

# HOSTAPHAN™

**The Innovative Polyester Film for  
Security and Banknote Applications**



Mitsubishi Polyester Film GmbH

# Mitsubishi Chemical Group

With a vast network of affiliate companies, the Mitsubishi Chemical Group has both the organisation and infrastructure to realise local and global synergies. Over 70,000 employees work in 30 different countries to deliver innovative solutions for customer applications. Thanks to the intensified collaboration and coordination on a regional and global level, Mitsubishi Chemical Group companies are uniquely positioned to meet the changing demands of key industries including automotive, aerospace, medical, packaging and 3D printing.

As a global leader and one of the largest suppliers of biaxially oriented polyester film (polyethylene terephthalate / PET), the Mitsubishi Polyester Film Group is both, a supplier of choice for a wide range of innovative high-quality

customized HOSTAPHAN™ boPET films as well as for customized product solutions. In joint research activities we develop individual solutions together with our customers.

Our technological competence is regionally anchored and intensified through our global company-group. Along with our modern production lines, with co-extrusion and inline coating capabilities integrated in the process, it allows us to offer a broad range of value added performance options for our HOSTAPHAN™ products.

We make the right PET film. For the needs of today and the aspirations of tomorrow.



## KAITEKI - Our Philosophy

At Mitsubishi Chemical Group, sustainability is more than a concept - it's a way of life. Through our focus on improving the health and well-being of people and the planet, we create innovative sustainable solutions globally. The sustainable well-being of people and our planet Earth - we call it **KAITEKI**.

We believe our role in the chemical industry is to be partners in innovation, developing material solutions that support a circular economy and sustainability of the earth and society. This overarching **KAITEKI** Philosophy is our guiding principle as we use LESS to have MORE.

# HOSTAPHAN™

## The Ideal Material for Security Applications

Counterfeiting of banknotes and product piracy lead to the development of sophisticated security features. Banknote threads, hologram stripes and patches are incorporated in virtually every denomination not only to increase the hurdles for forgers but also to add optically attractive elements to improve public perception. Holograms are widely used to prove the authenticity of products, passports, cards and tickets. They also provide a design feature for higher value packaging and product differentiation. Mitsubishi Polyester Film is a long-term supplier for these applications and provides a wide range of HOSTAPHAN™ BOPET films for the production of security features. The high mechanical strength of HOSTAPHAN™ films fulfils a requirement for security threads. In the manufacturing process itself, our HOSTAPHAN™ films serve as process and carrier films for embossing, ink and metal layers that make up banknotes.

HOSTAPHANTM™ is qualified in many security applications and offers the following advantages:

- High mechanical strength
- Durability
- Consistent high quality
- Good ink adhesion
- Excellent printability

