### Leading supplier of sustainable papers for packaging solutions



The Power of Less<sup>®</sup>

## Our forward-thinking approach to paper

As towns, cities and entire populations evolve, and digital technology continues to revolutionise the way we shop and go about our lives, our needs and expectations have changed.

We demand more from the products we buy and expect them delivered faster to our doors. All whilst reducing our impact on the environment at the same time.

There is a need for a new approach to packaging and strong leadership in our industry.



### Our Purpose

### Redefining Packaging for a Changing World

Papermaking isn't just something we do. It's at the heart of our entire business model and is central to delivering on our Purpose.

We believe our vision for the packaging industry can play a powerful role in meeting some of the world's complex consumer and sustainability challenges. By innovating and thinking differently we are developing the bespoke strategies and paper products our customers want and the environment needs.



### **Thinking differently**

We take a flexible approach to our papermaking operations. While producing around five million tonnes of finished paper products every year, we are finding innovative ways to help our customers achieve more for less – sell more, reduce costs, manage risk and complexity in their supply chain.



### **Innovating together**

Working with our customers to understand their needs, and with our suppliers to ensure we receive the highest quality of paper for recycling, we innovate to maximise the performance and strength of our packaging papers.



### Putting sustainability at our heart

Whether it's ensuring that 100% of the fibre we use comes from recycled or chain of custody certified papers, reducing our carbon footprint, or mitigating our mills' water impact, sustainability is at the heart of our paper production processes.



### Developing the right strategies

We focus on supplying our customers with the high-quality finished papers they need for their manufacturing processes. That's why we developed ways of working that ensure our sustainably sourced fibres become the papers needed for high-performance packaging solutions.

### Your partner in containerboard and speciality papers

We are a leading manufacturer of sustainable corrugated case materials, speciality papers and high-performance papers for packaging production. All of our finished paper products are 100% recyclable and sustainably sourced.

Our products range from recycled to kraft, including brown liners, white liners, fluting, dual-use, coated grades and speciality papers.

Through our products, experience and knowledge, we are committed to ensuring consistent quality and service to our customers.



### The size and scale to manage all your needs

Our paper supply network stretches across 13 European mills and two in North America and produces around 5 million tonnes of containerboard and specialist finished paper products each year.

Although we're proud to have become one of the biggest papermaking operations in the world, we never forget the importance of personal service. So, we take an individual approach to account management and each of our regions employs a dedicated commercial manager who will personally deal with your enquiries.



# Paper that's good for your sustainability goals

Today's customers, employees, investors and shareholders all expect you to adopt a more sustainable approach. When you purchase our products, you can be certain they come from sustainably sourced or chain of custody certified sources.

Sustainability is at the heart of our papermaking and we work in partnership with you to select the right finished papers for packaging solutions that your business demands – whilst improving your environmental credentials at the same time.

Our Now and Next Sustainability Strategy focuses on closing the loop through better design, protecting natural resources by making the most of every fibre, reducing waste and pollution through circular solutions and equipping people to lead the transition to a circular economy.



# Leading the way in quality

We are proud to be recognised for the high quality of our finished product.

Our focus on quality runs throughout all the key stages of the papermaking process, from raw materials to the finished product, providing our customers with the quality assurance they need.

Although most of our mills have an automated paper testing laboratory, all our mills are required to send regular samples into an independent, certified Paper Quality Centre based in Witzenhausen, Germany.

Our paper mills get regularly audited by independent assessors, who inspect all aspects of our management systems and papermaking.



### Inventing, re-imagining and redefining to deliver the Circular Economy

From the way we make our paper to how we transport it to your doorstep, we have a track record of innovation and leadership in our industry.

We are already delivering new, smarter ways of working that improve our quality, service and sustainability credentials. We are increasing capacity and capabilities in our paper mills to not only produce more volume but lighter weight papers to respond to changing retail and e-commerce packaging requirements. Through all of our processes our designers and innovators are relentlessly pursuing every new opportunity to create circular solutions designed to eliminate waste and pollution, circulate products and materials, and regenerate nature.

- At our Kemlsey Mill, we have invested in a state-of-the-art laboratory to enhance the performance and sustainability qualities of our paper, including coatings, wet-end chemistries, surface chemistries, repulpability, and recyclability.
- By thinking differently about our Supply Chain Services, we are developing the right strategies to cut lead times, improve quality, assure supply and make us a more reliable supplier. All while reducing the impact of transport on our environment.
- We're already utilising digital technology in our mills to help us reduce power consumption, reduce contamination in raw materials, reduce fibre consumption, increase quality and more.

### Technical Customer Services

We set the bar high in all aspects of our service.

Our Technical Customer Service team is on hand to work with you in support of your requirements. Through our support, technical know-how and deep understanding of our paper performance, we are improving productivity, reducing costs and ensuring that you meet your commercial and sustainability challenges.



# Our containerboard products

We offer you one of the widest choices of containerboard products available. All designed and manufactured to meet today's sustainability challenges and provide the ideal material to satisfy your and your customers' needs.

On the following pages you will find details of our range, including grades and availability.



### Product Range

| Family Grade          | Grade                  | Page  |
|-----------------------|------------------------|-------|
|                       | Liner 1                | 14-16 |
| Brown Liners          | Liner 2                | 17-18 |
|                       | Liner 3                | 19-20 |
| Kraft Liners          | Brown Kraft Liner      | 22    |
| Kiait Lineis          | Brown Kraft Top Liner  | 23    |
|                       | White Liner A          | 25-26 |
| White Liners          | White Liner B          | 27-29 |
|                       | White Liner C          | 30-31 |
|                       | Top Double Coated      | 33    |
| Coated Papers         | Double Coated          | 34    |
|                       | Double Coated Economic | 35    |
|                       | Medium Plus            | 37    |
| Medium/Fluting Grades | Medium HP Plus         | 38-39 |
|                       | Medium HP WS           | 40-41 |
| Dual-Use Grades       | Dual-Use               | 43-44 |
| Dual-Use Grades       | Dual-Use HP Plus       | 45    |



### Key to Applications



#### Dual-Us

### **Brown Liners**

Made from 100% recycled fibre, our brown liners have exceptional attributes such as high mechanical properties, high printability performance, good runnability on the corrugator and optimum levels of colour stability.

### Grades available

- Liner 1
- Liner 2
- Liner 3



### Liner 1

Liner 1 is produced in Lucca, Zărnești, Alcolea and Dueñas mills. We can offer you three slightly different variations of Liner 1.

### Characteristics

- FSC<sup>®</sup> certified
- Made from 100% recycled fibres
- Offers a great balance between cost and strength properties
- Excellent runnability, resistance and homogenous appearance
- Designed for challenging mechanical and environmental applications

### Key Applications



| Typical Values    | Typical is what a customer can expect to receive on a customer reel average |
|-------------------|---|
| Guaranteed values | Guaranteed is a min/max value of a property on a customer reel average      |
| Test conditions   | 50% RH and 23°C   |
| Issue date        | January 2022  |
| CEPI Code         | 10/12   |

Alternative grammages, not listed, may be available – please contact our sales team for more information.

#### Liner 1 produced in Lucca and Zărnești

| Typical values            |      |          |        |        |        |        |        |
|---------------------------|------|----------|--------|--------|--------|--------|--------|
| Property                  | Unit | Method   |        |        |        |        |        |
| Grammage                  | g/m² | ISO 536  | 120    | 135    | 145    | 170    | 200    |
| Burst strength            | kPa  | ISO 2758 | 360    | 410    | 425    | 510    | 580    |
| SCT CD                    | kN/m | ISO 9895 | 2.35   | 2.65   | 2.85   | 3.30   | 3.85   |
| Guaranteed values         |      |          |        |        |        |        |        |
| Property                  | Unit | Method   | 200    |        |        |        |        |
| Grammage                  | g/m² | ISO 536  | 120    | 135    | 145    | 170    | 200    |
| Grammage average, min/max | %    | ISO 536  | ±3     | ±3     | ±3     | ±3     | ±3     |
| Moisture average          | %    | Online   | 8.0 ±1 | 8.0 ±1 | 8.0 ±1 | 8.0 ±1 | 8.0 ±1 |
| Burst strength, min       | kPa  | ISO 2758 | 325    | 370    | 395    | 465    | 530    |
| SCT CD, min               | kN/m | ISO 9895 | 2.15   | 2.40   | 2.60   | 3.00   | 3.50   |
| Cabb EOc may              | g/m² | ISO 535  | 45     | 45     | 45     | 45     | 45     |
| Cobb 60s, max             | g/m  | 100 000  | 15     |        |        |        |        |



### Liner 1

Liner 1 is produced in Lucca, Zărnești, Alcolea and Dueñas mills. We can offer you three slightly different variations of Liner 1.

### **Characteristics**

- FSC<sup>®</sup> certified
- Made from 100% recycled fibres
- Offers a great balance between cost and strength properties
- Excellent runnability, resistance and homogenous appearance
- Designed for challenging mechanical and environmental applications

### Key Applications



| Typical Values    | Typical is what a customer can expect to receive on a customer reel average |
|-------------------|---|
| Guaranteed values | Guaranteed is a min/max value of a property on a customer reel average      |
| Test conditions   | 50% RH and 23°C   |
| Issue date        | January 2022  |
| CEPI Code         | 12  |

Alternative grammages, not listed, may be available – please contact our sales team for more information.

