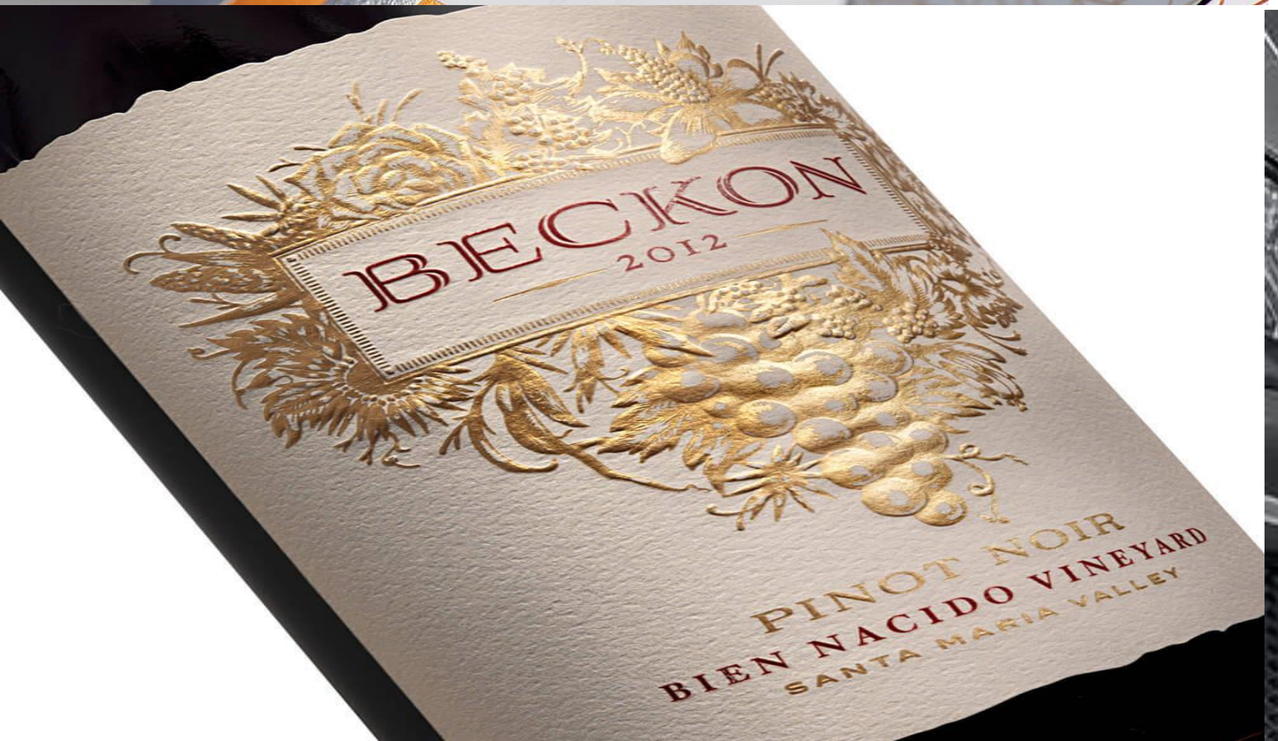
SUSTAINABILITY & RECYCLING

About KURZ

- family run business since 1899 (5th generation)
- global leader in thin-film technology
- supplies products for surface finishing, decoration, labelling and counterfeit protection
- over 5,000 employees
- global presence in more than 30 locations
- manufactures in Europe, Asia and the USA

SUPA
FUNC


BECKON
2012
PINOT NOIR
BIEN NACIDO VINEYARD
SANTA MARIA VALLEY

D
S BR 1768

- Product scope: Quality, Innovation, Sustainability.

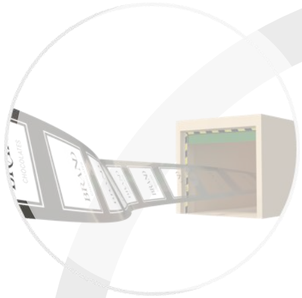
- Sustainable process, based on the 4 R's: **Reduce (KPS SLIM), Reuse, Recycle (Recosys®), Recover.**

01. Our Mission for sustainability

TRANSFER CARRIER

From waste material to **valuable raw material**.

- ✓ Extremely thin PET carrier material
- ✓ Free of hazardous substances



END PRODUCT

Minimum material application for a **maximum optical effect**.

