# **Stretch Film**





# Oriented Film Product range

## User friendly

Reduce repetetive strain injuries due to light rolls in comparison to regular stretch films. Oriented rolls are shock proof and are damage resistant.

## Wrapping consistency

No compromises on safety and quality. When paired with our OSS solution stability and costs are controlled and film is used until the last metre.



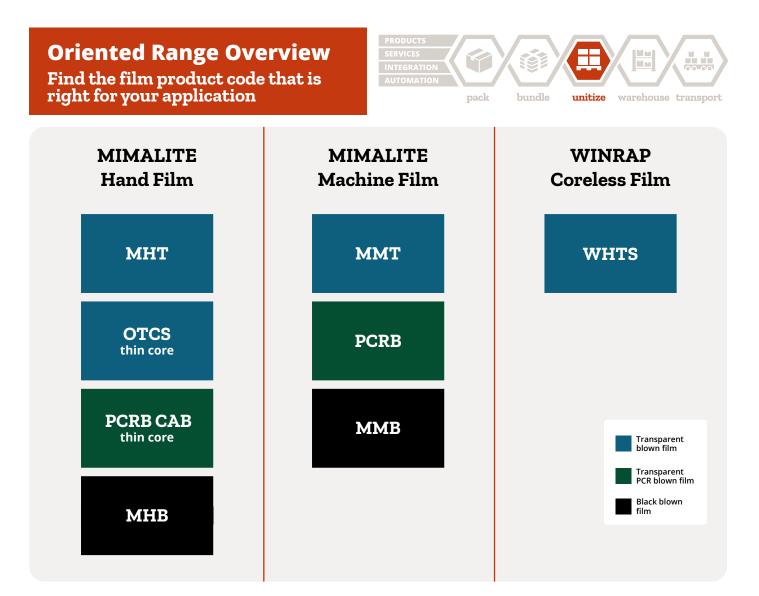
The best alternative to manual wrapping. Optimized cost per pallet due to a more controlled wrapping and thin gauge extrusion process.

## 100% recyclable

Our oriented films are 100% recyclable. Packaging waste can be reduced by over 50% in comparison with traditional stretch film wrapping methods.







## Reasons why our Oriented Film product range are the key choice for consumers

#### Quality & Performance

All our oriented films are designed, produced and delivered with the highest grade of quality control. We make no compromises on safety, traceability and performance. Our quality incidence report was < 0.1% in 2020. We are BRC / IOP, ISO 9001,14001 and 50001 certified.

#### Consistency

We are pioneers in developing oriented film and select purposefully, top quality raw materials, sourced in Europe and carefully controlled to perfect our recipes and make your application work flawlessly. Our product range is designed to bring the most consistent results depending of the mechanical properties of the film.

#### Producer Expertise

40+ years experience as the stretch film producer in Europe. We are pioneers of producing oriented films both in cast and blown extrusion. We have 3 production facilities located in Belgium and Ireland.

#### Research & Development

We are consistently improving our products in order to find better solutions for our customers, we also commit our focus to sustainability, waste reduction and carbon footprint.

#### Technical Consultancy & Holistic Approach

We deliver to our customers superior technical support and expertise. Our film specialists provide ad-hoc and on site audits to perfectly match the right film with the right machine and application. We do not only rely on weight or cost, we analyze your whole production and supply chain process, from primary to tertiary packaging and automated storage to provide you the best solution, both in stability and economical performance.

Our laboratory and test centers – unique in Europe – are powerful tools to achieve the best-in-class performance according to your needs.

# Sustainability

How we are making a difference

#### Oriented film is fully Recyclable

Oriented film is made with Linear Low Density PolyEthylene (LLDPE) which is 100% recyclable and can be reused for recycled oriented film or numerous applications depending on the purity of the collected material.



# Technical Consultancy to our Customers

Being closer to our customers and contributing to optimal consumptions is one of our commitments. The best oriented film is the one you don't waste by being overpacked.