#### Liner 1 produced in Alcolea

| Typical values            |      |          |          |               |               |               |               |               |
|---------------------------|------|----------|----------|---------------|---------------|---------------|---------------|---------------|
| Property                  | Unit | Method   |          |               |               |               |               |               |
| Grammage                  | g/m² | ISO 536  | 170      | 180           | 200           | 220           | 250           | 275           |
| Burst strength            | kPa  | ISO 2758 | 510      | 540           | 600           | 660           | 750           | 825           |
| SCT CD                    | kN/m | ISO 9895 | 3.75     | 3.95          | 4.40          | 4.80          | 5.50          | 6.05          |
| Guaranteed values         |      |          |          |               |               |               |               |               |
| Property                  | Unit | Method   |          |               |               |               |               |               |
| Grammage                  | g/m² | ISO 536  | 170      | 180           | 200           | 220           | 250           | 275           |
| Grammage average, min/max | %    | ISO 536  | ±4       | ±4            | ±4            | ±4            | ±4            | ±4            |
| Moisture average          | %    | Online   | 8.5 ±1.5 | $8.5 \pm 1.5$ |
| Burst strength, min       | kPa  | ISO 2758 | 440      | 470           | 520           | 570           | 650           | 715           |
| SCT CD, min               | kN/m | ISO 9895 | 3.30     | 3.50          | 3.90          | 4.30          | 4.90          | 5.36          |
| Cobb 1800s, max           | g/m² | ISO 535  | 150      | 150           | 150           | 150           | 150           | 150           |



### Liner 1 HP

Liner 1 is produced in Lucca, Zărnești, Alcolea and Dueñas mills. We can offer you three slightly different variations of Liner 1.

### **Characteristics**

- FSC<sup>®</sup> certified
- Made from 100% recycled fibres
- Offers a great balance between cost and strength properties
- Excellent runnability, resistance and homogenous appearance
- Designed for challenging mechanical and environmental applications

### Key Applications



| Typical Values    | Typical is what a customer can expect to receive on a customer reel average |
|-------------------|---|
| Guaranteed values | Guaranteed is a min/max value of a property on a customer reel average      |
| Test conditions   | 50% RH and 23°C   |
| Issue date        | January 2022  |

Alternative grammages, not listed, may be available – please contact our sales team for more information.

#### Liner 1 HP produced in Dueñas

| Typical values                  |      |          |          |               |               |               |               |               |          |
|---------------------------------|------|----------|----------|---------------|---------------|---------------|---------------|---------------|----------|
| Property                        | Unit | Method   |          |               |               |               |               |               |          |
| Grammage                        | g/m² | ISO 536  | 115      | 120           | 125           | 135           | 150           | 165           | 195      |
| Burst strength                  | kPa  | ISO 2758 | 368      | 384           | 410           | 432           | 480           | 528           | 585      |
| SCT CD                          | kN/m | ISO 9895 | 2.50     | 2.65          | 2.80          | 3.00          | 3.30          | 3.60          | 4.30     |
| Guaranteed values               |      |          |          |               |               |               |               |               |          |
| Property                        | Unit | Method   |          |               |               |               |               |               |          |
| Grammage                        | g/m² | ISO 536  | 115      | 120           | 125           | 135           | 150           | 165           | 195      |
| Grammage average, min/max       | %    | ISO 536  | ±4       | ±4            | ±4            | ±4            | ±4            | ±4            | ±4       |
| Moisture average                | %    | Online   | 8.5 ±1.5 | $8.5 \pm 1.5$ | 8.5 ±1.5 |
| Burst strength, min             | kPa  | ISO 2758 | 322      | 335           | 350           | 378           | 420           | 462           | 507      |
| SCT CD, min                     | kN/m | ISO 9895 | 2.25     | 2.30          | 2.40          | 2.60          | 2.90          | 3.20          | 3.80     |
| Cobb 1800s, max (if applicable) | g/m² | ISO 535  | 150      | 150           | 150           | 150           | 150           | 150           | -        |



### Liner 2

Liner 2 is produced in Aschaffenburg, Belišće, Trakia, Witzenhausen and Zărnești mills. We can offer you two slightly different variations of Liner 2.

### Characteristics

- FSC<sup>®</sup> certified
- Made from 100% recycled fibres
- Offers a great balance between cost and strength properties
- Excellent runnability

### **Key Applications**



| Typical Values    | Typical is what a customer can expect to receive on a customer reel average |
|-------------------|---|
| Guaranteed values | Guaranteed is a min/max value of a property on a customer reel average      |
| Test conditions   | 50% RH and 23°C   |
| Issue date        | January 2022  |
| CEPI Code         | 20  |

Alternative grammages, not listed, may be available – please contact our sales team for more information.

#### Liner 2 produced in Aschaffenburg, Belišće, Trakia, Witzenhausen and Zărnești

| Typical values            |      |          |        |        |        |
|---------------------------|------|----------|--------|--------|--------|
| Property                  | Unit | Method   |        |        |        |
| Grammage                  | g/m² | ISO 536  | 115    | 125    | 140    |
| Burst strength            | kPa  | ISO 2758 | 270    | 290    | 330    |
| SCT CD                    | kN/m | ISO 9895 | 2.15   | 2.35   | 2.60   |
| Guaranteed values         |      |          |        |        |        |
| Property                  | Unit | Method   |        |        |        |
| Grammage                  | g/m² | ISO 536  | 115    | 125    | 140    |
| Grammage average, min/max | %    | ISO 536  | ±3     | ±3     | ±3     |
| Moisture average          | %    | Online   | 8.0 ±1 | 8.0 ±1 | 8.0 ±1 |
| Burst strength, min       | kPa  | ISO 2758 | 240    | 260    | 300    |
| SCT CD, min               | kN/m | ISO 9895 | 1.95   | 2.15   | 2.40   |
| Cobb 60s, max             | g/m² | ISO 535  | 45     | 45     | 45     |
|                           |      |          |        |        |        |



### Liner 2 HS

Liner 2 is produced in Aschaffenburg, Belišće, Trakia, Witzenhausen and Zărnești mills. We can offer you two slightly different variations of Liner 2.

### **Characteristics**

- FSC<sup>®</sup> certified
- Made from 100% recycled fibres
- Offers a great balance between cost and strength properties
- Excellent runnability

### **Key Applications**



| Typical Values    | Typical is what a customer can expect to receive on a customer reel average |
|-------------------|---|
| Guaranteed values | Guaranteed is a min/max value of a property on a customer reel average      |
| Test conditions   | 50% RH and 23°C   |
| Issue date        | January 2022  |
| CEPI Code         | 22  |

Alternative grammages, not listed, may be available please contact our sales team for more information.

#### Liner 2 HP produced in Witzenhausen

| Typical values            |      |          |        |        |
|---------------------------|------|----------|--------|--------|
| Property                  | Unit | Method   |        |        |
| Grammage                  | g/m² | ISO 536  | 125    | 170    |
| Burst strength            | kPa  | ISO 2758 | 335    | 445    |
| SCT CD                    | kN/m | ISO 9895 | 3.80   | 5.15   |
| Guaranteed values         |      |          |        |        |
| Property                  | Unit | Method   |        |        |
| Grammage                  | g/m² | ISO 536  | 125    | 170    |
| Grammage average, min/max | %    | ISO 536  | ±3     | ±3     |
| Moisture average          | %    | Online   | 8.0 ±1 | 8.0 ±1 |
| Burst strength, min       | kPa  | ISO 2758 | 310    | 415    |
| SCT CD, min               | kN/m | ISO 9895 | 2.15   | 2.85   |
| Cobb 60s, max             | g/m² | ISO 535  | 110    | 110    |
|                           |      |          |        |        |



### Liner 3

Cobb 1800s, max (if applicable)

Liner 3 is produced in Aschaffenburg, Belišće, Kemsley, Lucca, Trakia, Witzenhausen, Zărnești and Dueñas. We can offer you two slightly different variations of Liner 3.

 $q/m^2$ 

ISO 535

### **Characteristics**

- FSC<sup>®</sup> certified
- Made from 100% recycled fibres
- A very consistent appearance and stable properties ensuring corrugated board strength
- Excellent runnability on the corrugator with high production efficiency

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### Key Applications



| Typical Values    | Typical is what a customer can expect to receive on a customer reel average |
|-------------------|---|
| Guaranteed values | Guaranteed is a min/max value of a property on a customer reel average      |
| Test conditions   | 50% RH and 23°C   |
| Issue date        | January 2022  |
| CEPI Code         | 30/32   |

Alternative grammages, not listed, may be available – please contact our sales team for more information.

#### Light Liner Typical values Property Unit Method 100 Grammage g/m<sup>2</sup> ISO 536 90 110 115 120 130 150 160 165 190 210 Burst strength kPa ISO 2758 200 220 250 270 285 310 350 365 375 420 460 1.55 2.50 2.75 SCT CD kN/m ISO 9895 1.70 1.90 2.00 2.10 2.25 2.65 3.10 3.50 Guaranteed values Unit Method Property Grammage g/m<sup>2</sup> ISO 536 90 100 110 115 120 130 150 160 165 190 210 % ±3 ±3 Grammage average, min/max ISO 536 ±3 ±3 ±3 ±З ±3 ±3 ±3 ±3 ±3 Moisture average\* % Online 8.0 ±1 8.0 ±1 8.0 ±1 8.0 ±1 8.0 ±1 8.0 ±1 8.0 ±1 8.0 ±1 8.0 ±1 8.0 ±1 8.0 ±1 Burst strength, min kPa ISO 2758 180 200 220 230 240 260 300 320 330 370 425 SCT CD, min kN/m ISO 9895 1.40 1.55 1.70 1.75 1.85 2.00 2.30 2.45 2.55 2.85 3.25 Cobb 60s, max\*\* $q/m^2$ ISO 535 45 45 45 45 45 45 45 45 45 45 45

110

#### Liner 3 produced in Aschaffenburg, Belišće, Kemsley, Lucca, Trakia, Witzenhausen and Zărnești

110

110

### Liner 3

Liner 3 is produced in Aschaffenburg, Belišće, Kemsley, Lucca, Trakia, Witzenhausen, Zărnești and Dueñas. We can offer you two slightly different variations of Liner 3.