- ✓ No plastic on the packaging
- ✓ Aluminum layers 6,000x thinner than human hair
- ✓ Recyclable, deinkable and compostable

BE A GREEN LEADER

with sustainable finishing in print & packaging

MANUFACTURING PROCES

Sustainable production as an **international benchmark.**

- ✓ Certified ingredients
- ✓ Solvent recovery
- ✓ Significant share of green energy supply
- ✓ German state of the art production care globally

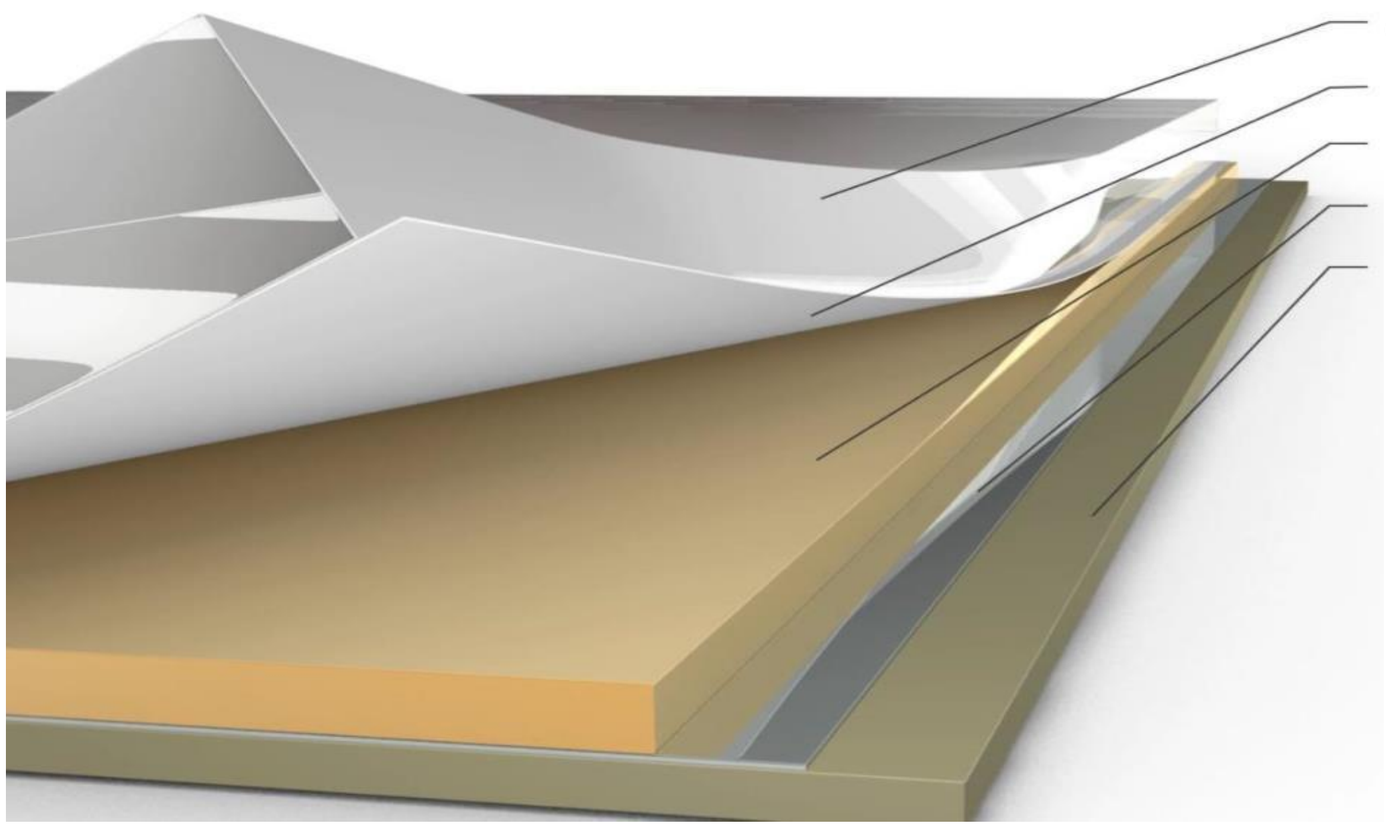
APPLICATION PROCESS

Building a bridge between **brillantly finished packaging design** and **environmentally friendly processing**

- ✓ No water, no solvents
- ✓ Dry & energy-efficient
- ✓ PET released and mono-fractioned separated

01.