## Internal Recyclability

Our Target is to reuse 100% of internal scrap by 2023 latest. Today our Gorey factory in Ireland is a leader in this commitment with almost 100% of the internal scrap reprocessed and reused in house.



## Produced locally in Belgium & Ireland

The raw material that we use for our films is carefully selected and sourced in Europe. Mass balanced, bio based and recycled raw materials in order to reduce environmental impact are our top priorities.



## **Energy Management**

More than 50% of 2021 Capital Investments were Sustainability related projects. As an example, 3600m<sup>2</sup> of solar panels were installed in 2021 for our Virton plant, with an objective of using 40% green energy, to end 2021.



## **Quality Performance**

We make no compromises on quality with an average return rate of <0.1% in 2021. This prevents multiple trips, unecessary resources and carbon footprint increase.





#### PCR: One of our ways to contribute to a better circular economy Reducing environmental impact through the re-usability of stretch film

#### What is Post Consumer Recycled (PCR)?

PCR, is recycled materials collected from industrial waste packaging. In order to produce PCR Resin, waste packaging must be sorted to isolate LLDPE (linear low density polyethylene) and processed through the recycling chain. This includes returns of used oriented film material.

We acquire PCR Resin, from our trusted circular economy partners, with the highest grade of purity to ensure the same mechanical properties as regular stretch film.

#### How Does PCR Oriented Film perform?

When it comes to mechanical performance there is no difference between PCR Oriented films and fossil fuel based films. We have invested time and resources in to research and development to create the optimum recipe for the highest quality.

Stretchability of film requires a strong and stable molecular chain to achieve consistent results. By using 30% PCR resin in product composition we ensure a reliable and consistent quality, with the highest performance standards.

## **Material Life Cycle of PCR Oriented Film**



\* Fossil fuel based and PCR stretch film can be recycled several times in this loop



## Benefits of using PCR oriented films

#### Why PCR is the key choice for a more sustainable method of wrapping pallets

#### A More Sustainable Industry

Made with 30% PCR content, recovered from post consumer waste streams. Signode PCR oriented film delivers the same mechanical performance and transportation efficiency as film produced with virgin raw material, maintaining full recyclability.

#### ■ Cuts Tax Costs in €'s

The EU plans to raise a tax per ton of non-recycled plastic content. Each metric ton of non-recycled plastic is a loss and potentially a cost, both financially and environmentally. By using PCR oriented film you reduce the volume of non-recycled plastic, minimizing waste & contributing to EU environmental goals.

#### CO2 Reduction

The fossil fueled raw material production process involves numerous steps with high CO2 impact. By recycling used LLDPE you minimize CO2 emissions, in comparison to the production of film, made from virgin raw material. It also prevents the export of plastic waste outside of the EU and it's associated CO2 emissions.

#### Future Ready

The trajectory of industries is leading towards a more sustainable way of re-using waste packaging. By using Signode PCR oriented film, you contribute to prevent the use of unnecessary resources, involved in the production process of new packaging.



#### Granulated PCR Resin

# PCR Film - With core



# Introducing PCRB Machine film, an oriented blown machine film containing 30% recycled raw material, designed for semi-automatic machines.

Reel & Packaging Specifications				
Product Reference	PCRB7B390			
	/4200			
Thickness µ	6.6			
Film width (mm)	390			
Reel length (m)	4200			
Cling	Inside			
Core weight (kg)	1.153			
Reel weight (kg GFN)	11.250			
Pallet size	1000 x 1200			
Outside diameter (mm)	257			
Inside core diameter (mm)	≥ 76			
Palletization/nr of layers	2			
Nr of reels/pallet	36			
Pallet gross weight (kg)	405			
Pallet net weight (kg)	363			

#### **PCRB Film Benefits**

- Containing 30% PCR
- Improved load containment
- One side cling film
- Low coefficient of friction
- Good clarity and optics
- Less film consumption

Film Tolerances	
Thickness Tolerance	+/- 10%
Core Protrusion	± 3 mm
Tolerances on weight	± 5 %
On Reel length	± 5 %
On Film width	± 4 mm

# Introducing PCRB Hand Film Soft Core, a blown oriented hand film containing 30% recycled raw material, with optimized core weight.