### Characteristics

- FSC<sup>®</sup> certified
- Made from 100% recycled fibres
- A very consistent appearance and stable properties ensuring corrugated board strength
- Excellent runnability on the corrugator with high production efficiency

### **Key Applications**



| Typical Values    | Typical is what a customer can expect to receive on a customer reel average |
|-------------------|---|
| Guaranteed values | Guaranteed is a min/max value of a property on a customer reel average      |
| Test conditions   | 50% RH and 23°C   |
| Issue date        | January 2022  |
| CEPI Code         | 30  |

Alternative grammages, not listed, may be available – please contact our sales team for more information.

#### Liner 3 produced in Dueñas

| Typical values            |      |          |          |          |          |          |          |          |          |
|---------------------------|------|----------|----------|----------|----------|----------|----------|----------|----------|
| Property                  | Unit | Method   |          |          |          |          |          |          |          |
| Grammage                  | g/m² | ISO 536  | 110      | 120      | 130      | 140      | 150      | 160      | 170      |
| Burst strength            | kPa  | ISO 2758 | 268      | 290      | 310      | 340      | 360      | 385      | 405      |
| SCT CD                    | kN/m | ISO 9895 | 1.72     | 1.85     | 2.00     | 2.15     | 2.30     | 2.45     | 2.70     |
| Guaranteed values         |      |          |          |          |          |          |          |          |          |
| Property                  | Unit | Method   |          |          |          |          |          |          |          |
| Grammage                  | g/m² | ISO 536  | 110      | 120      | 130      | 140      | 150      | 160      | 170      |
| Grammage average, min/max | %    | ISO 536  | ±4       | ±4       | ±4       | ±4       | ±4       | ±4       | ±4       |
| Moisture average          | %    | Online   | 7.5 ±1.5 | 7.5 ±1.5 | 7.5 ±1.5 | 7.5 ±1.5 | 7.5 ±1.5 | 7.5 ±1.5 | 7.5 ±1.5 |
| Burst strength, min       | kPa  | ISO 2758 | 240      | 260      | 280      | 300      | 325      | 345      | 360      |
| SCT CD, min               | kN/m | ISO 9895 | 1.55     | 1.65     | 1.80     | 1.95     | 2.10     | 2.25     | 2.40     |
| Wax Pick (Dennison), min  | #    | T-549    | 14       | 14       | 14       | 14       | 14       | 14       | 14       |
|                           |      |          |          |          |          |          |          |          |          |



### Kraft Liners

Made from 100% sustainably sourced virgin fibre, our Kraft liners are boasting excellent resistance to tearing, moisture, stress, and punching.

### Grades available

- Brown Kraft Liner
- Brown Kraft Top Liner



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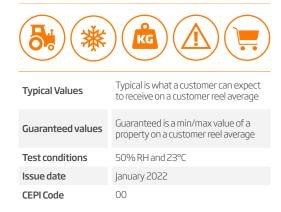
### Brown Kraft Liner

Brown Kraft Liner is produced in Viana mill.

### **Characteristics**

- FSC<sup>®</sup> certified
- Made from sustainably sourced virgin fibres
- Excellent resistance to tearing, moisture, stress, and punching
- Great runnability achieving high production efficiency
- High compression strength retention over time so it's great for use in moist environments

#### Key Applications



Alternative grammages, not listed, may be available – please contact our sales team for more information.

| Typical values      |      |             |      |      |      |      |      |      |      |      |
|---------------------|------|-------------|------|------|------|------|------|------|------|------|
| Property            | Unit | Method      |      |      |      |      |      |      |      |      |
| Grammage            | g/m² | ISO 536     | 115  | 125  | 135  | 170  | 186  | 200  | 225  | 275  |
| Burst strength      | kPa  | ISO 2759    | 535  | 570  | 625  | 760  | 860  | 910  | 970  | 1130 |
| SCT CD              | kN/m | ISO 9895    | 2.30 | 2.55 | 2.75 | 3.50 | 3.85 | 4.10 | 4.60 | 5.80 |
| Wax Pick (Dennison) | #    | TAPPI T-459 | 18   | 18   | 18   | 18   | 18   | 18   | 18   | 18   |
| Cobb 60s            | g/m2 | ISO 535     | 26   | 26   | 26   | 26   | 26   | 26   | 26   | 26   |
| Scott Bond ,min     | J/m2 | TAPPI T-569 | 320  | 320  | 320  | 320  | 300  | 300  | 280  | 280  |

Guaranteed values

| Property                  | Unit | Method      |        |        |        |        |        |             |             |             |
|---------------------------|------|-------------|--------|--------|--------|--------|--------|-------------|-------------|-------------|
| Grammage                  | g/m² | ISO 536     | 115    | 125    | 135    | 170    | 186    | 200         | 225         | 275         |
| Grammage average, min/max | %    | ISO 536     | ±3     | ±3     | ±3     | ±3     | ±3     | ±3          | ±3          | ±3          |
| Moisture average          | %    | Online      | 8.0 ±1 | 8.0 ±1 | 8.0 ±1 | 8.0 ±1 | 8.0 ±1 | 8.0 +1.5/-1 | 8.0 +1.5/-1 | 8.0 +1.5/-1 |
| Burst strength, min       | kPa  | ISO 2759    | 430    | 480    | 520    | 640    | 710    | 730         | 830         | 920         |
| SCT CD, min               | kN/m | ISO 9895    | 2.00   | 2.20   | 2.40   | 3.00   | 3.30   | 3.55        | 3.95        | 4.90        |
| Scott Bond, min           | J/m² | TAPPI T-569 | 220    | 220    | 220    | 220    | 220    | 220         | 220         | 220         |
| Wax Pick (Dennison), min  | #    | TAPPI T-459 | 16     | 16     | 16     | 16     | 16     | 16          | 16          | 16          |
| Cobb 60s, max             | g/m² | ISO 535     | 32     | 32     | 32     | 32     | 32     | 32          | 32          | 32          |

Typical values

### Brown Kraft Top Liner

Brown Kraft Top Liner is produced in Viana mill.

### **Characteristics**

- FSC<sup>®</sup> certified
- Made from sustainably sourced virgin fibres
- Great runnability producing savings in terms of speed, fewer stoppages and losses
- High compression strength retention over time so it's great for use in moist environments

### **Key Applications**



| Typical Values    | Typical is what a customer can expect to receive on a customer reel average |
|-------------------|---|
| Guaranteed values | Guaranteed is a min/max value of a property on a customer reel average      |
| Test conditions   | 50% RH and 23°C   |
| Issue date        | January 2022  |
| CEPI Code         | 90  |

Alternative grammages, not listed, may be available – please contact our sales team for more information.

| 51                        |      |             |        |        |        |
|---------------------------|------|-------------|--------|--------|--------|
| Property                  | Unit | Method      |        |        |        |
| Grammage                  | g/m² | ISO 536     | 115    | 140    | 165    |
| Burst strength            | kPa  | ISO 2759    | 360    | 440    | 520    |
| SCT CD                    | kN/m | ISO 9895    | 2.10   | 2.50   | 3.10   |
| Guaranteed values         |      |             |        |        |        |
| Property                  | Unit | Method      |        |        |        |
| Grammage                  | g/m² | ISO 536     | 115    | 140    | 165    |
| Grammage average, min/max | %    | ISO 536     | ±3     | ±3     | ±3     |
| Moisture average          | %    | Online      | 8.0 ±1 | 8.0 ±1 | 8.0 ±1 |
| Burst strength, min       | kPa  | ISO 2759    | 325    | 400    | 470    |
| SCT CD, min               | kN/m | ISO 9895    | 1.60   | 1.95   | 2.40   |
| Scott Bond, min           | J/m² | TAPPI T-569 | 200    | 200    | 200    |
| Wax Pick (Dennison), min  | #    | TAPPI T-459 | 16     | 16     | 16     |
| Cobb 60s, max             | g/m² | ISO 535     | 32     | 32     | 32     |
|                           |      |             |        |        |        |

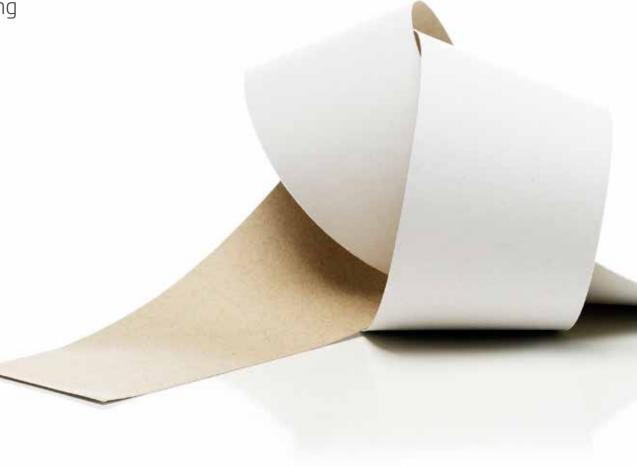


### White Liners

Made from recycled fibre, our White Liners are smooth and world-class clean. They are ideal for packaging solutions with the high printing performance requirements of any modern conversion line.

### Grades available

- White Liner A
- White Liner B
- White Liner C



### White Liner A

White Liner A is produced in Kemsley and Dueñas mills. We can offer you two slightly different variations of White Liner A.

