



Tro FILMS

Germany

A new tactile film from TroFilms



Tro ROUGH

THE ROUGH TOUCH

Available in
three different
qualities.



THE ROUGH TOUCH

WET




NEW!

- ✓ sand structure
- ✓ scratch-proof
- ✓ good tear resistance
- ✓ odorless
- ✓ hot foil stampable*
- ✓ overcoatable*
- ✓ glueable*




www.trofilms.de

Black 80% 40% 20% 10% 5% 0% 100% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%



THE ROUGH TOUCH

THERMAL



NEW!

- ✓ sand structure
- ✓ scratch-proof
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- ✓ glueable*



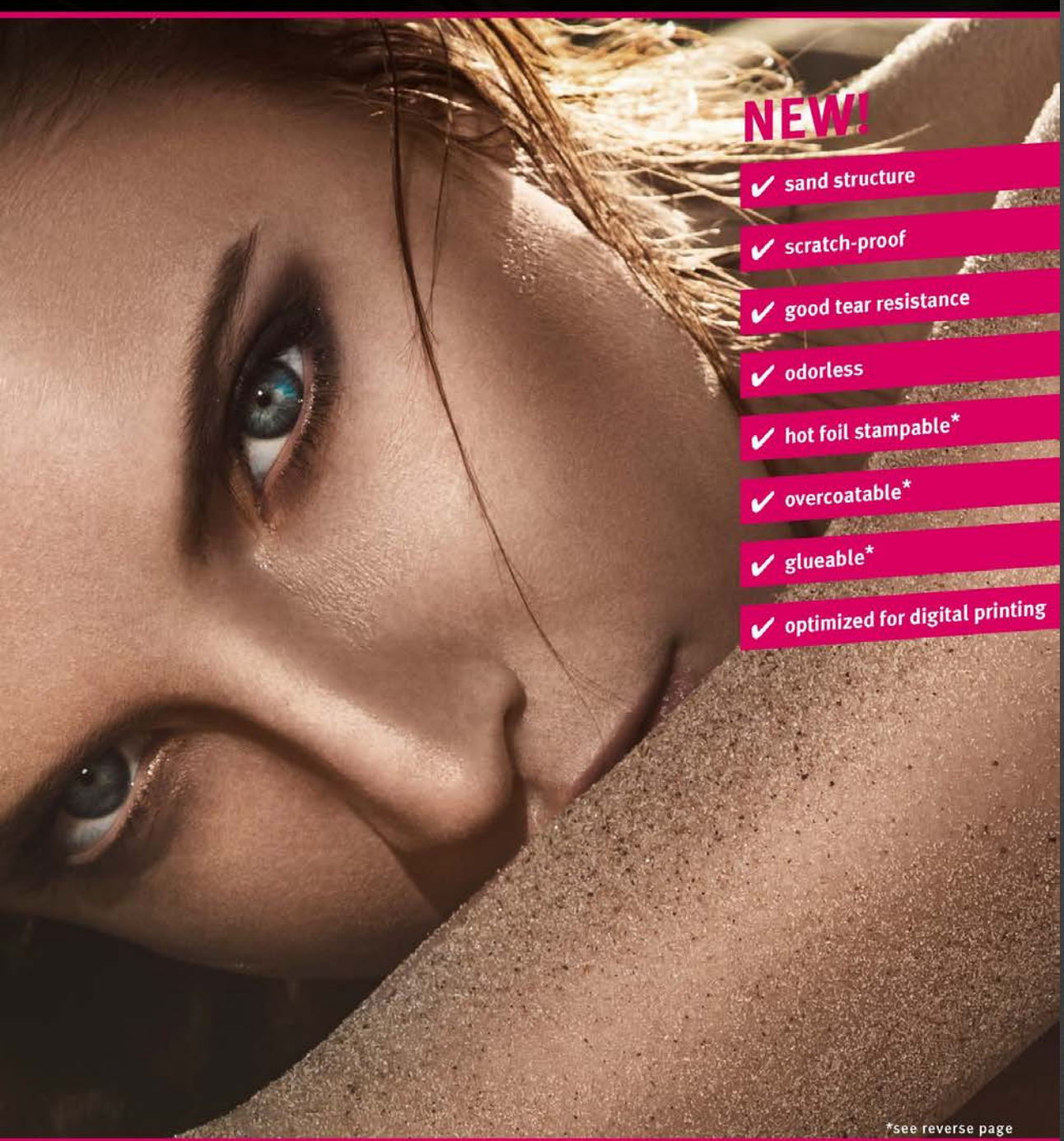
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THE ROUGH TOUCH

DIGITAL



NEW!

