



VANGUARD SHRINK FILMS

www.vanguardshrinkfilms.com



CCL High Performance Cross-Linked Shrink Film

Vanguard Shrink Films CCL is an advanced biaxially oriented high clarity cross-linked LLDPE shrink film, with the versatility to shrink wrap a wide variety of products. Vanguard CCL is formulated and produced to ensure performance characteristics to meet even the toughest shrink wrapping applications. This film is compatible with nearly all shrink wrapping equipment in use today.



**FOR YOUR TOUGHEST
APPLICATIONS**



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VSF-CCL



Cross-Linked Shrink Films

Specifications

Available In: 50, 60, 75, 100
& 125 gauge

* 6" to 58" Centerfolded

* 6" to 84" Singlewound

* Custom sizes are available
(Consult Factory)

* Microperfed Film Available

* Printed Film Available
(Consult Factory)
60ga, 75ga, 100ga, 125ga

FDA/USDA COMPLIANT

Vanguard Shrink Films
comply with U.S. Food and
Drug Administration (FDA)
requirements governing direct
food contact.

Manufacturing processes are
ISO 9001 and ISO 22000
certified

MSDS data sheets are
available upon request



CCL has been pre-
qualified as Store Drop-
off Recyclable by
How2Recycle®.

The assigned label for on-pack usage may
change due to product application,
attachments, or other factors

- Excellent gloss and clarity for retail appeal
- Strong durable seals on a wide variety of sealing systems
- High tensile strength and tear resistance for added toughness
- Consistent machinability on semi-automatic and automatic wrappers
- High shrink percentage allows film to conform tightly to irregular shapes
- Corrosion free sealing with no fumes or wire buildup
- Good resistance to burn though created by tunnel temperature variations
- Works well on a wide range of applications
- Multipacks, toys & games, baked goods, printed items

Properties	Unit	ASTM Test	Values				
Guage			50	60	75	100	125
Roll Length							
CF			5250'	4375'	3500'	2625'	2100'
SW			10500'	8750'	7000'	5250'	4200'
Tensile Strength							
MD	PSI	D882	16700	1600	1600	13800	12300
TD			1600	15200	15200	13100	11600
Tear Strength							
MD	Grams	D1922	10.5	14.5	17.5	23.5	28.5
TD			10	13.5	16	23	27
Elongation							
MD	%	D882	115	120	125	130	130
TD			110	115	115	125	125
Coefficient Of Friction							
Static		D1894	0.24	0.23	0.24	0.26	0.25
Dynamic			0.23	0.22	0.22	0.25	0.25
Optics							
Haze	%	D1003	2.2	2.6	3.2	3.9	4.5
Clarity		D1746	98	98	97	95	92
Gloss @ 45 Deg	%	D2457	85	85	83	81	80
Barrier							
Oxygen Transmission Rate	CC/M-2/Day	D3985	10300	9500	6200	5400	4200
Wate Vapor Transmission Rate	g/100sq/day	F1249	2.2	1.9	1.4	1	0.7
Shrink Properties			MD		TD		
Free Shrinkage	212 F %	D2732	16		26		
	230 F %		34		43		
	248 F %		62		66		
	266 F %		81		79		
Shrink Tension	212 F %	D2838	305		370		
	230 F %		390		560		
	248 F %		425		615		
	266 F %		405		580		

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A Shrink Tech Systems, L.L.C. Company

This information represents our judgment based on tests performed, however, Vanguard Shrink Films, Inc. assumes no 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 application.