#### White Liner A produced in Kemsley

| Typical values |      |          |      |      |
|----------------|------|----------|------|------|
| Property       | Unit | Method   |      |      |
| Grammage       | g/m² | ISO 536  | 130  | 160  |
| Burst strength | kPa  | ISO 2758 | 310  | 360  |
| SCT CD         | kN/m | ISO 9895 | 2.25 | 2.75 |

#### Guaranteed values

| Property                        | Unit   | Method      |        |        |
|---------------------------------|--------|-------------|--------|--------|
| Grammage                        | g/m²   | ISO 536     | 130    | 160    |
| Grammage average, min/max       | %      | ISO 536     | ±3     | ±3     |
| Moisture average                | %      | Online      | 8.0 ±1 | 8.0 ±1 |
| Burst strength, min             | kPa    | ISO 2758    | 270    | 335    |
| SCT CD, min                     | kN/m   | ISO 9895    | 2.10   | 2.55   |
| Plybond, min                    | J/m²   | TAPPI T-569 | 200    | 200    |
| Cobb 60s, max                   | g/m²   | ISO 535     | 40     | 40     |
| Cobb 1800s, max (if applicable) | g/m²   | ISO 535     | 100    | 100    |
| Brightness, min                 | %      | ISO 2470-2  | 76     | 76     |
| Roughness, Bendtsen, max        | ml/min | ISO 8791-2  | 300    | 400    |

### **Characteristics**

- FSC<sup>®</sup> certified
- Made from 100% recycled fibres
- High brightness, great properties, and optimized smoothness
- A superior presentation liner with excellent printing quality and good strength for your boxes

### **Key Applications**



| Typical Values    | Typical is what a customer can expect to receive on a customer reel average |
|-------------------|---|
| Guaranteed values | Guaranteed is a min/max value of a property on a customer reel average      |
| Test conditions   | 50% RH and 23°C   |
| Issue date        | January 2022  |
| CEPI Code         | 70  |

Alternative grammages, not listed, may be available – please contact our sales team for more information.



### White Liner A

White Liner A is produced in Kemsley and Dueñas mills. We can offer you two slightly different variations of White Liner A.

### Characteristics

- FSC<sup>®</sup> certified
- Made from 100% recycled fibres
- High brightness, great properties, and optimized smoothness
- A superior presentation liner with excellent printing quality and good strength for your boxes

### **Key Applications**



| Typical Values    | Typical is what a customer can expect to receive on a customer reel average |
|-------------------|---|
| Guaranteed values | Guaranteed is a min/max value of a property on a customer reel average      |
| Test conditions   | 50% RH and 23°C   |
| Issue date        | January 2022  |
| CEPI Code         | 70  |

Alternative grammages, not listed, may be available – please contact our sales team for more information.

#### White Liner A produced in Dueñas

| Typical values |      |          |      |      |      |      |
|----------------|------|----------|------|------|------|------|
| Property       | Unit | Method   |      |      |      |      |
| Grammage       | g/m² | ISO 536  | 135  | 140  | 160  | 180  |
| Burst strength | kPa  | ISO 2758 | 340  | 355  | 410  | 430  |
| SCT CD         | kN/m | ISO 9895 | 2.45 | 2.55 | 2.90 | 3.25 |
| E.B.A.         | ppm  | T-437    | 50   | 50   | 50   | 50   |

Guaranteed values

| Property                  | Unit   | Method     |             |             |             |             |
|---------------------------|--------|------------|-------------|-------------|-------------|-------------|
| Grammage                  | g/m²   | ISO 536    | 135         | 140         | 160         | 180         |
| Grammage average, min/max | %      | ISO 536    | ±4          | ±4          | ±4          | ±4          |
| Moisture average          | %      | Online     | 7.0 +1.5/-1 | 7.0 +1.5/-1 | 7.0 +1.5/-1 | 7.0 +1.5/-1 |
| Burst strength, min       | kPa    | ISO 2758   | 310         | 320         | 365         | 390         |
| SCT CD, min               | kN/m   | ISO 9895   | 2.25        | 2.30        | 2.65        | 2.95        |
| Wax Pick (Dennison), min  | #      | T-549      | 14          | 14          | 14          | 14          |
| Cobb 60s, max             | g/m²   | ISO 535    | 35          | 35          | 35          | 35          |
| Roughness, Bendtsen, max  | ml/min | ISO 8791-2 | 600         | 600         | 600         | 600         |
| ISO Brightness - R457     | %      | ISO 2470-1 | 74          | 74          | 74          | 74          |
| E.B.A., max               | ppm    | T-437      | 100         | 100         | 100         | 100         |



### White Liner B

White Liner B is produced in Kemsley and Dueñas mills. We can offer you three slightly different variations of White Liner B.

### Characteristics

- FSC<sup>®</sup> certified
- Made from 100% recycled fibres
- Presentation liner with excellent printing quality
- Optimum combination of print and strength characteristics to allow product optimisation

### **Key Applications**



| Typical Values    | Typical is what a customer can expect to receive on a customer reel average |
|-------------------|---|
| Guaranteed values | Guaranteed is a min/max value of a property on a customer reel average      |
| Test conditions   | 50% RH and 23°C   |
| Issue date        | January 2022  |
| CEPI Code         | 71  |

Alternative grammages, not listed, may be available – please contact our sales team for more information.

#### White Liner B produced in Kemsley

| Typical values |      |          |      |      |      |
|----------------|------|----------|------|------|------|
| Property       | Unit | Method   |      |      |      |
| Grammage       | g/m² | ISO 536  | 115  | 120  | 135  |
| Burst strength | kPa  | ISO 2758 | 260  | 270  | 300  |
| SCT CD         | kN/m | ISO 9895 | 1.85 | 1.95 | 2.20 |

#### Guaranteed values

| Property                  | Unit             | Method      |        |        |        |
|---------------------------|------------------|-------------|--------|--------|--------|
| Grammage                  | g/m²             | ISO 536     | 115    | 120    | 135    |
| Grammage average, min/max | %                | ISO 536     | ±3     | ±3     | ±3     |
| Moisture average          | %                | Online      | 8.0 ±1 | 8.0 ±1 | 8.0 ±1 |
| Burst strength, min       | kPa              | ISO 2758    | 220    | 230    | 260    |
| SCT CD, min               | kN/m             | ISO 9895    | 1.65   | 1.70   | 1.95   |
| Plybond, min              | J/m <sup>2</sup> | TAPPI T-569 | 200    | 200    | 200    |
| Cobb 60s, max             | g/m²             | ISO 535     | 40     | 40     | 40     |
| Brightness, min           | %                | ISO 2470-2  | 70     | 70     | 70     |
| Roughness, Bendtsen, max  | ml/min           | ISO 8791-2  | 600    | 600    | 600    |



### White Liner B

White Liner B is produced in Kemsley and Dueñas mills. We can offer you three slightly different variations of White Liner B.

### Characteristics

- FSC<sup>®</sup> certified
- Made from 100% recycled fibres
- Presentation liner with excellent printing quality
- Optimum combination of print and strength characteristics to allow product optimisation

### **Key Applications**



| Typical Values    | Typical is what a customer can expect to receive on a customer reel average |
|-------------------|---|
| Guaranteed values | Guaranteed is a min/max value of a property on a customer reel average      |
| Test conditions   | 50% RH and 23°C   |
| Issue date        | January 2022  |
| CEPI Code         | 71  |

Alternative grammages, not listed, may be available – please contact our sales team for more information.

#### White Liner B produced in Dueñas

| Typical values |      |          |      |      |      |      |      |      |      |
|----------------|------|----------|------|------|------|------|------|------|------|
| Property       | Unit | Method   |      |      |      |      |      |      |      |
| Grammage       | g/m² | ISO 536  | 120  | 125  | 130  | 135  | 140  | 155  | 160  |
| Burst strength | kPa  | ISO 2758 | 245  | 260  | 270  | 280  | 295  | 320  | 330  |
| SCT CD         | kN/m | ISO 9895 | 1.85 | 1.90 | 1.97 | 2.05 | 2.15 | 2.37 | 2.45 |

#### Guaranteed values

| Property                   | Unit   | Method     |             |             |             |             |             |             |             |
|----------------------------|--------|------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Grammage                   | g/m²   | ISO 536    | 120         | 125         | 130         | 135         | 140         | 155         | 160         |
| Grammage average, min/max  | %      | ISO 536    | ±4          | ±4          | ±4          | ±4          | ±4          | ±4          | ±4          |
| Moisture average           | %      | Online     | 7.0 +1.5/-1 | 7.0 +1.5/-1 | 7.0 +1.5/-1 | 7.0 +1.5/-1 | 7.0 +1.5/-1 | 7.0 +1.5/-1 | 7.0 +1.5/-1 |
| Burst strength, min        | kPa    | ISO 2758   | 220         | 230         | 240         | 250         | 260         | 285         | 295         |
| SCT CD, min                | kN/m   | ISO 9895   | 1.70        | 1.75        | 1.82        | 1.90        | 1.95        | 2.17        | 2.25        |
| Wax Pick (Dennison), min   | #      | T-549      | 13          | 13          | 13          | 13          | 13          | 13          | 13          |
| Cobb 60s, max              | g/m²   | ISO 535    | 35          | 35          | 35          | 35          | 35          | 35          | 35          |
| Roughness, Bendtsen, max   | ml/min | ISO 8791-2 | 600         | 600         | 600         | 600         | 600         | 600         | 600         |
| ISO Brightness - R457, min | %      | ISO 2470-1 | 70          | 70          | 70          | 70          | 70          | 70          | 70          |
| E.B.A., max                | ppm    | T-437      | 300         | 300         | 300         | 300         | 300         | 300         | 300         |

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### White Liner B Highly Sized

White Liner B is produced in Kemsley and Dueñas mills. We can offer you three slightly different variations of White Liner B.