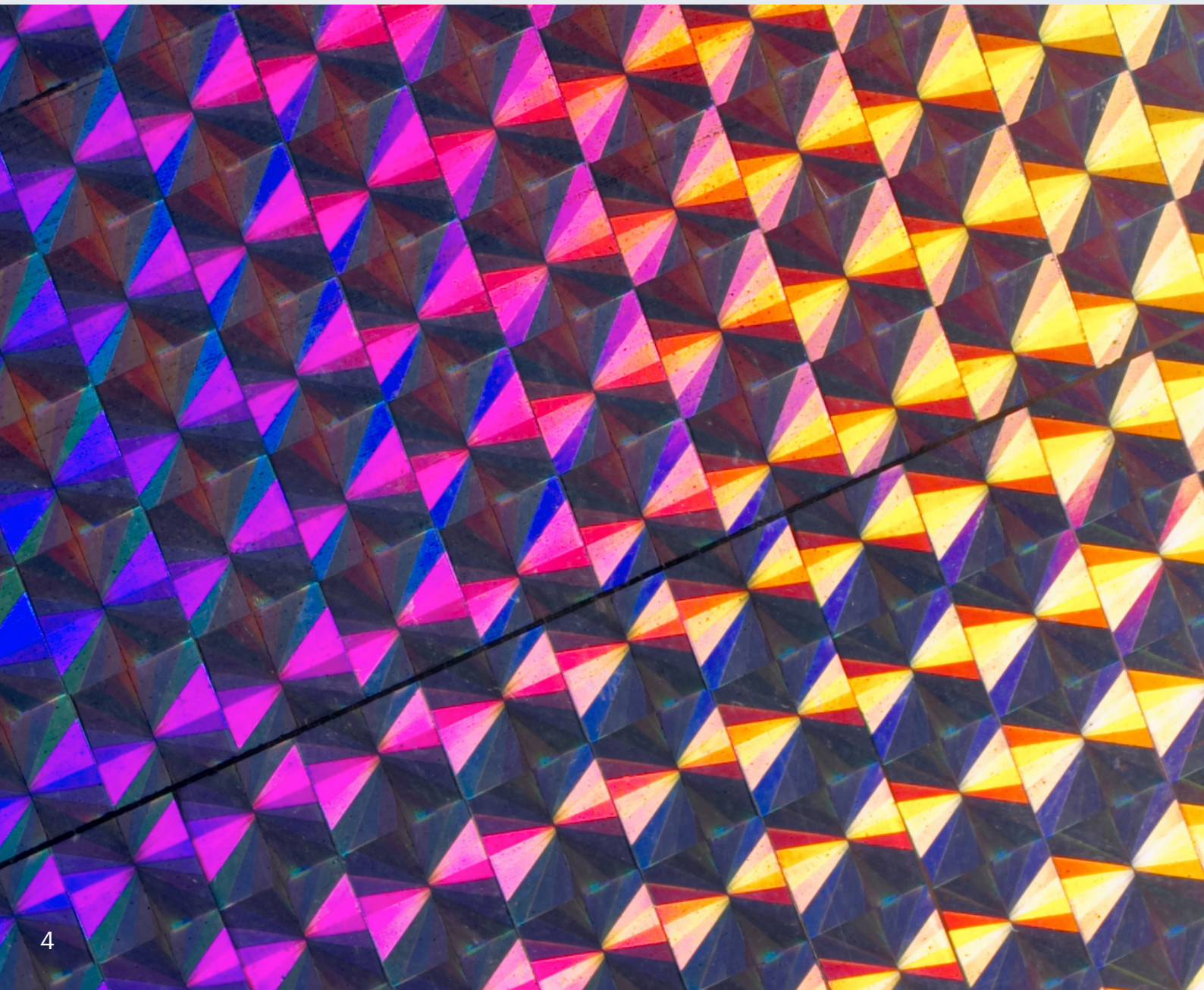


## HOSTAPHAN™ Films for Banknote Threads

- Thin films of 6, 8, 10, 12, 15, 16 and 19 µm for thread structures with one PET base film or sandwich structures with 2 PET films
- Extra high quality standards regarding film profile and roll formation
- Adhesion promoting coatings for metallisation, inks and adhesives available
- Excellent chemical stability

## HOSTAPHAN™ Films for Hologram Production

- Films in 12, 15, 16, 19, 23, 30 and 36 µm as carrier for hologram production
- High transparency and gloss
- Extra smooth surface available to minimize distortion and black spots
- Modified thermal shrinkage for perfect registration
- High thermal stability