Our Layout of KURZ transfer products



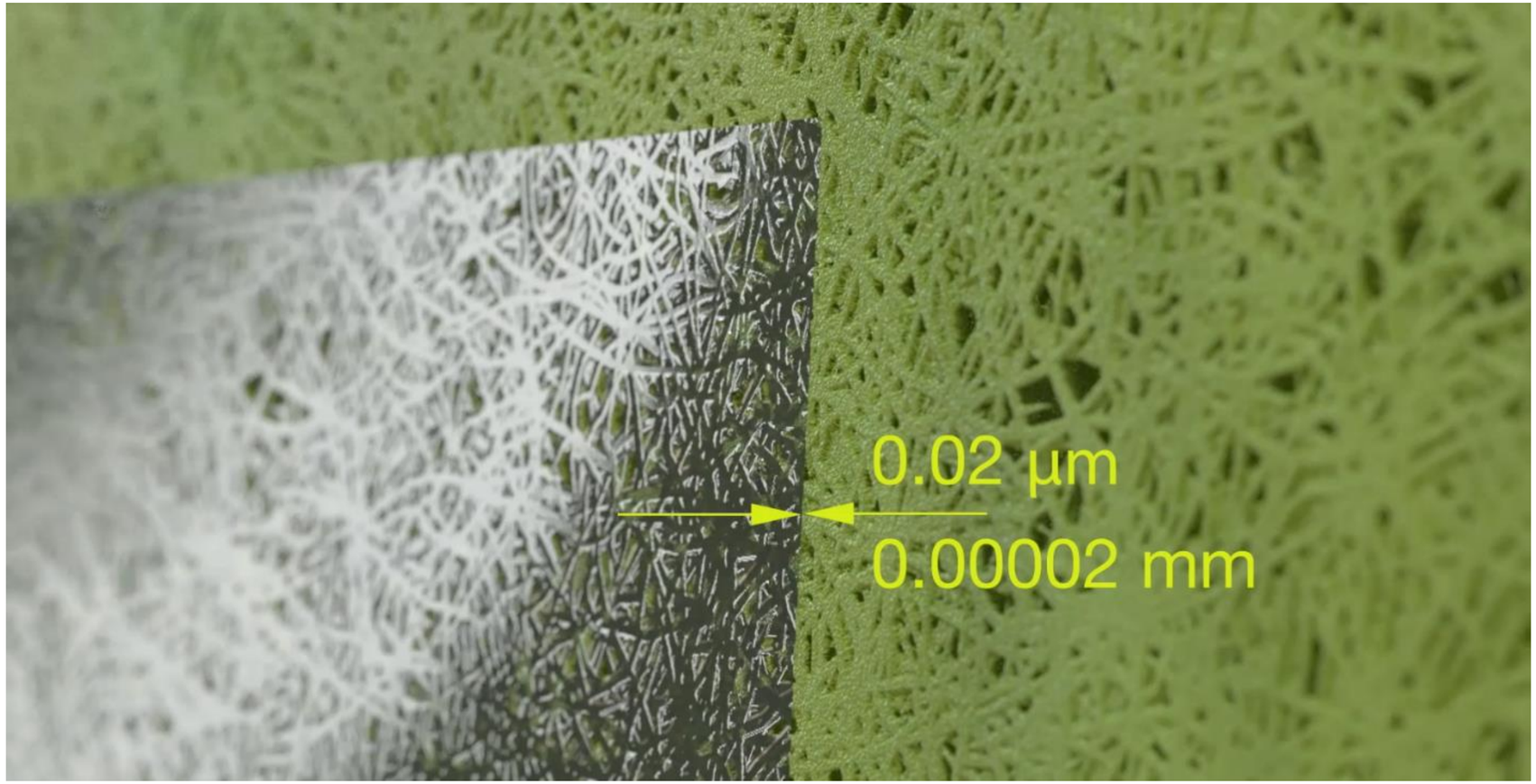
➔ Total thickness of all layers
1.5 to 3 g/m² ≈ 1.5 to 3 µm

01.

No Plastic on the packaging

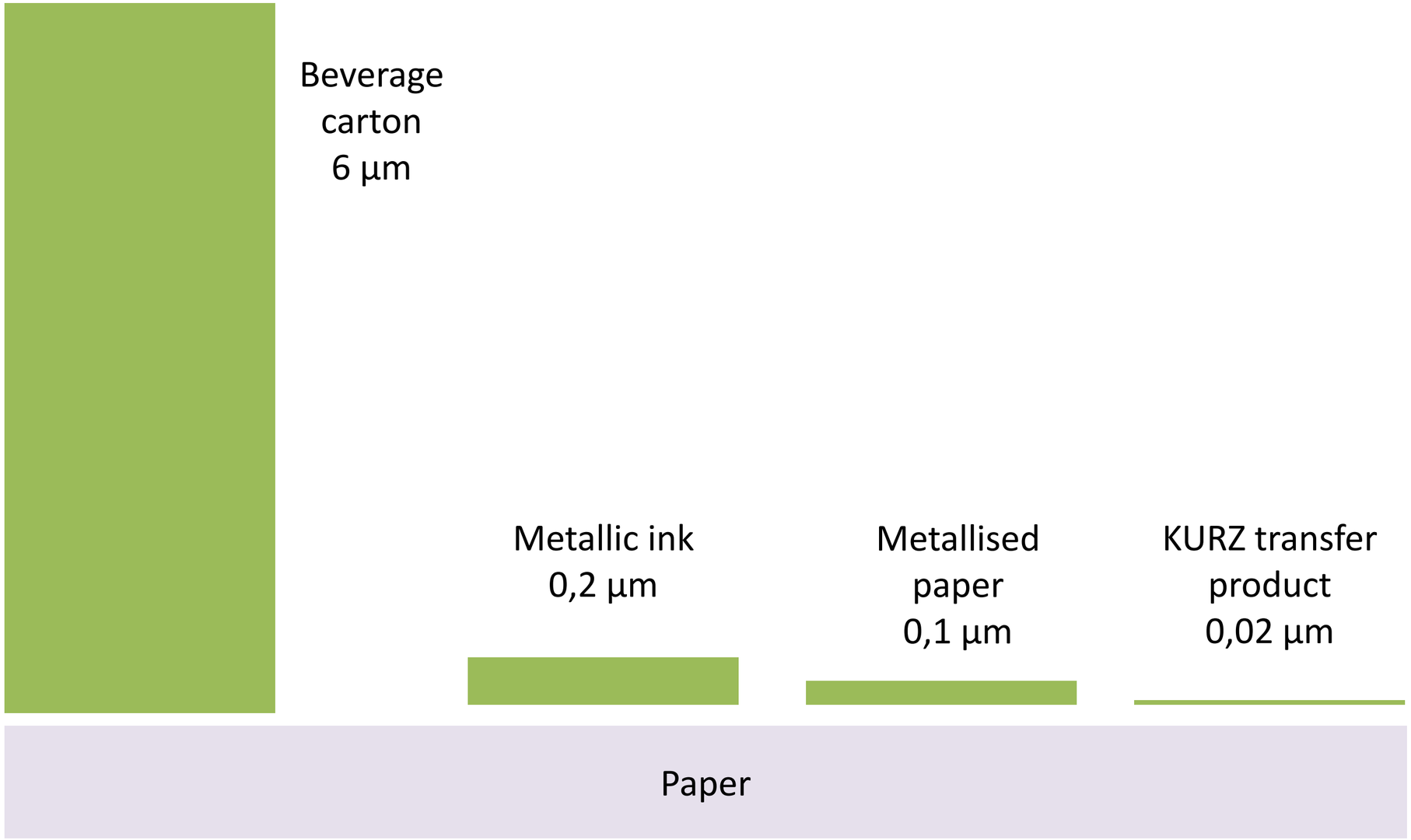
01.