### **Characteristics**

- FSC<sup>®</sup> certified
- Made from 100% recycled fibres
- Presentation liner with excellent printing quality
- Optimum combination of print and strength characteristics to allow product optimisation

#### Key Applications



| Typical Values    | Typical is what a customer can expect to receive on a customer reel average |
|-------------------|---|
| Guaranteed values | Guaranteed is a min/max value of a property on a customer reel average      |
| Test conditions   | 50% RH and 23°C   |
| Issue date        | January 2022  |
| CEPI Code         | 71  |

Alternative grammages, not listed, may be available – please contact our sales team for more information.

#### White Liner B Highly Sized produced in Dueñas

| Typical values |      |          |      |      |      |      |      |      |      |
|----------------|------|----------|------|------|------|------|------|------|------|
| Property       | Unit | Method   |      |      |      |      |      |      |      |
| Grammage       | g/m² | ISO 536  | 120  | 125  | 130  | 135  | 140  | 155  | 160  |
| Burst strength | kPa  | ISO 2758 | 245  | 260  | 270  | 280  | 295  | 320  | 330  |
| SCT CD         | kN/m | ISO 9895 | 1.85 | 1.90 | 1.97 | 2.05 | 2.15 | 2.37 | 2.45 |

#### Guaranteed values

| Property                  | Unit   | Method     |             |             |             |             |             |             |             |
|---------------------------|--------|------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Grammage                  | g/m²   | ISO 536    | 120         | 125         | 130         | 135         | 140         | 155         | 160         |
| Grammage average, min/max | %      | ISO 536    | ±4          | ±4          | ±4          | ±4          | ±4          | ±4          | ±4          |
| Moisture average          | %      | Online     | 7.0 +1.5/-1 | 7.0 +1.5/-1 | 7.0 +1.5/-1 | 7.0 +1.5/-1 | 7.0 +1.5/-1 | 7.0 +1.5/-1 | 7.0 +1.5/-1 |
| Burst strength, min       | kPa    | ISO 2758   | 220         | 230         | 240         | 250         | 260         | 285         | 295         |
| SCT CD, min               | kN/m   | ISO 9895   | 1.70        | 1.75        | 1.82        | 1.90        | 1.95        | 2.17        | 2.25        |
| Wax Pick (Dennison), min  | #      | T-549      | 13          | 13          | 13          | 13          | 13          | 13          | 13          |
| Cobb 1800s, max           |        | ISO 535    | 100         | 100         | 100         | 100         | 100         | 100         | 100         |
| Roughness, Bendtsen, max  | ml/min | ISO 8791-2 | 600         | 600         | 600         | 600         | 600         | 600         | 600         |
| ISO Brightness - R457     | %      | ISO 2470-1 | 70          | 70          | 70          | 70          | 70          | 70          | 70          |
| E.B.A., max               | ppm    | T-437      | 300         | 300         | 300         | 300         | 300         | 300         | 300         |

### White Liner C

White Liner C is produced in Lucca and Dueñas mills. We can offer you two slightly different variations of White Liner C.

### **Characteristics**

- FSC<sup>®</sup> certified
- Made from 100% recycled fibres
- Presentation liner with good printing quality

### **Key Applications**



| Typical Values    | Typical is what a customer can expect to receive on a customer reel average |
|-------------------|---|
| Guaranteed values | Guaranteed is a min/max value of a property on a customer reel average      |
| Test conditions   | 50% RH and 23°C   |
| Issue date        | January 2022  |
| CEPI Code         | 72  |

Alternative grammages, not listed, may be available – please contact our sales team for more information.



#### White Liner C produced in Lucca

| Typical values |      |          |      |      |      |      |
|----------------|------|----------|------|------|------|------|
| Property       | Unit | Method   |      |      |      |      |
| Grammage       | g/m² | ISO 536  | 120  | 125  | 135  | 150  |
| Burst strength | kPa  | ISO 2758 | 230  | 235  | 255  | 275  |
| SCT CD         | kN/m | ISO 9895 | 1.75 | 1.80 | 1.95 | 2.15 |

#### Guaranteed values

| Property                      | Unit   | Method      |        |        |        |        |
|-------------------------------|--------|-------------|--------|--------|--------|--------|
| Grammage                      | g/m²   | ISO 536     | 120    | 125    | 135    | 150    |
| Grammage average, min/max     | %      | ISO 536     | ±3     | ±3     | ±3     | ±3     |
| Moisture average              | %      | Online      | 8.0 ±1 | 8.0 ±1 | 8.0 ±1 | 8.0 ±1 |
| Burst strength, min           | kPa    | ISO 2758    | 210    | 220    | 235    | 255    |
| SCT CD, min                   | kN/m   | ISO 9895    | 1.60   | 1.65   | 1.75   | 1.90   |
| Plybond, min                  | J/m²   | TAPPI T-569 | 200    | 200    | 200    | 200    |
| Cobb 60s, max (if applicable) | g/m²   | ISO 535     | 40     | 40     | 40     | 40     |
| Brightness, min               | %      | ISO 2470-1  | 64     | 64     | 64     | 64     |
| Roughness, Bendtsen, max      | ml/min | ISO 8791-2  | 600    | 600    | 600    | 600    |

### White Liner C

White Liner C is produced in Lucca and Dueñas mills. We can offer you two slightly different variations of White Liner C.

### **Characteristics**

- FSC<sup>®</sup> certified
- Made from 100% recycled fibres
- Presentation liner with good printing quality

### **Key Applications**



| Typical Values    | Typical is what a customer can expect to receive on a customer reel average |
|-------------------|---|
| Guaranteed values | Guaranteed is a min/max value of a property on a customer reel average      |
| Test conditions   | 50% RH and 23°C   |
| Issue date        | January 2022  |
| CEPI Code         | 72  |

Alternative grammages, not listed, may be available – please contact our sales team for more information.



#### White Liner C produced in Dueñas

| Typical values |      |          |      |      |      |
|----------------|------|----------|------|------|------|
| Property       | Unit | Method   |      |      |      |
| Grammage       | g/m² | ISO 536  | 115  | 120  | 125  |
| Burst strength | kPa  | ISO 2758 | 185  | 190  | 200  |
| SCT CD         | kN/m | ISO 9895 | 1.40 | 1.45 | 1.50 |

#### Guaranteed values

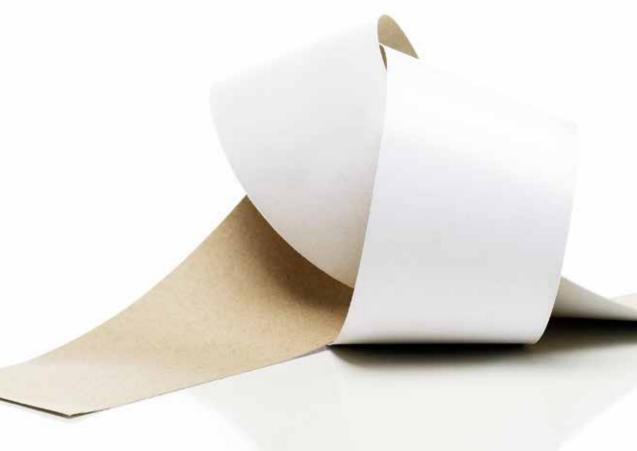
| Property                  | Unit | Method     |             |             |             |
|---------------------------|------|------------|-------------|-------------|-------------|
| Grammage                  | g/m² | ISO 536    | 115         | 120         | 125         |
| Grammage average, min/max | %    | ISO 536    | ±4          | ±4          | ±4          |
| Moisture average          | %    | Online     | 7.0 +1.5/-1 | 7.0 +1.5/-1 | 7.0 +1.5/-1 |
| Burst strength, min       | kPa  | ISO 2758   | 170         | 175         | 180         |
| SCT CD, min               | kN/m | ISO 9895   | 1.20        | 1.25        | 1.30        |
| Wax Pick (Dennison), min  | #    | T-549      | 10          | 10          | 10          |
| Cobb 60s, max             | g/m² | ISO 535    | 35          | 35          | 35          |
| ISO Brightness - R457     | %    | ISO 2470-1 | 62          | 62          | 62          |
| E.B.A., max               | ppm  | T-437      | 500         | 500         | 500         |

### **Coated Papers**

Made from recycled fibre, our Coated Papers are specially-designed to reduce trapping and optimise dot gain. Ideal for packaging with the high-quality print requirements.