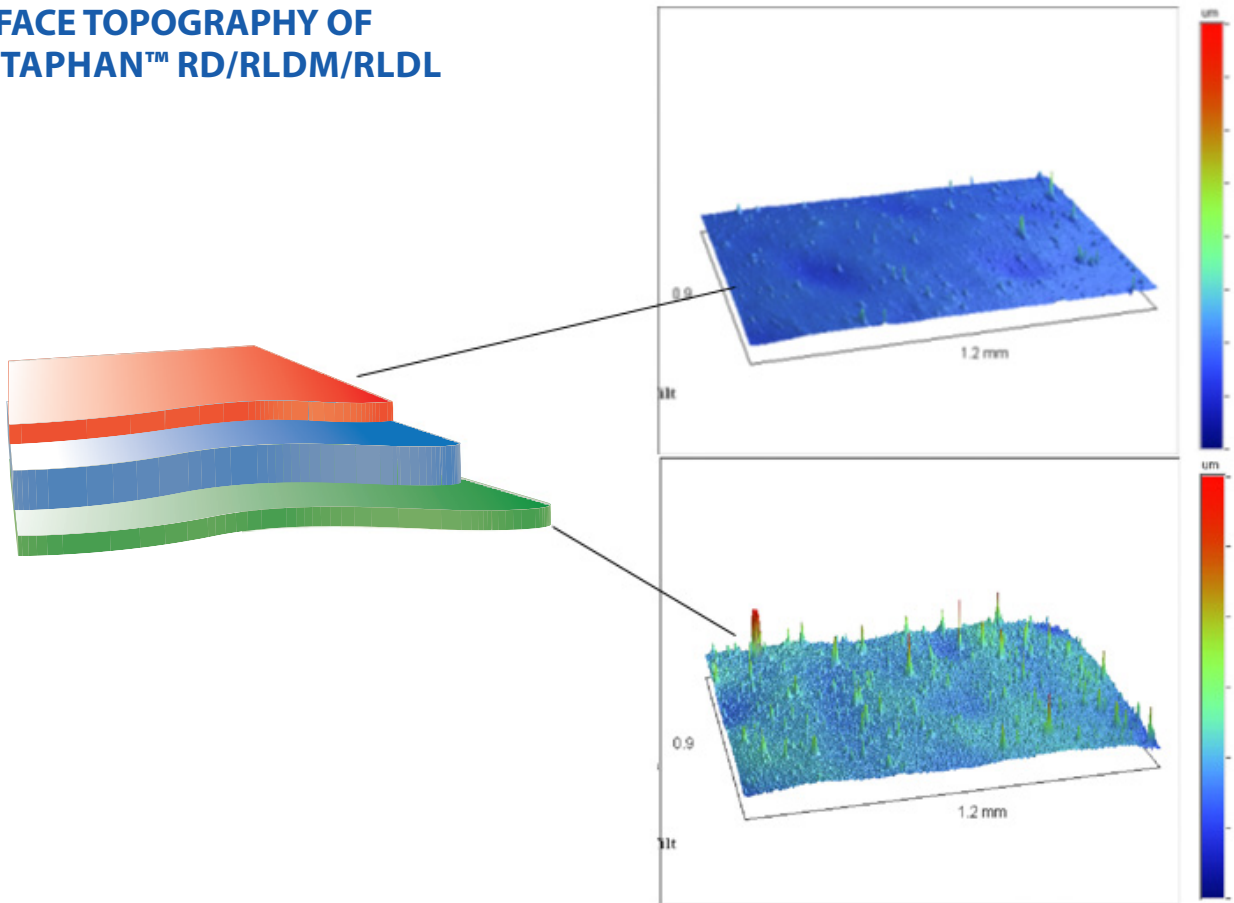


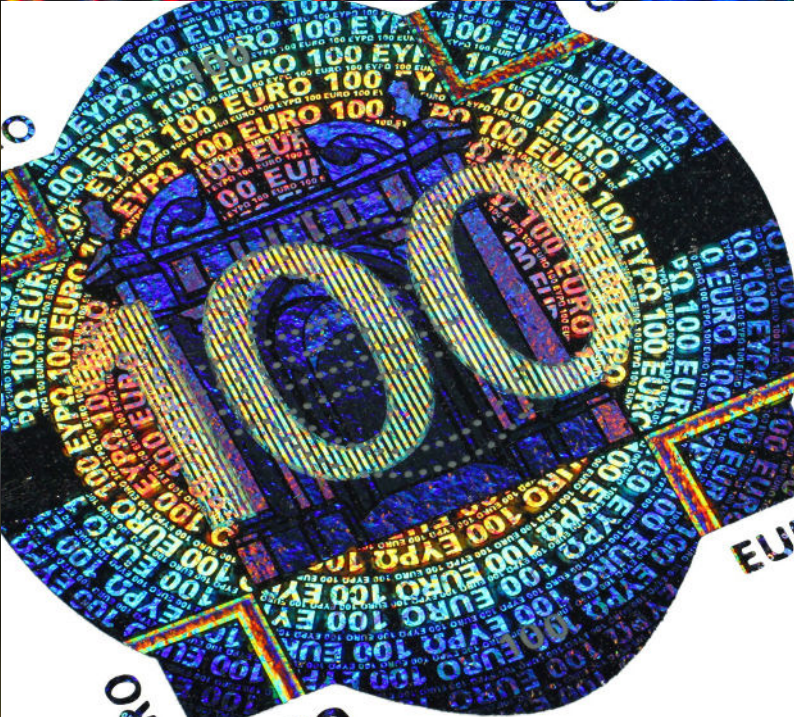
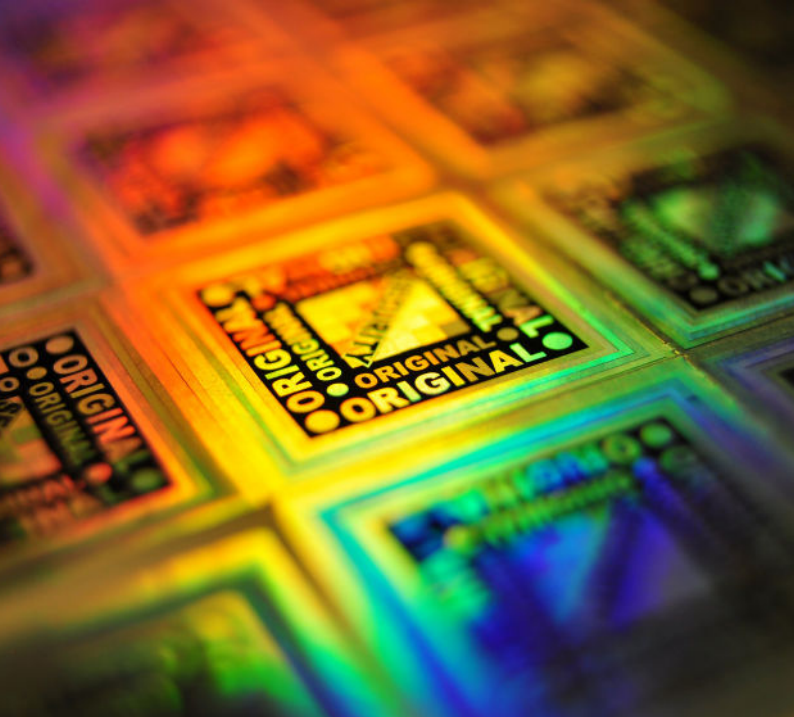