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- ✓ optimized for digital printing



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Tro ROUGH

WET

TroROUGH WET

The TroFilms TroROUGH WET is an acrylic coated, sand structured, biaxially oriented polypropylene foil; the thickness of the film is 45 µm ($\pm 5\%$); the foil can be used for materials of various kinds.

It is suitable for lamination with all commercial adhesives (water based, solvent free, solvent based).

Properties of the film

- scratch-proof
- good tear resistance
- odourless
- glueability, printability and hot stamping applications possible in principle, but the structure may make conditions more difficult and pre-tests are required. Overcoating is possible in screen printing and digital printing. A minimum of 12 g/m² coating is needed to cover the uneven surface.



THE ROUGH TOUCH

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TroROUGH WET

Quality

Each master roll is tested and logged for gloss, surface energy, bonding and coating homogeneity before, during and after the coating process.

The reels have maximum winding and cutting quality. At the beginning of each production process (change of varnish or film batch), a few meters get laminated and will be reviewed by our quality department.

Size and packaging

The films are available in widths from 160 mm to 1,440 mm. Each roll is wound on a 3" (76.2 mm) core. For each splice, we deliver 50 extra service meters. The coating is on the outside of the roll.



THE ROUGH TOUCH

TroROUGH
WET

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TroROUGH WET

TYPE	TroROUGH WET
THICKNESS *	45 $\mu\text{m} \pm 5 \%$
WEIGHT *	$\approx 17.87 \text{ g/m}^2$
YIELD *	$\approx 55.96 \text{ m}^2/\text{kg}$
FREE SURFACE ENERGY	min. 40.0 mN/m **
GLOSS 60° *	≈ 4.0 ***

* Values are subject to change.

** Cannot be measured exactly due to uneven structure.

*** The gloss points are for orientation only due to the uneven structure.

THE ROUGH TOUCH



NEW!

✓ sand structure

✓ scratch-proof

✓ good tear resistance

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Tro ROUGH

THERMAL

TroROUGH THERMAL

The TroFilms TroROUGH THERMAL is an acrylic coated, sand structured, biaxially oriented polypropylene foil; the backside is coated with EVA Hotmelt. The EVA needs some time for optimal curing. The time for curing depends on the used base material and should be tested before further processing. The thickness of the film is 50 µm ($\pm 5\%$); the foil can be used for materials of various kinds. The optimum processing temperature of the laminating roll is between 100 °C and 115 °C.

Properties of the film

- scratch-proof
- good tear resistance
- odourless
- glueability, printability and hot stamping applications possible in principle, but the structure may make conditions more difficult and pre-tests are required. Overcoating is possible in screen printing and digital printing. A minimum of 12 g/m² coating is needed to cover the uneven surface.



THE ROUGH TOUCH

TroROUGH THERMAL

NEW!

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- ✓ scratch-proof
- ✓ good tear resistance
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TroROUGH THERMAL

Quality

Each master roll is tested and logged for gloss, surface energy, bonding and coating homogeneity before, during and after the coating process. The reels have maximum winding and cutting quality. At the beginning of each production process (change of varnish or film batch), a few meters get laminated and will be reviewed by our quality department.

Size and packaging

The films are available in widths from 160 mm to 1,440 mm. Each roll is wound on a 3" (76.2 mm) core. For each splice, we deliver 50 extra service meters. The coating is on the outside of the roll.



THE ROUGH TOUCH

TroROUGH THERMAL

NEW!