### Grades available

- Top Double Coated
- Double Coated
- Double Coated Economic



### Top Double Coated

### Top Double Coated is produced in Dueñas mill.

| Typical values        |      |            |      |      |      |      |
|-----------------------|------|------------|------|------|------|------|
| Property              | Unit | Method     |      |      |      |      |
| Grammage              | g/m² | ISO 536    | 140  | 150  | 160  | 180  |
| Burst strength        | kPa  | ISO 2758   | 295  | 315  | 335  | 380  |
| buiststiengti         | Ki û | ISO 2759   | 340  | 360  | 380  | 424  |
| SCT CD                | kN/m | ISO 9895   | 2.65 | 2.85 | 3.05 | 3.40 |
| Scott Bond            | J/m² | T-569      | 320  | 320  | 320  | 320  |
| Cobb 1800s            | g/m² | ISO 535    | 80   | 80   | 80   | 80   |
| Coated weight         | g/m² | ITR-201-55 | 20   | 20   | 20   | 20   |
| Roughness, PPS        | um   | ISO 8791-4 | 1.7  | 1.7  | 1.7  | 2.1  |
| ICO Drichtmann D457   | 07   | ISO 2470-1 | 85   | 85   | 85   | 85   |
| ISO Brightness - R457 | %    | ISO 2470-2 | 89   | 89   | 89   | 89   |
| Gloss                 | 0    | ISO 8254-1 | 50   | 50   | 50   | 50   |
| E.B.A.                | ppm  | T-437      | З    | З    | З    | З    |

#### Guaranteed values

| Property                   | Unit | Method     |        |        |        |        |
|----------------------------|------|------------|--------|--------|--------|--------|
| Grammage                   | g/m² | ISO 536    | 140    | 150    | 160    | 180    |
| Grammage average, min/max  | %    | ISO 536    | ±4     | ±4     | ±4     | ±4     |
| Moisture average           | %    | Online     | 7.5 ±1 | 7.5 ±1 | 7.5 ±1 | 7.5 ±1 |
| Burst strength, min        | kPa  | ISO 2758   | 240    | 260    | 285    | 335    |
| SCT CD, min                | kN/m | ISO 9895   | 2.40   | 2.55   | 2.70   | 3.05   |
| Scott Bond, min            | J/m² | T-569      | 280    | 280    | 280    | 280    |
| Cobb 1800s, max            | g/m² | ISO 535    | 110    | 110    | 110    | 110    |
| Roughness, PPS, max        | um   | ISO 8791-4 | 2.4    | 2.4    | 2.4    | 2.8    |
| ISO Brightness - R457, min | %    | ISO 2470-1 | 82     | 82     | 82     | 82     |
| E.B.A., max                | ppm  | T-437      | 10     | 10     | 10     | 10     |

### **Characteristics**

- FSC<sup>®</sup> certified
- Made from 100% recycled fibres
- Designed to reduce trapping and optimise dot gain
- Premium appearance in terms of neatness, brightness and whiteness
- Great mechanical quality in the folding process

### **Key Applications**

|             | $\bigcirc$   | $\frown$ |
|-------------|--------------|----------|
| $(\Lambda)$ |              |          |
|             | $(\bigcirc)$ |          |
| $\sim$      | $\sim$       | $\smile$ |

| Typical Values    | Typical is what a customer can expect to receive on a customer reel average |
|-------------------|---|
| Guaranteed values | Guaranteed is a min/max value of a property on a customer reel average      |
| Test conditions   | 50% RH and 23°C   |
| Issue date        | January 2022  |
| CEPI Code         | 77  |

Alternative grammages, not listed, may be available – please contact our sales team for more information.



### **Double Coated**

### Double Coated is produced in Dueñas mill.

| Typical values        |      |            |      |      |      |      |
|-----------------------|------|------------|------|------|------|------|
| Property              | Unit | Method     |      |      |      |      |
| Grammage              | g/m² | ISO 536    | 140  | 150  | 160  | 180  |
| Burst strength        | kPa  | ISO 2758   | 270  | 295  | 320  | 360  |
| buiststiengti         | Krd  | ISO 2759   | 315  | 340  | 365  | 410  |
| SCT CD                | kN/m | ISO 9895   | 2.50 | 2.70 | 2.90 | 3.25 |
| Scott Bond            | J/m² | T-569      | 280  | 280  | 280  | 280  |
| Cobb 60s              | g/m² | ISO 535    | 35   | 35   | 35   | 35   |
| Coated weight         | g/m² | ITR-201-55 | 20   | 20   | 20   | 20   |
| Roughness, PPS        | um   | ISO 8791-4 | 1.7  | 1.7  | 1.7  | 2.1  |
| ICO Driebtenese D457  | %    | ISO 2470-1 | 85   | 85   | 85   | 85   |
| ISO Brightness - R457 | %0   | ISO 2470-2 | 89   | 89   | 89   | 89   |
| Gloss                 | 0    | ISO 8254-1 | 50   | 50   | 50   | 50   |
| E.B.A.                | ppm  | T-437      | З    | З    | З    | З    |

#### Guaranteed values

| Property                   | Unit | Method     |        |        |        |        |
|----------------------------|------|------------|--------|--------|--------|--------|
| Grammage                   | g/m² | ISO 536    | 140    | 150    | 160    | 180    |
| Grammage average, min/max  | %    | ISO 536    | ±4     | ±4     | ±4     | ±4     |
| Moisture average           | %    | Online     | 7.5 ±1 | 7.5 ±1 | 7.5 ±1 | 7.5 ±1 |
| Burst strength, min        | kPa  | ISO 2758   | 230    | 253    | 275    | 310    |
| SCT CD, min                | kN/m | ISO 9895   | 2.25   | 2.37   | 2.50   | 2.90   |
| Scott Bond, min            | J/m² | T-569      | 240    | 240    | 240    | 240    |
| Cobb 60s, max              | g/m² | ISO 535    | 50     | 50     | 50     | 50     |
| Roughness, PPS max         | um   | ISO 8791-4 | 2.4    | 2.4    | 2.4    | 2.8    |
| ISO Brightness - R457, min | %    | ISO 2470-1 | 82     | 82     | 82     | 82     |
| E.B.A., max                | ppm  | T-437      | 10     | 10     | 10     | 10     |

### **Characteristics**

- FSC<sup>®</sup> certified
- Made from 100% recycled fibres
- Designed to reduce trapping and optimise dot gain
- Optimum quality for neatness, brightness and whiteness
- Great mechanical qualities

#### **Key Applications**

| $\bigcirc$ |  |
|------------|--|
|            |  |

| Typical Values    | Typical is what a customer can expect to receive on a customer reel average |
|-------------------|---|
| Guaranteed values | Guaranteed is a min/max value of a property on a customer reel average      |
| Test conditions   | 50% RH and 23°C   |
| Issue date        | January 2022  |
| CEPI Code         | 77  |

Alternative grammages, not listed, may be available – please contact our sales team for more information.



### Double Coated Economic

### Double Coated Economic is produced in Dueñas mill.

| Typical values        |      |            |      |      |      |      |      |
|-----------------------|------|------------|------|------|------|------|------|
| Property              | Unit | Method     |      |      |      |      |      |
| Grammage              | g/m² | ISO 536    | 130  | 140  | 150  | 160  | 180  |
| Burst strength        | kPa  | ISO 2758   | 220  | 240  | 270  | 300  | 320  |
| buiststiengtn         | KFd  | ISO 2759   | 265  | 285  | 300  | 345  | 365  |
| SCT CD                | kN/m | ISO 9895   | 2.25 | 2.40 | 2.45 | 2.70 | 3.05 |
| Scott Bond            | J/m² | T-569      | 280  | 280  | 280  | 280  | 280  |
| Cobb 60s              | g/m² | ISO 535    | 35   | 35   | 35   | 35   | 35   |
| Coated weight         | g/m² | ITR-201-55 | 18   | 18   | 18   | 18   | 18   |
| Roughness, PPS        | um   | ISO 8791-4 | 2.0  | 2.0  | 2.0  | 2.0  | 2.2  |
| ICO Drichtmass D457   | 07   | ISO 2470-1 | 80   | 80   | 80   | 80   | 80   |
| ISO Brightness - R457 | %    | ISO 2470-2 | 83   | 83   | 83   | 83   | 83   |
| Gloss                 | 0    | ISO 8254-1 | 44   | 44   | 44   | 44   | 44   |
| E.B.A.                | ppm  | T-437      | З    | З    | З    | З    | З    |

#### Guaranteed values

| Property                   | Unit | Method     |        |        |        |        |        |
|----------------------------|------|------------|--------|--------|--------|--------|--------|
| Grammage                   | g/m² | ISO 536    | 130    | 140    | 150    | 160    | 180    |
| Grammage average, min/max  | %    | ISO 536    | ±4     | ±4     | ±4     | ±4     | ±4     |
| Moisture average           | %    | Online     | 7.5 ±1 | 7.5 ±1 | 7.5 ±1 | 7.5 ±1 | 7.5 ±1 |
| Burst strength, min        | kPa  | ISO 2758   | 200    | 215    | 250    | 265    | 290    |
| SCT CD, min                | kN/m | ISO 9895   | 1.95   | 2.10   | 2.15   | 2.40   | 2.70   |
| Scott Bond, min            | J/m² | T-569      | 240    | 240    | 240    | 240    | 240    |
| Cobb 60s, max              | g/m² | ISO 535    | 50     | 50     | 50     | 50     | 50     |
| Roughness, PPS, max        | um   | ISO 8791-4 | 2.5    | 2.5    | 2.5    | 2.5    | 2.9    |
| ISO Brightness - R457, min | %    | ISO 2470-1 | 77     | 77     | 77     | 77     | 77     |
| E.B.A., max                | ppm  | T-437      | 10     | 10     | 10     | 10     | 10     |

### **Characteristics**

- FSC<sup>®</sup> certified
- Made from 100% recycled fibres
- Cost-effective solution with great printing capabilities
- Great mechanical qualities

### **Key Applications**



| Typical Values    | Typical is what a customer can expect to receive on a customer reel average |
|-------------------|---|
| Guaranteed values | Guaranteed is a min/max value of a property on a customer reel average      |
| Test conditions   | 50% RH and 23°C   |
| Issue date        | January 2022  |
| CEPI Code         | 77  |

Alternative grammages, not listed, may be available – please contact our sales team for more information.

