

## Technical Information and Typical Properties

### Sigma Stretch Film Vortex™ 1.0 mil One Sided Cling Blown Machine Film



#### Product Description

Sigma Vortex is a 3 layer blown film with one sided cling properties. Toughness, containment, and puncture resistance ensures problem free wrapping with clarity similar to most cast films.

#### General

Applications	• Bagged Product	• Ringer Applications	• Brick and Block
Revision Date	• High Containment	• Inboard Loads	• Bottled Water
	• 3/12/15		

Film Properties	Typical Value (English)		Typical Value (SI)		Test Method
	Value	Tolerance	Value	Tolerance	
Tensile Strength at Yield MD	2300 psi	± 15%	15.9 mPa	--	ASTM D882
Tensile Strength at Yield TD	1200 psi	± 15%	8.3 mPa	± 15%	ASTM D882
Tensile Strength at Break MD	5800 psi	± 15%	39.9 mPa	± 15%	ASTM D882
Tensile Strength at Break TD	2900 psi	± 15%	20.0 mPa	± 15%	ASTM D882
Elongation at Break MD	480%	± 15%	480%	± 15%	ASTM D882
Elongation at Break TD	520%	± 15%	520%	± 15%	ASTM D882
Protrusion Puncture	9.2 lbs	± 15%	4.2 kg	± 15%	ASTM D5748
Protrusion Puncture Energy	30.7 in-lb	± 15%	3.5 n-m	± 15%	ASTM D5748
Elmendorf Tear Strength MD	180 g/mil	± 15%	7.1 g/micron	± 15%	ASTM D1922
Elmendorf Tear Strength TD	1100 g/mil	± 15%	43.3 g/micron	± 15%	ASTM D1922
Cling - Outside to Inside @ 225%	min 150 g/in	± 15%	min 59 g/cm	± 15%	ASTM D5458

Dimensions	Value (English)	Tolerance	Value (SI)	Tolerance
Core ID	3.05 inches	± 0.05 in	76.2 mm	± 1.3 mm
Film Thickness	1.0 mil		25.4 micron	

Manufactured with pride in the USA by

#### **Sigma Stretch Film**

Page & Schuyler Aves. Bldg #8

Phone: 800-672-9727 • 201-507-9100

Email: [stretch.info@sigmaplastics.com](mailto:stretch.info@sigmaplastics.com)

Visit our website at [www.sigmastretchfilm.com](http://www.sigmastretchfilm.com)

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