Extremely thin
transferred aluminium layers



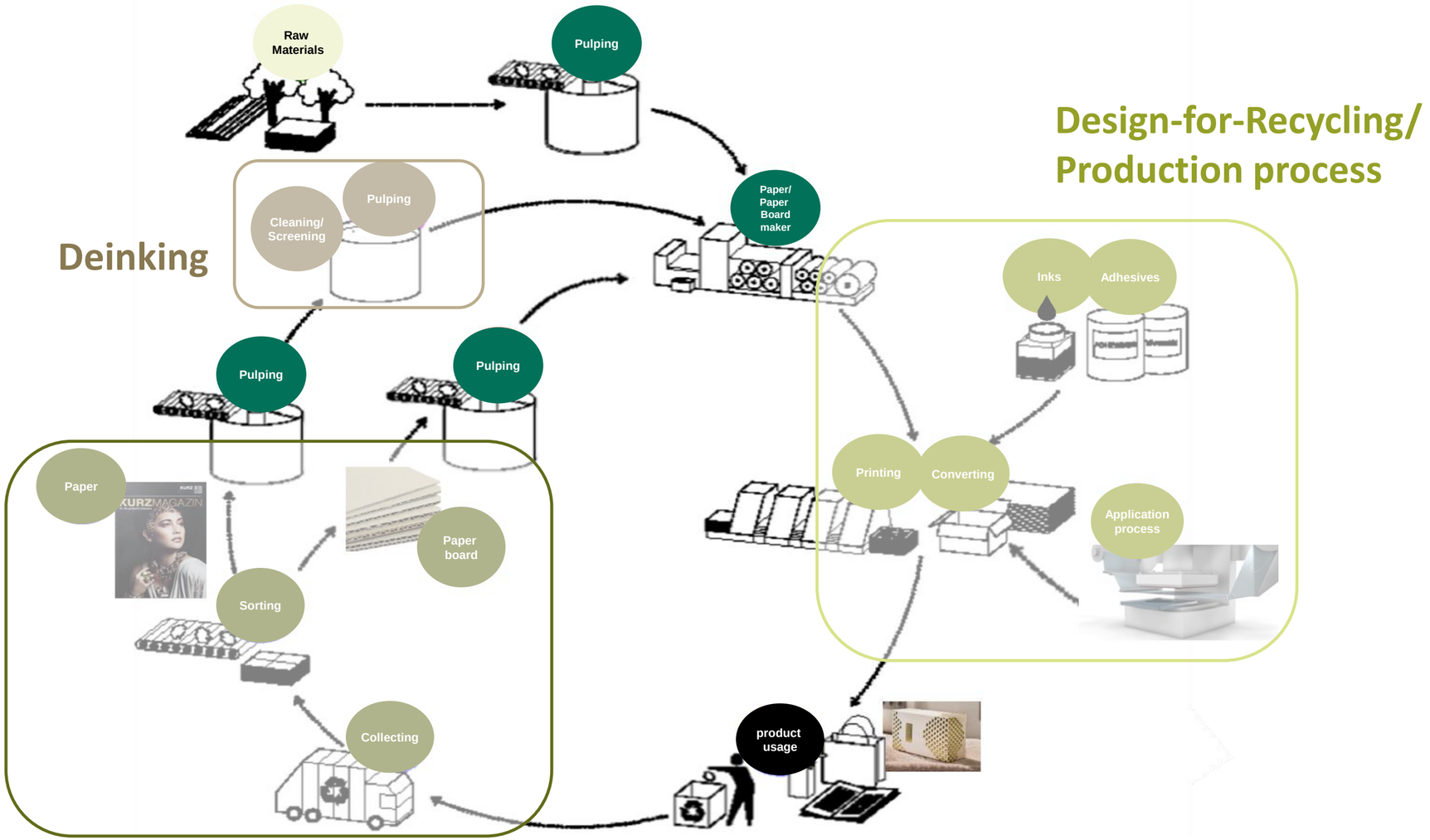
01.