Reel & Packaging Specifications				
Product Reference	PCRB2B390			
	/0600			
Thickness µ	6.6 µ			
Film width (mm)	390			
Reel length (m)	600			
Cling	Inside			
Core weight (kg)	0.180			
Reel weight (kg GFN)	1.601			
Pallet size	1000 x 1200			
Outside diameter (mm)	120			
Inside core diameter (mm)	≥ 50			
Palletization/nr of layers	4			
Nr of reels/pallet	360			
Pallet gross weight (kg)	576			
Pallet net weight (kg)	512			

#### **PCRB Film Benefits**

- Containing 30% PCR
- Improved load containment
- One side cling film
- Low coefficient of friction
- Good clarity and optics
- Less cardboard waste

Film Tolerances	
Thickness Tolerance	+/- 10%
Core Protrusion	± 3 mm
Tolerances on weight	± 5 %
On Reel length	± 5 %
On Film width	± 4 mm



# **PCR Film - Coreless**



# Introducing PCRB Coreless film, an oriented blown film containing 30% recycled raw material, designed for semi-automatic machines or manual use.

Reel & Packaging Specifications	
Product Reference	PCRBCAB7B390
	/0800
Thickness µ	6.6
Film width (mm)	390
Reel length (m)	800
Cling	Inside
Core weight (kg)	
Reel weight (kg GFN)	1.894
Pallet size	1000 x 1200
Outside diameter (mm)	185
Inside core diameter (mm)	≥ 76
Palletization/nr of layers	5
Nr of reels/pallet	180
Pallet gross weight (kg)	405
Pallet net weight (kg)	341

#### **PCRB Film Benefits**

- Containing 30% PCR
- Improved load containment
- One side cling film
- Low coefficient of friction
- Good clarity and optics
- Zero cardboard waste

Film Tolerances	
Thickness Tolerance	+/- 10%
Core Protrusion	± 3 mm
Tolerances on weight	± 5 %
On Reel length	± 5 %
On Film width	± 4 mm



# Winrap Coreless Blown



# Introducing Winrap coreless blown, an oriented machine film specifically designed to provide high load containment on our semi-automatic machines

#### **MIMALITE Machine Film Benefits**

- Improved load containment
- One side cling film
- Low coefficient of friction
- Good clarity and optics
- Less film consumption

# Film TolerancesThickness Tolerance+/- 10%Tolerances on weight± 5 %On Reel length± 5 %On Film width± 4 mm

Reel & Packaging Specifica	ations				
Product Reference	WHTCAB390	WHTCAB390	WHTS3B391	WHTS3B390	WHTS3B390
Product Kelerence	/0800	/0800Y	/0600L	/0600	/0800
Thickness µ	6.6 µ	6.6	6.6 µ	7.5 µ	7.5 µ
Film width (mm)	390	390	390	390	390
Reel length (m)	800	800	616	600	800
Cling	Inside	Inside	Inside	Inside	Inside
Reel weight (kg GFN)	1.894	1.894	1.459	1.615	2.153
Pallet size	1000 x 1200	1000 x 1200	800 x 1200	1000 x 1200	1000 x 1200
Outside diameter (mm)	185	185	165	165	190
Inside core diameter (mm)	≥ 76	≥ 76	≥ 76	≥ 76	≥ 76
Palletization/nr of layers	5	4	5	5	5
Nr of reels/pallet	180	144	175	230	180
Pallet gross weight (kg)	341	273	255	371	388
Pallet net weight (kg)	341	273	255	371	388