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TroROUGH THERMAL

TYPE	TroROUGH THERMAL
THICKNESS *	50 $\mu\text{m} \pm 5 \%$
WEIGHT *	$\approx 29.53 \text{ g/m}^2$
YIELD *	$\approx 33.86 \text{ m}^2/\text{kg}$
FREE SURFACE ENERGY	min. 40.0 mN/m **
GLOSS 60° *	≈ 8.0 ***

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TroROUGH
THERMAL

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Tro ROUGH

DIGITAL

TroROUGH DIGITAL

The TroFilms TroROUGH DIGITAL is an acrylic coated, sand structured, biaxially oriented polypropylene foil; the backside is coated with EVA Hotmelt. The EVA needs some time for optimal curing. The time for curing depends on the used base material and should be tested before further processing. The thickness of the film is 50 µm ($\pm 5\%$); the foil can be used for materials of various kinds. The optimum processing temperature of the laminating roll is between 100 °C and 115 °C.

Properties of the film

- scratch-proof
- good tear resistance
- odourless
- glueability, printability and hot stamping applications possible in principle, but the structure may make conditions more difficult and pre-tests are required. Overcoating is possible in screen printing and digital printing. A minimum of 12 g/m² coating is needed to cover the uneven surface.
- optimum bonding to substrate for digital printing



The advertisement features a close-up of a person's face with a textured, sand-like surface applied to their skin. The TroFILMS logo is in the top right corner. The title 'THE ROUGH TOUCH' is prominently displayed in the upper left. A 'NEW!' banner is on the right. A list of features is presented in pink boxes on the right side.

TroROUGH DIGITAL

THE ROUGH TOUCH

NEW!

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- ✓ glueable*
- ✓ optimized for digital printing

TroROUGH DIGITAL

Quality

Each master roll is tested and logged for gloss, surface energy, bonding and coating homogeneity before, during and after the coating process. The reels have maximum winding and cutting quality. At the beginning of each production process (change of varnish or film batch), a few meters get laminated and will be reviewed by our quality department.

Size and packaging

The films are available in the standard widths 315 mm, 325 mm, 350 mm, 445 mm, 450 mm and 495 mm.

Special widths can only be produced after consultation. Each roll is wound on a 3" (76.2 mm) core and has at least 1,500 running meters on it. For each splice, we deliver 50 extra service meters. The coating is on the outside of the roll; EVA is on the inside.



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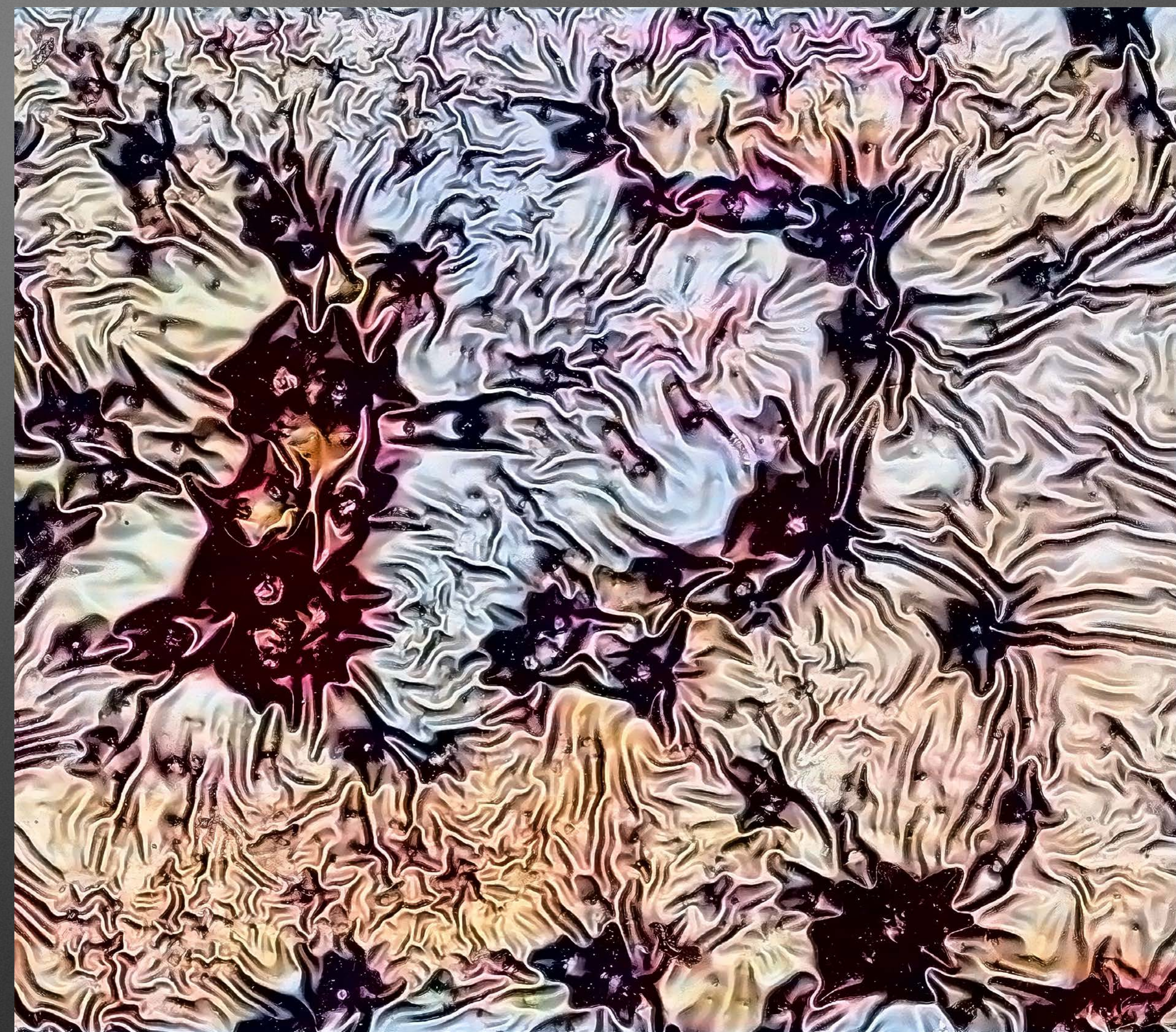
A deeper view
through our 3D microscope