Aluminium thickness comparison

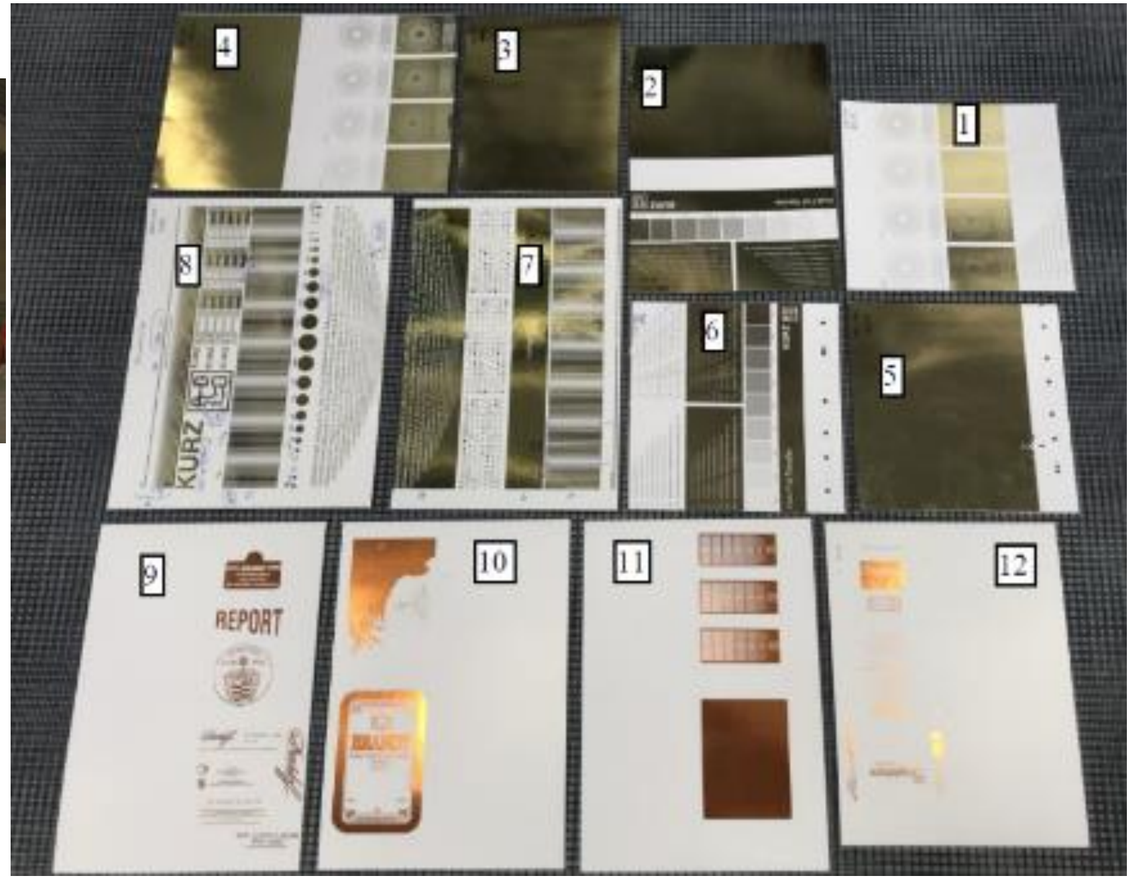


01.

Is the end product recyclable ?



Sorting: Study by Rowe



- Company: Rowe Nürnberg
- Capacity 35to/h
- 3 main streams: paper, cardboard/paper and papers for deinking

Sorting: Study by Rowe

01.