Duaduct Defeuence	WHTS3B431	WHTS3B431	WHTS9B390	WHBS3B430
Product Reference	/0600	/0600Y	/0500	/0500
Thickness µ	7.5 µ	7.5 µ	9 µ	9 µ
Film width (mm)	430	430	390	440
Reel length (m)	600	600	500	500
Cling	Inside	Inside	Inside	Inside
Reel weight (kg GFN)	1.780	1.780	1.615	1.841
Pallet size	800 x 1200	800 x 1200	1000 x 1200	1000 x 1200
Outside diameter (mm)	165	165	165	165
Inside core diameter (mm)	≥ 76	≥ 76	≥ 76	≥ 76
Palletization/nr of layers	5	4	5	4
Nr of reels/pallet	175	140	230	168
Pallet gross weight (kg)	312	249	371	309
Pallet net weight (kg)	312	249	371	309

# MIMALITE Hand Film Thin Core



# Introducing Mimalite Hand Film Thin Core, a manual blown oriented film specifically designed to provide high load containment

MIMALITE Hand Film Thin Core Benefits	Film Tolerances	
Improved load containment	Thickness Tolerance	+/- 10%
One side cling film	Core Protrusion	10 ± 3 mm
Low coefficient of friction	Tolerances on weight	± 5 %
Light paper core	On Reel length	± 5 %
Less film consumption	On Film width	± 4 mm

Reel & Packaging Specifica	ations			
Product Reference	OBCS2B390	OTCS2B390	OTCS2B391	OTCS2B430
Product Reference	/0600	/0600	/0600	/0600
Thickness µ	6.6 µ	6.6 µ	6.6 µ	6.6 µ
Film width (mm)	390	390	390	430
Reel length (m)	600	600	600	600
Cling	Inside	Inside	Inside	Inside
Core weight (kg)	0.180	0.180	0.180	0.198
Reel weight (kg GFN)	1.601	1.601	1.601	1.765
Pallet size	1000 x 1200	1000 x 1200	800 x 1200	1000 x 1200
Outside diameter (mm)	120	120	120	120
Inside core diameter (mm)	≥ 50	≥ 50	≥ 50	≥ 50
Palletization/nr of layers	4	4	4	4
Nr of reels/pallet	360	360	288	360
Pallet gross weight (kg)	576	576	461	635
Pallet net weight (kg)	512	512	409	564



# **MIMALITE Hand Film**



+/- 10%

± 3 mm

±5%

±5%

± 4 mm

# Introducing Mimalite Hand Film, a manual blown oriented film specifically designed to provide high load containment

**Film Tolerances** 

**Core Protrusion** 

**On Reel length** 

On Film width

**Thickness Tolerance** 

**Tolerances on weight** 

#### **MIMALITE Hand Film Benefits**

- Improved load containment
- One side cling film
- Low coefficient of friction
- Good clarity and optics
- Less film consumption

Reel & Packaging Specifications						
Dreduct Defenses	мнто	7B390	MHT07B393	MHT09B390	MHT09B393	MHT07B430
Product Reference	/0600	/0600X	/0600 (Boxed)	/0500	/0300 (Boxed)	/0600
Thickness µ	6.6	δμ	6.6 µ	8.6 µ	8.6 µ	6.6 µ
Film width (mm)	39	90	390	390	390	430
Reel length (m)	60	00	600	500	300	600
Cling	Ins	ide	Inside	Inside	Inside	Inside
Core weight (kg)	0.4	0.48	0.4	0.4	0.4	0.45
Reel weight (kg GFN)	1.839	1.919	1.839	1.966	1.340	2.040
Pallet size	1000 x 1200	1000 x 1200	800 x 1200	1000 x 1200	800 x 1200	1000 x 1200
Outside diameter (mm)	113	106	113	113	100	113
Inside core diameter (mm)	≥ 50	≥ 38.2	≥ 50	≥ 50	≥ 50	≥ 50
Palletization/nr of layers	4	2	2	4	2	3
Nr of reels/pallet	400	210	120	400	132	300
Pallet gross weight (kg)	753	419	254	802	208	628
Pallet net weight (kg)	736	403	221	786	177	612

