based on tests performed, but neither Okura USA nor Okura Industrial Co., Ltd. assumes any liability whatsoever in connection with the use of this information or suggestions contained herein. They are given and accepted at the user's risk. We urge purchasers to conduct independent tests to determine final suitability for their specific applications.