Labels & sustainability

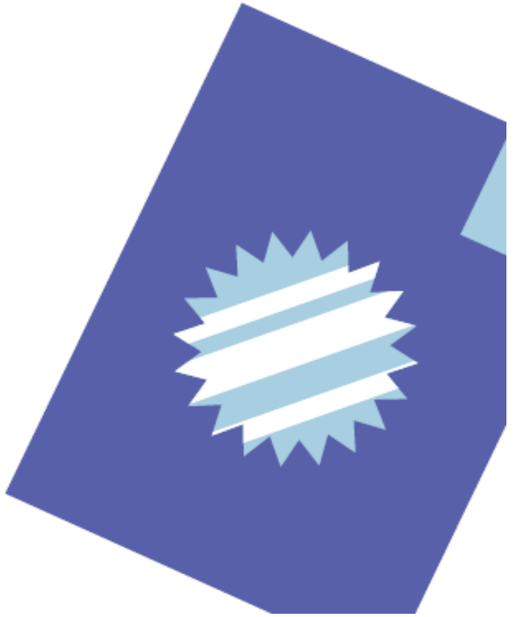
- Design for recycling must focus on label material and glue
- Recommended label coverage:
  - 50% for bottles and containers with a capacity of less than 500ml
  - 70% for bottles and containers with a capacity of more than 500ml
- Avoid labels and sleeves that are entirely metallized, which disrupts optical sorting.
- Inks must remain on the label and not bleed into the wash bath

4evergreen design guidelines for fiber based materials.

Component	Sub-category	Fully compatible with standard recycling process	Conditionally compatible with standard recycling process	Not compatible with standard recycling process	Compatibility with recycling process unknown	Comment
Metallic components	decoration	hot and cold transfer		PP/PET metallised laminates, PET-metallised film		Designers should not cover the surface of fibre-based products fully with metallization, as this could cause issues regarding the detection as fibre product. The available test results are only applicable for certain types of packaging. For exact thresholds, testing is required!

Table 8. Design table of recommendations for typical decorative metallic elements

METALLIC/FOIL BLOCK PRINTING



WHY CAN THIS BE A PROBLEM?

As with films and laminates, metallic and foil block can be difficult to separate from the paper content and the particles can clog up machinery.

WHAT ARE THE CONSIDERATIONS?

Generally, paper mills can recycle packaging that has metallic block printing on one side and no more of 60% of that sides surface area. Don't exceed this recommended maximum limit.

Hot and Cold Foil Transfer

Hot and Cold Foil Transfer can be dealt with by paper mills.

Cartons printed with not more than 60% of the external surface area in foil transfer should be considered recyclable.

Recycling/Deinking Process: Study by INGEDE

INGEDE
International Association of the Deinking Industry

Deinking test to judge the removal of foil from printed products

A major step in the recycling process of printed graphic products to produce a bright pulp suitable for a wide range of recycled paper and board.

Tested to INGDE Method 11 Jan 2018

The deinkability of a printed product as a whole can only be assessed by looking at its Deinkability Score, which can range from -100 to +100

Recycling/Deinking Process: Study by INGEDE

INGEDE
International Association of the Deinking Industry

LEONHARD KURZ Stiftung & Co. KG
Schwabacher Straße 482
90763 Fürth
GERMANY

9 November 2017

Confirmation about the deinkability of a printed product

1. Test

The test print was tested according to INGEDE Method 11 and assessed according to the "Assessment of Printed Product Recyclability – Deinkability Score" (ERPC 2015).

2. Specifications

Print sample:	Various laboratory-printed samples ALUFIN KPS-OP 093 (simplex partly printed on cold foil)
Paper:	Performa Brilliance, 215 g/m²
Paper manufacturer:	IGEPA (Stora Enso)
Paper surface:	Fully coated CTMP board with white coated reverse
Printing process/ Printing machine:	Sheet-fed offset, UV-cured (without further specification) KBA Rapida 105
Printing ink/toner:	Cold foil attached with INXCure™ UV Cold Foil Adhesive HT 1409286 Siegwerk UV Sicura Plast SP (without further specification) UV varnish (without further specification)

3. Total result

The total score is 100 points. The deinkability is rated "good".

These results confirm that the samples tested are good deinkable. To qualify for an ecolabel, full details of the respective sample are required.

INGEDE Office
International Association of the Deinking Industry
Gerokstraße 40, 74321 Bietigheim-Bissingen
Registry Number 14846 VR München
Tel. +49 7142 37522-21
www.ingede.org
office@ingede.org

INGEDE
International Association of the Deinking Industry

LEONHARD KURZ Stiftung & Co. KG
Schwabacher Straße 482
90763 Fürth
GERMANY

5 October 2018

Confirmation about the deinkability of a printed product

1. Test

The test print was tested according to INGEDE Method 11 and assessed according to the "Assessment of Printed Product Recyclability – Deinkability Score" (EPRC 2017).

2. Specifications

Print sample:	Various laboratory-prepared samples ALUFIN MTS (hot-stamping foil partly applied on one side)
Paper:	Performa White, 300 g/m²
Paper manufacturer:	Stora Enso
Paper surface:	Fully coated CTMP board with light coated reverse
Printing process/ Printing machine:	unprinted
Printing ink/toner:	Hot-stamping foil removed after application of the aluminum layer, not in the final product, unprinted metal layer

3. Total result

The total score is 100 points. The deinkability is rated "good".

These results confirm that the samples tested are good deinkable. To qualify for an ecolabel, full details of the respective sample are required.

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Recycling/Composting

Certification gained from by DIN CERTO: DIN EN 13432.

With this hot stamped recyclable papers and cardboard that have been decorated with our surface finish can easily be composted and returned to the natural cycle.