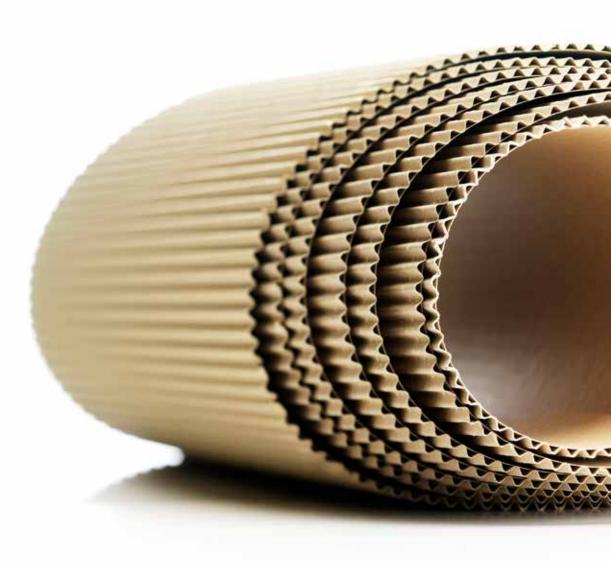


### Medium / Fluting

We offer a wide range of Medium / Fluting grades, from light to high-performance to suit every application. Made from 100% recycled fibre, they are great at handling high speed converting in a robust manner.

### Grades available

- Medium Plus
- Medium HP Plus
- Medium HP WS



### Medium Plus

Medium Plus is produced in Aschaffenburg, Belišće, Kemsley, Rouen, Trakia, Witzenhausen, Zărnești and Lucca mills.'

### **Characteristics**

- FSC<sup>®</sup> certified
- Made from 100% recycled fibres
- A very stable product with excellent runnability on the corrugator
- Highly competitive with higher characteristics than standard

### **Key Applications**



| Typical Values    | Typical is what a customer can expect to receive on a customer reel average |
|-------------------|---|
| Guaranteed values | Guaranteed is a min/max value of a property on a customer reel average      |
| Test conditions   | 50% RH and 23°C   |
| Issue date        | January 2022  |
| CEPI Code         | 44/60   |

Alternative grammages, not listed, may be available – please contact our sales team for more information.

| Typical values                               |                  |                           | Ligh            | t Medium        | Plus            |                  |                  |                  |                  |                  |
|--|------------------|---------------------------|-----------------|-----------------|-----------------|------------------|------------------|------------------|------------------|------------------|
| Property                                     | Unit             | Method                    |                 |                 |                 |                  |                  |                  |                  |                  |
| Grammage                                     | g/m²             | ISO 536                   | 85              | 90              | 95              | 100              | 110              | 120              | 130              | 140              |
| SCT CD                                       | kN/m             | ISO 9895                  | 1.60            | 1.65            | 1.75            | 1.85             | 2.05             | 2.20             | 2.35             | 2.55             |
| CMT 30                                       | Ν                | ISO 7263                  | -               | -               | -               | 165              | 180              | 205              | 220              | 235              |
| Guaranteed values                            |                  |                           |                 |                 |                 |                  |                  |                  |                  |                  |
| Property                                     | Unit             | Method                    |                 |                 |                 |                  |                  |                  |                  |                  |
|  | onne             |                           |                 |                 |                 |                  |                  |                  |                  |                  |
| Grammage                                     | g/m <sup>2</sup> | ISO 536                   | 85              | 90              | 95              | 100              | 110              | 120              | 130              | 140              |
|  |                  |                           | <b>85</b><br>±3 | <b>90</b><br>±3 | <b>95</b><br>±3 | <b>100</b><br>±3 | <b>110</b><br>±3 | <b>120</b><br>±3 | <b>130</b><br>±3 | <b>140</b><br>±3 |
| Grammage                                     | g/m²             | ISO 536                   |                 |                 |                 |                  |                  |                  |                  |                  |
| <b>Grammage</b><br>Grammage average, min/max | g/m²<br>%        | <b>ISO 536</b><br>ISO 536 | ±3              | ±3              | ±3              | ±3               | ±3               | ±3               | ±3               | ±3               |



### Medium HP Plus

Medium HP Plus is produced in Aschaffenburg, Belišće, Kemsley, Lucca, Rouen, Witzenhausen, Zărnești and Alcolea mills. We can offer you two slightly different variations of Medium HP Plus.

### **Characteristics**

- FSC<sup>®</sup> certified
- Made from 100% recycled fibres with performance additives to ensure very high strength properties
- A good alternative to Semi-Chemical fluting
- Good runnability and bonding

### **Key Applications**



| Typical Values    | Typical is what a customer can expect to receive on a customer reel average |
|-------------------|---|
| Guaranteed values | Guaranteed is a min/max value of a property on a customer reel average      |
| Test conditions   | 50% RH and 23°C   |
| Issue date        | January 2022  |
| CEPI Code         | 45  |

Alternative grammages, not listed, may be available – please contact our sales team for more information.

#### Medium HP Plus produced in Aschaffenburg, Belišće, Kemsley, Lucca, Rouen, Witzenhausen and Zărnești

| Typical values                               |                          |                           |                  |                  |                  |                  |                  |                  |                  |                  |                  |
|--|--------------------------|---------------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| Property                                     | Unit                     | Method                    |                  |                  |                  |                  |                  |                  |                  |                  |                  |
| Grammage                                     | g/m²                     | ISO 536                   | 105              | 115              | 120              | 130              | 135              | 150              | 160              | 165              | 200              |
| SCT CD                                       | kN/m                     | ISO 9895                  | 2.15             | 2.35             | 2.50             | 2.65             | 2.75             | 3.10             | 3.25             | 3.35             | 4.00             |
| CMT 30                                       | Ν                        | ISO 7263                  | 200              | 225              | 235              | 255              | 265              | 295              | 310              | 315              | -                |
| Guaranteed values                            |                          |                           |                  |                  |                  |                  |                  |                  |                  |                  |                  |
| Deserve                                      |                          |                           |                  |                  |                  |                  |                  |                  |                  |                  |                  |
| Property                                     | Unit                     | Method                    |                  |                  |                  |                  |                  |                  |                  |                  |                  |
| Grammage                                     | Unit<br>g/m <sup>2</sup> | Method<br>ISO 536         | 105              | 115              | 120              | 130              | 135              | 150              | 160              | 165              | 200              |
|  |                          |                           | <b>105</b><br>±3 | <b>115</b><br>±3 | <b>120</b><br>±3 | <b>130</b><br>±3 | <b>135</b><br>±3 | <b>150</b><br>±3 | <b>160</b><br>±3 | <b>165</b><br>±3 | <b>200</b><br>±3 |
| Grammage                                     | g/m²                     | ISO 536                   |                  |                  |                  |                  |                  |                  |                  |                  |                  |
| <b>Grammage</b><br>Grammage average, min/max | <b>g/m²</b><br>%         | <b>ISO 536</b><br>ISO 536 | ±3               | ±3               | ±3               | ±3               | ±3               | ±3               | ±3               | ±3               | ±3               |

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### Medium HP Plus

Medium HP Plus is produced in Aschaffenburg, Belišće, Kemsley, Lucca, Rouen, Witzenhausen, Zărnești and Alcolea mills. We can offer you two slightly different variations of Medium HP Plus.

### **Characteristics**

- FSC<sup>®</sup> certified
- Made from 100% recycled fibres with performance additives to ensure very high strength properties
- A good alternative to Semi-Chemical fluting
- Good runnability and bonding

### **Key Applications**



| Typical Values    | Typical is what a customer can expect to receive on a customer reel average |
|-------------------|---|
| Guaranteed values | Guaranteed is a min/max value of a property on a customer reel average      |
| Test conditions   | 50% RH and 23°C   |
| Issue date        | January 2022  |
| CEPI Code         | 45  |

Alternative grammages, not listed, may be available please contact our sales team for more information.

#### Medium HP Plus produced in Alcolea

| Typical values            |                          |                   |          |          |          |          |          |
|---------------------------|--------------------------|-------------------|----------|----------|----------|----------|----------|
| Property                  | Unit                     | Method            |          |          |          |          |          |
| Grammage                  | g/m²                     | ISO 536           | 130      | 140      | 150      | 160      | 170      |
| SCT CD                    | kN/m                     | ISO 9895          | 2.85     | 3.10     | 3.30     | 3.50     | 3.75     |
| CMT 30                    | Ν                        | ISO 7263          | 327      | 350      | 375      | 400      | 425      |
| Guaranteed values         | 11-14                    | Mathead           |          |          |          |          |          |
| Property<br>Grammage      | Unit<br>g/m <sup>2</sup> | Method<br>ISO 536 | 130      | 140      | 150      | 160      | 170      |
| -                         | -                        |                   |          |          |          |          |          |
| Grammage average, min/max | %                        | ISO 536           | ±4       | ±4       | ±4       | ±4       | ±4       |
| Moisture average          | %                        | Online            | 8.5 ±1.5 | 8.5 ±1.5 | 8.5 ±1.5 | 8.5 ±1.5 | 8.5 ±1.5 |
| SCT CD, min               | kN/m                     | ISO 9895          | 2.60     | 2.80     | 3.00     | 3.20     | 3.40     |
| CMT 30, min               | Ν                        | ISO 7263          | 285      | 307      | 326      | 346      | 367      |
| Porosity, Gurley, min     | s/100ml                  | ISO 5636-5        | 30       | 30       | 30       | 30       | 30       |



### Medium HP WS

Medium HP WS is produced in Belišće and Alcolea mills. We can offer you two slightly different variations of Medium HP WS.

### **Characteristics**

- FSC<sup>®</sup> certified
- Made from 100% recycled fibres with performance additives and wet-strength to resist high moisture and retain high strength properties
- A good alternative to Semi-Chemical fluting
- Good runnability and bonding

### **Key Applications**



| Typical Values    | Typical is what a customer can expect to receive on a customer reel average |
|-------------------|---|
| Guaranteed values | Guaranteed is a min/max value of a property on a customer reel average      |
| Test conditions   | 50% RH and 23°C   |
| Issue date        | January 2022  |

Alternative grammages, not listed, may be available – please contact our sales team for more information.

