

## HAA OPAQUE BLOWN HAND FILM

### .70 mil

#### Product Description

HAA is Sigma's opaque black blown hand film. It is ideal for concealing valuable products and has high-quality containment attributes. 100% Recyclable. Available in widths from 11 inches - 18 inches.

#### Applications

Brick & Block	Bagged Products
Warehouse	Boxed Products
Irregular Loads	Multi-use Applications
Transportation Industry	
Food Distribution	

Film Properties	Typical Value (English)	Tolerance	Test Method
Tensile Strength at Yield MD	1600 psi	± 15%	ASTM D882
Tensile Strength at Yield TD	1700 psi	± 15%	ASTM D882
Tensile Strength at Break MD	6900 psi	± 15%	ASTM D882
Tensile Strength at Break TD	4700 psi	± 15%	ASTM D882
Elongation at Break MD	470%	± 15%	ASTM D882
Elongation at Break TD	700%	± 15%	ASTM D882
Protrusion Puncture	8.6 lbs.	± 15%	ASTM D5748
Protrusion Puncture Energy	17.5 in-lb	± 15%	ASTM D5748
Elmendorf Tear Strength MD	140 g/mil	± 15%	ASTM 1922
Elmendorf Tear Strength TD	750 g/mil	± 15%	ASTM 1922
Cling - Outside to Inside @ 225%	min 150 g/in	± 15%	ASTM D5458

Dimensions	Value	Tolerance
Core ID	3.05 inches	± 0.05%
Film Thickness	17.8 micron	

**Manufactured with pride in the USA and Canada 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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# HAA OPAQUE BLOWN HAND FILM

## .75 mil

### Product Description

HAA is Sigma's opaque black blown hand film. It is ideal for concealing valuable products and has high-quality containment attributes. 100% Recyclable. Available in widths from 11 inches - 18 inches.

### Applications

Brick & Block	Bagged Products
Warehouse	Boxed Products
Irregular Loads	Multi-use Applications
Transportation Industry	
Food Distribution	

Film Properties	Typical Value (English)	Tolerance	Test Method
Tensile Strength at Yield MD	1600 psi	± 15%	ASTM D882
Tensile Strength at Yield TD	1700 psi	± 15%	ASTM D882
Tensile Strength at Break MD	6900 psi	± 15%	ASTM D882
Tensile Strength at Break TD	4700 psi	± 15%	ASTM D882
Elongation at Break MD	470%	± 15%	ASTM D882
Elongation at Break TD	700%	± 15%	ASTM D882
Protrusion Puncture	8.6 lbs.	± 15%	ASTM D5748
Protrusion Puncture Energy	17.5 in-lb	± 15%	ASTM D5748
Elmendorf Tear Strength MD	140 g/mil	± 15%	ASTM 1922
Elmendorf Tear Strength TD	750 g/mil	± 15%	ASTM 1922
Cling - Outside to Inside @ 225%	min 150 g/in	± 15%	ASTM D5458

Dimensions	Value	Tolerance
Core ID	3.05 inches	± 0.05%
Film Thickness	19.0 micron	

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 Email: stretch.info@sigmaplastics.com  
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## HAA OPAQUE BLOWN HAND FILM

### .80 mil

#### Product Description

HAA is Sigma's opaque black blown hand film. It is ideal for concealing valuable products and has high-quality containment attributes. 100% Recyclable. Available in widths from 11 inches - 18 inches.

#### Applications

Brick & Block	Bagged Products
Warehouse	Boxed Products
Irregular Loads	Multi-use Applications
Transportation Industry	
Food Distribution	

Film Properties	Typical Value (English)	Tolerance	Test Method
Tensile Strength at Yield MD	1600 psi	± 15%	ASTM D882
Tensile Strength at Yield TD	1700 psi	± 15%	ASTM D882
Tensile Strength at Break MD	6900 psi	± 15%	ASTM D882
Tensile Strength at Break TD	4700 psi	± 15%	ASTM D882
Elongation at Break MD	470%	± 15%	ASTM D882
Elongation at Break TD	700%	± 15%	ASTM D882
Protrusion Puncture	8.6 lbs.	± 15%	ASTM D5748
Protrusion Puncture Energy	17.5 in-lb	± 15%	ASTM D5748
Elmendorf Tear Strength MD	140 g/mil	± 15%	ASTM 1922
Elmendorf Tear Strength TD	750 g/mil	± 15%	ASTM 1922
Cling - Outside to Inside @ 225%	min 150 g/in	± 15%	ASTM D5458

Dimensions	Value	Tolerance
Core ID	3.05 inches	± 0.05%
Film Thickness	20.3 micron	

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## HAA OPAQUE BLOWN HAND FILM

### 1.00 mil

#### Product Description

HAA is Sigma's opaque black blown hand film. It is ideal for concealing valuable products and has high-quality containment attributes. 100% Recyclable. Available in widths from 11 inches - 18 inches.

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Warehouse	Boxed Products
Irregular Loads	Multi-use Applications
Transportation Industry	
Food Distribution	

Film Properties	Typical Value (English)	Tolerance	Test Method
Tensile Strength at Yield MD	1600 psi	± 15%	ASTM D882
Tensile Strength at Yield TD	1700 psi	± 15%	ASTM D882
Tensile Strength at Break MD	6900 psi	± 15%	ASTM D882
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Elongation at Break MD	470%	± 15%	ASTM D882
Elongation at Break TD	700%	± 15%	ASTM D882
Protrusion Puncture	8.6 lbs.	± 15%	ASTM D5748
Protrusion Puncture Energy	17.5 in-lb	± 15%	ASTM D5748
Elmendorf Tear Strength MD	140 g/mil	± 15%	ASTM 1922
Elmendorf Tear Strength TD	750 g/mil	± 15%	ASTM 1922
Cling - Outside to Inside @ 225%	min 150 g/in	± 15%	ASTM D5458

Dimensions	Value	Tolerance
Core ID	3.05 inches	± 0.05%
Film Thickness	25.4 micron	

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