Max 1% of overall mass proportion

KURZ

Grammage / g/m² / percentage of coverage / %	100	125	150	175	200	215	230	245	265	290	305	325	350	375	400	425	450	500	600
0	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
5	0,12%	0,10%	0,08%	0,07%	0,06%	0,06%	0,05%	0,05%	0,05%	0,04%	0,04%	0,04%	0,03%	0,03%	0,03%	0,03%	0,03%	0,03%	0,02%
10	0,24%	0,19%	0,16%	0,14%	0,12%	0,11%	0,10%	0,10%	0,09%	0,08%	0,08%	0,07%	0,07%	0,06%	0,06%	0,06%	0,05%	0,05%	0,04%
15	0,36%	0,29%	0,24%	0,21%	0,18%	0,17%	0,16%	0,15%	0,14%	0,12%	0,12%	0,11%	0,10%	0,10%	0,09%	0,09%	0,08%	0,07%	0,06%
20	0,48%	0,38%	0,32%	0,27%	0,24%	0,22%	0,21%	0,20%	0,18%	0,17%	0,16%	0,15%	0,14%	0,13%	0,12%	0,11%	0,11%	0,10%	0,08%
25	0,60%	0,48%	0,40%	0,34%	0,30%	0,28%	0,26%	0,24%	0,23%	0,21%	0,20%	0,18%	0,17%	0,16%	0,15%	0,14%	0,13%	0,12%	0,10%
30	0,71%	0,57%	0,48%	0,41%	0,36%	0,33%	0,31%	0,29%	0,27%	0,25%	0,24%	0,22%	0,21%	0,19%	0,18%	0,17%	0,16%	0,14%	0,12%
35	0,83%	0,67%	0,56%	0,48%	0,42%	0,39%	0,36%	0,34%	0,32%	0,29%	0,27%	0,26%	0,24%	0,22%	0,21%	0,20%	0,19%	0,17%	0,14%
40	0,95%	0,76%	0,64%	0,55%	0,48%	0,44%	0,42%	0,39%	0,36%	0,33%	0,31%	0,29%	0,27%	0,26%	0,24%	0,23%	0,21%	0,19%	0,16%
45	1,07%	0,86%	0,71%	0,61%	0,54%	0,50%	0,47%	0,44%	0,41%	0,37%	0,35%	0,33%	0,31%	0,29%	0,27%	0,25%	0,24%	0,22%	0,18%
50	1,19%	0,95%	0,79%	0,68%	0,60%	0,56%	0,52%	0,49%	0,45%	0,41%	0,39%	0,37%	0,34%	0,32%	0,30%	0,28%	0,27%	0,24%	0,20%
55	1,30%	1,04%	0,87%	0,75%	0,66%	0,61%	0,57%	0,54%	0,50%	0,45%	0,43%	0,40%	0,38%	0,35%	0,33%	0,31%	0,29%	0,26%	0,22%
60	1,42%	1,14%	0,95%	0,82%	0,71%	0,67%	0,62%	0,58%	0,54%	0,49%	0,47%	0,44%	0,41%	0,38%	0,36%	0,34%	0,32%	0,29%	0,24%
65	1,54%	1,23%	1,03%	0,88%	0,77%	0,72%	0,67%	0,63%	0,59%	0,54%	0,51%	0,48%	0,44%	0,41%	0,39%	0,37%	0,35%	0,31%	0,26%
70	1,65%	1,33%	1,11%	0,95%	0,83%	0,78%	0,73%	0,68%	0,63%	0,58%	0,55%	0,51%	0,48%	0,45%	0,42%	0,39%	0,37%	0,33%	0,28%
75	1,77%	1,42%	1,19%	1,02%	0,89%	0,83%	0,78%	0,73%	0,67%	0,62%	0,59%	0,55%	0,51%	0,48%	0,45%	0,42%	0,40%	0,36%	0,30%
80	1,88%	1,51%	1,26%	1,08%	0,95%	0,89%	0,83%	0,78%	0,72%	0,66%	0,63%	0,59%	0,55%	0,51%	0,48%	0,45%	0,42%	0,38%	0,32%
85	2,00%	1,61%	1,34%	1,15%	1,01%	0,94%	0,88%	0,83%	0,76%	0,70%	0,66%	0,62%	0,58%	0,54%	0,51%	0,48%	0,45%	0,41%	0,34%
90	2,11%	1,70%	1,42%	1,22%	1,07%	0,99%	0,93%	0,87%	0,81%	0,74%	0,70%	0,66%	0,61%	0,57%	0,54%	0,51%	0,48%	0,43%	0,36%
95	2,23%	1,79%	1,50%	1,29%	1,13%	1,05%	0,98%	0,92%	0,85%	0,78%	0,74%	0,70%	0,65%	0,60%	0,57%	0,53%	0,50%	0,45%	0,38%
100	2,34%	1,88%	1,57%	1,35%	1,19%	1,10%	1,03%	0,97%	0,90%	0,82%	0,78%	0,73%	0,68%	0,64%	0,60%	0,56%	0,53%	0,48%	0,40%