#### Medium HP WS produced in Belišće

| Typical values            |      |          |        |        |
|---------------------------|------|----------|--------|--------|
| Property                  | Unit | Method   |        |        |
| Grammage                  | g/m² | ISO 536  | 145    | 170    |
| SCT CD                    | kN/m | ISO 9895 | 2.75   | 3.15   |
| CMT 30                    | Ν    | ISO 7263 | 315    | 340    |
| Guaranteed values         |      |          |        |        |
| Property                  | Unit | Method   |        |        |
| Grammage                  | g/m² | ISO 536  | 140    | 170    |
| Grammage average, min/max | %    | ISO 536  | ±3     | ±β     |
| Moisture average          | %    | Online   | 8.0 ±1 | 8.0 ±1 |
| SCT CD, min               | kN/m | ISO 9895 | 2.50   | 2.85   |
| CMT 30, min               | Ν    | ISO 7263 | 295    | 340    |
| Cobb 60s, max             | g/m² | ISO 535  | 55     | 55     |



### Medium HP WS

Medium HP WS is produced in Belišće and Alcolea mills. We can offer you two slightly different variations of Medium HP WS.

### **Characteristics**

- FSC<sup>®</sup> certified
- Made from 100% recycled fibres with performance additives to resist high humidity conditions and retain our highest strength properties
- A good alternative to Semi-Chemical fluting
- Good runnability and bonding

### **Key Applications**



| Typical Values    | Typical is what a customer can expect to receive on a customer reel average |
|-------------------|---|
| Guaranteed values | Guaranteed is a min/max value of a property on a customer reel average      |
| Test conditions   | 50% RH and 23°C   |
| Issue date        | January 2022  |

Alternative grammages, not listed, may be available – please contact our sales team for more information.

#### Medium HP WS produced in Alcolea

| Typical values            |         |            |          |          |
|---------------------------|---------|------------|----------|----------|
| Property                  | Unit    | Method     |          |          |
| Grammage                  | g/m²    | ISO 536    | 170      | 190      |
| SCT CD                    | kN/m    | ISO 9895   | 4.30     | 4.80     |
| CMT 30                    | Ν       | ISO 7263   | 425      | -        |
| Guaranteed values         |         |            |          |          |
| Property                  | Unit    | Method     |          |          |
| Grammage                  | g/m²    | ISO 536    | 170      | 190      |
| Grammage average, min/max | %       | ISO 536    | ±4       | ±4       |
| Moisture average          | %       | Online     | 8.5 ±1.5 | 8.5 ±1.5 |
| SCT CD, min               | kN/m    | ISO 9895   | 3.90     | 4.40     |
| CMT 30, min               | Ν       | ISO 7263   | 374      | -        |
| Porosity, Gurley, min     | s/100ml | ISO 5636-5 | 30       | 30       |



### Dual-Use

Made from 100% recycled fibre, our Dual-Use grades perform well during the corrugator and the conversion process, meaning they can be utilised to their full potential in both sheet feeding and conventional printing sectors.

### Grades available

Dual-Use

• Dual-Use HP Plus



### Dual-Use

Dual-Use is produced in Kemsley, Alcolea, Dueñas and Rouen mills. We can offer you two slightly different variations of Dual-Use.

### **Characteristics**

- FSC<sup>®</sup> certified
- Made from 100% recycled fibres
- Great runnability as Liner or Medium on the corrugator with very good strength properties
- Good solution for optimising warehouse stock

### **Key Applications**



| Typical Values    | Typical is what a customer can expect to receive on a customer reel average |
|-------------------|---|
| Guaranteed values | Guaranteed is a min/max value of a property on a customer reel average      |
| Test conditions   | 50% RH and 23°C   |
| Issue date        | January 2022  |
| CEPI Code         | 52  |

Alternative grammages, not listed, may be available – please contact our sales team for more information.



#### **Dual-Use produced in Kemsley and Rouen**

| Typical values            |      |          |        |        |        |        |
|---------------------------|------|----------|--------|--------|--------|--------|
| Property                  | Unit | Method   |        |        |        |        |
| Grammage                  | g/m² | ISO 536  | 85     | 100    | 110    | 125    |
| Burst strength            | kPa  | ISO 2758 | 200    | 235    | 255    | 290    |
| SCT CD                    | kN/m | ISO 9895 | 1.60   | 1.85   | 2.05   | 2.30   |
| CMT 30                    | Ν    | ISO 7263 | -      | 160    | 175    | 200    |
| Guaranteed values         |      |          |        |        |        |        |
| Property                  | Unit | Method   |        |        |        |        |
| Grammage                  | g/m² | ISO 536  | 85     | 100    | 110    | 125    |
| Grammage average, min/max | %    | ISO 536  | ±β     | ±3     | ±3     | ±β     |
| Moisture average          | %    | Online   | 8.0 ±1 | 8.0 ±1 | 8.0 ±1 | 8.0 ±1 |
| Burst strength, min       | kPa  | ISO 2758 | 180    | 210    | 230    | 260    |
| SCT CD, min               | kN/m | ISO 9895 | 1.45   | 1.70   | 1.90   | 2.15   |
| CMT 30, min               | Ν    | ISO 7263 | -      | 145    | 160    | 180    |
| Cobb 60s, max             | g/m² | ISO 535  | 45     | 45     | 45     | 45     |

### Dual-Use

Dual-Use is produced in Kemsley, Alcolea, Dueñas and Rouen mills. We can offer you two slightly different variations of Dual-Use.

### **Characteristics**

- FSC<sup>®</sup> certified
- Made from 100% recycled fibres
- Great runnability as Liner or Medium on the corrugator with very good strength properties
- Good solution for optimising warehouse stock

### **Key Applications**



| Typical Values    | Typical is what a customer can expect to receive on a customer reel average |
|-------------------|---|
| Guaranteed values | Guaranteed is a min/max value of a property on a customer reel average      |
| Test conditions   | 50% RH and 23°C   |
| Issue date        | January 2022  |
| CEPI Code         | 52  |

Alternative grammages, not listed, may be available – please contact our sales team for more information.

#### Dual-Use produced in Alcolea and Dueñas

| Typical values            |      |          |          |          |          |          |          |          |
|---------------------------|------|----------|----------|----------|----------|----------|----------|----------|
| Property                  | Unit | Method   |          |          |          |          |          |          |
| Grammage                  | g/m² | ISO 536  | 100      | 110      | 130      | 145      | 160      | 190      |
| Burst strength            | kPa  | ISO 2758 | 230      | 250      | 315      | 350      | 385      | 455      |
| SCT CD                    | kN/m | ISO 9895 | 1.80     | 2.00     | 2.30     | 2.60     | 2.90     | 3.45     |
| CMT 30                    | Ν    | ISO 7263 | 190      | 210      | 245      | 265      | 300      | -        |
| Guaranteed values         |      |          |          |          |          |          |          |          |
| Property                  | Unit | Method   |          |          |          |          |          |          |
| Grammage                  | g/m² | ISO 536  | 100      | 110      | 130      | 145      | 160      | 190      |
| Grammage average, min/max | %    | ISO 536  | ±4       | ±4       | ±4       | ±4       | ±4       | ±4       |
| Moisture average          | %    | Online   | 8.5 ±1.5 | 8.5 ±1.5 | 8.5 ±1.5 | 8.5 ±1.5 | 8.5 ±1.5 | 8.5 ±1.5 |
| Burst strength, min       | kPa  | ISO 2758 | 200      | 220      | 265      | 290      | 320      | 380      |
| SCT CD, min               | kN/m | ISO 9895 | 1.60     | 1.75     | 2.10     | 2.35     | 2.55     | 3.00     |
| CMT 30, min               | Ν    | ISO 7263 | 165      | 180      | 214      | 235      | 260      | -        |
| Cobb 60s, max             | g/m² | ISO 535  | 50       | 50       | 50       | 50       | 50       | 50       |



Burst strength, min

SCT CD, min

CMT 30, min

Cobb 60s, max

**Characteristics** 

FSC<sup>®</sup> certified

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### **Dual-Use HP Plus**

Dual-Use HP Plus is produced in Kemsley mill.

| Typical values            |      |          |        |
|---------------------------|------|----------|--------|
| Property                  | Unit | Method   |        |
| Grammage                  | g/m² | ISO 536  | 130    |
| Burst strength            | kPa  | ISO 2758 | 335    |
| SCT CD                    | kN/m | ISO 9895 | 2.70   |
| CMT 30                    | Ν    | ISO 7263 | 245    |
| Guaranteed values         |      |          |        |
| Property                  | Unit | Method   |        |
| Grammage                  | g/m² | ISO 536  | 130    |
| Grammage average, min/max | %    | ISO 536  | ±3     |
| Moisture average          | %    | Online   | 8.0 ±1 |

kPa

kN/m

Ν

g/m²

ISO 2758

ISO 9895

ISO 7263

ISO 535

300

2.45

210

45

| stre | ngt | h pro  | perties | s av | aila | ble to suit |
|------|-----|--------|---------|------|------|-------------|
| dem  | and | ding a | pplica  | tion | IS   |             |
| ~    |     | 1      | ~       |      |      |             |

• Good solution for optimising warehouse stock

Made from 100% recycled fibres
Great runnability as Liner or Medium on the corrugator with the highest

### **Key Applications**



| Typical Values    | Typical is what a customer can expect to receive on a customer reel average |
|-------------------|---|
| Guaranteed values | Guaranteed is a min/max value of a property on a customer reel average      |
| Test conditions   | 50% RH and 23°C   |
| Issue date        | January 2022  |
| CEPI Code         | 52  |

Alternative grammages, not listed, may be available – please contact our sales team for more information.





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