TroROUGH under the 3D microscope

Under the 3D microscope, you can see very clearly the sand grain-like effect materials as well as the deliberately created distortions of the scratch-resistant protective lacquer used.

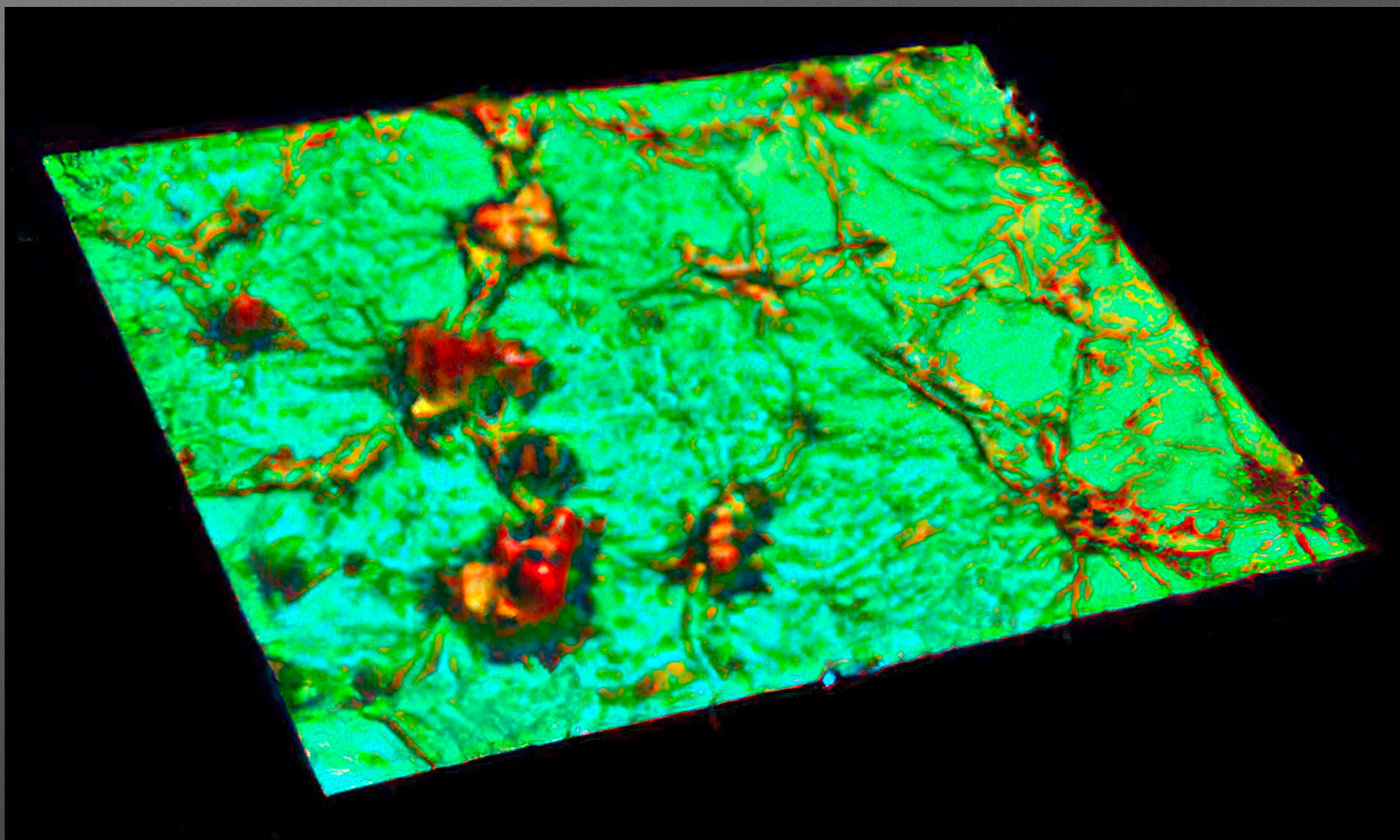
The correct coordination of grain size, number of grains and the chaotic Gaussian distribution in the interplay of coating quality, coating quantity and the resulting film thickness determine the feel of the sand effect as well as the processing quality of the film, but also its resistance to scratching and abrasion.