Basis of calculation: Luxor® MTS 220; weight applied 2.4 g / m²

DIN CERTCO
Gesellschaft für Konformitätsbewertung mbH

CERTIFICATE

Certificate holder	Leonhard Kurz Stiftung & Co. KG Schwabacher Str. 482 90763 Fürth GERMANY
Product	Additives according to DIN EN 13432
Type, Model	ALUFIN® MTS, LUXOR® MTS 220, LUXOR® MTS 429N, LUXOR® MTS 232 LUXOR® MTS 385,LUXOR® MTS 338,LUXOR® MTS 376,LUXOR® MTS 334 LUXOR® MTS 420, LUXOR® MTS 349, LUXOR® MTS 307
Testing basis	DIN EN 13432:2000-12 Certification Scheme Additives harmless to the composting process (2018-03)
Material	Maximal usable amount in product: depends on used printing ink.
Mark of conformity	ADDITIVE EN 13432 DIN Geprüft
Registration No.	820039
Valid until	2024-09-30
Right of use	This certificate entitles the holder to use the mark of conformity shown above in conjunction with the specified registration number. See annex for further information.

DAkkS Deutsche Akkreditierungsstelle D-ZE-13125-01-00

2021-01-26
Dipl.-Phys. Carlo Saiser
Head of Certification Body

DIN

DIN CERTCO Gesellschaft für Konformitätsbewertung mbH · Alboinstraße 56 · D-12103 Berlin · www.dincertco.de

Sorting: Study by SUEZ

1.Standard tube (reference)	2.Tube with Inline foiling Technology (front & back) – coverage 70%

FINAL RESULT:

- **88%** of standard tube (reference)
  87% of tube with Inline foiling technology covering 70%
  … are sorted into the **rigid PE stream.**

01.

Is the end product recyclable?

Products with hot stamping & cold transfer are

- SORTING
- RECYCLABLE
- DEINKABLE
- COMPOSTABLE

01.

Are embellishment and sustainability in conflict?

No! – not with KURZ Products

- No plastic on the packaging
- Deinkable and recyclable packages
- Extremely thin aluminium layers
- PET Carrier remains in the industrial waste
- Worldwide standards, which exceeds governmental regulations

01. Our Mission for sustainability

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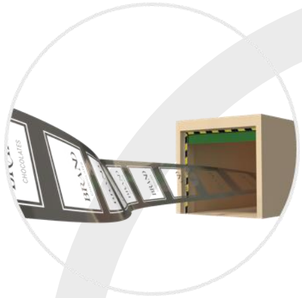

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with sustainable finishing in print & packaging

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Sustainable production as an **international benchmark.**

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- ✓ Solvent recovery
- ✓ Significant share of green energy supply
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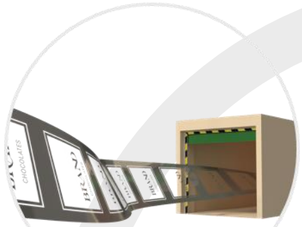

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02. Closing the loop

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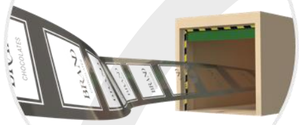


BE A GREEN LEADER
with sustainable finishing in print & packaging

YESTERDAY

- PET remains in the industrial waste cycle
- PET as high quality substitute fuel for natural gas or oil
- Landfill as an exception

TODAY

Development of a complete process for recycling KURZ transfer carrier waste

02. Closing the loop

TODAY

We collect used PET backing material.

The PET backing material is fed into the KURZ recycling process.

The recyclate properties are entirely re-engineered

Recycled PET is transformed into a high-quality, injection-mouldable material…

…for high-quality products with a wide range of properties.

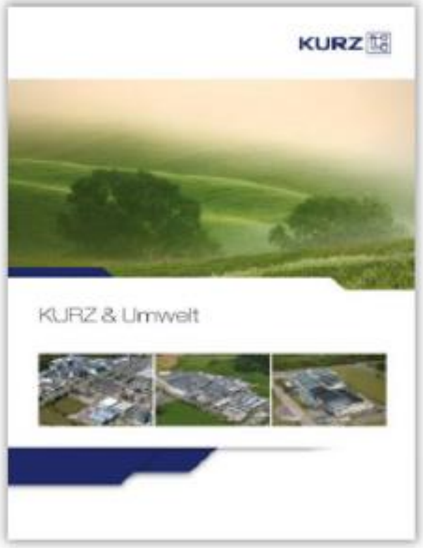
Sustainability is a Journey …… Not a destination!

DIG DEEPER WITH US...
QUESTIONS? CLARIFICATIONS?

For more information:

https://www.kurz-graphics.com/sustainability/

LEONHARD KURZ
YouTube



be a green leader
KURZ

Christophe Dujardin
Business Development Manager
Sustainability/ Cold Transfer

I'd love to help!
Christophe.Dujardin@kurz.de