Dreduct Deference	MHT07B431	MHB09B430	MHB09B433	MHT09B433
Product Reference	/0600	/0500	/0500 (Boxed)	/0500 (Boxed)
Thickness µ	6.6 µ	8.6 µ	8.6 µ	8.6 µ
Film width (mm)	430	430	430	430
Reel length (m)	600	500	500	600
Cling	Inside	Inside	Inside	Inside
Core weight (kg)	0.45	0.45	0.45	0.45
Reel weight (kg GFN)	2.04	2.194	2.194	2.175
Pallet size	800 x 1200	1000 x 1200	800 x 1200	800 x 1200
Outside diameter (mm)	113	113	113	113
Inside core diameter (mm)	≥ 50	≥ 50	≥ 50	≥ 50
Palletization/nr of layers	2	3	2	2
Nr of reels/pallet	160	300	120	120
Pallet gross weight (kg)	350	674	300	296
Pallet net weight (kg)	326	658	263	261



# MIMALITE Machine Film



# Introducing MIMALITE machine film, an oriented blown machine film specifically designed to provide high load containment on semi-automatic machines

MIMALITE Machine Film Benefits	Film Tolerances	
Improved load containment	Thickness Tolerance	+/- 10%
One side cling film	Core Protrusion	± 3 mm
Low coefficient of friction	Tolerances on weight	± 5 %
Good clarity and optics	On Reel length	± 5 %
Less film consumption	On Film width	± 4 mm

#### Reel & Packaging Specifications

Rect & Fuckuging operations							
Product Reference	MMT07B390	MMT07B390	MMT07B391	MMT09B390	MMT09B391		
	/2100	/4200	/4200	/3250	/3250		
Thickness µ	6.6 µ	6.6	6.6 µ	8.6 µ	8.6 µ		
Film width (mm)	390	390	390	390	390		
Reel length (m)	2100	4200	4200	3250	3250		
Cling	Inside	Inside	Inside	Inside	Inside		
Core weight (kg)	1.153	1.153	1.153	1.153	1.153		
Reel weight (kg GFN)	6.202	11.250	11.250	11.181	11.181		
Pallet size	1000 x 1200	1000 x 1200	800 x 1200	1000 x 1200	800 x 1200		
Outside diameter (mm)	195	257	257	257	257		
Inside core diameter (mm)	≥ 76	≥ 76	≥ 76	≥ 76	≥ 76		
Palletization/nr of layers	2	2	2	2	2		
Nr of reels/pallet	60	36	26	36	26		
Pallet gross weight (kg)	372	405	292	403	291		
Pallet net weight (kg)	303	363	263	361	261		

Product Reference	MMT07B440	MMT07B441	MMB09B441	MMT09B440	MMT09B441
	/4200	/4200	/3250	/3250	/3250
Thickness µ	6.6 µ	6.6 µ	8.6 µ	8.6 µ	8.6 µ
Film width (mm)	440	440	440	440	440
Reel length (m)	4200	4200	3250	3250	3250
Cling	Inside	Inside	Inside	Inside	Inside
Core weight (kg)	1.250	1.250	1.250	1.250	1.250
Reel weight (kg GFN)	12.630	12.630	12.847	12.564	12.564
Pallet size	1000 x 1200	800 x 1200	800 x 1200	1000 x 1200	800 x 1200
Outside diameter (mm)	257	257	257	257	257
Inside core diameter (mm)	≥ 76	≥ 76	≥ 76	≥ 76	≥ 76
Palletization/nr of layers	2	2	2	2	2
Nr of reels/pallet	36	26	26	36	26
Pallet gross weight (kg)	455	328	334	452	327
Pallet net weight (kg)	410	296	302	407	294

Sources: Signode Europe Outside-In Customer Study conducted 2020

# WE'LL PROTECT IT FROM HERE.

Signode is the multi-billion-dollar global Transit Packaging Division of Crown Holdings, with 80 manufacturing facilities, 33 within Europe where we have over 2000 employees. The breadth and depth of Signode's experience and product portfolio allows the company to offer the resources, reach, and vision to provide transit packaging solutions, from the smallest to largest of customers.

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