TroROUGH under the 3D microscope

All these parameters are continuously monitored during our film production and kept constant within the smallest possible tolerances as part of our certified quality assurance.

This means we can guarantee consistent film quality even across different production batches.





Tro ROUGH

THE ROUGH TOUCH

Further technical characteristics:

Further technical characteristics:

1. Maximum delivery lengths of jumbo rolls:
6,000 running meters for THERMAL and DIGITAL film; 9,000 running meters for WET film.
2. There may be slight differences in roughness due to production technology, as the accuracy of the grain size cross-distribution of the texturing agent may vary.
3. If a product is finished on both sides, it is important to consider the production sequence. For example, if the reverse side of a product that is finished with TroROUGH on the front side is finished with a sensitive film or coating on the reverse side (e.g., OPP matt film, TroTEMPTATION film or a sensitive matt or high gloss coating) – or the reverse side is unfinished and has a very sensitive paper coating (cast-coated or matt-coated with a high chalk percentage) – the reverse side may be damaged during stacking, repositioning, cutting or other operations downstream of lamination.
4. In principle, spot varnishing of the TroROUGH is possible, but due to the grain sizes required for the strong tactile effect, a very high-volume coating application must be used to create a homogeneous lacquer surface. Screen printing (with coarse screens) or digital equivalents in combination with high-build UV relief varnishes are recommended.



Tro ROUGH

THE ROUGH TOUCH

Where to use such a fascinating film?

Mr. Sandman, bring me a dream...

1. Due to the three different film qualities and the high performance of the new TroROUGH, the application possibilities of this film are almost unlimited.
2. It can be used on paper/cardboard for commercial printing, label printing and packaging printing, as well as on plastics and in flexible packaging.
3. TroROUGH can be used to create strong tactile, natural-looking effects and emotions. But it can also be used, in flexible packaging for example, to create surfaces with a natural touch and feel. For example, no-label labels or stand-up pouch packaging can be made to feel like natural, uncoated paper, or like currently trendy grass paper and Silphie cardboard through the skillful use of TroROUGH and a matching design.
4. And we are sure you will find many more fascinating applications for this brand-new film once you have felt and tested it.
5. **We are already looking forward to your feedback and samples with the new TroROUGH.**

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