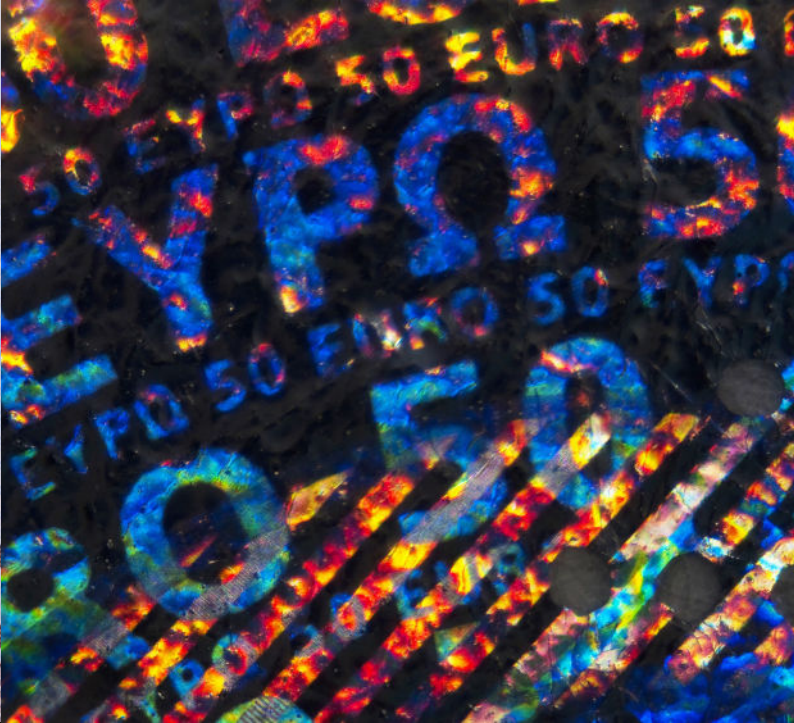
## Innovative Film for Security Applications

Product Type	Description	Thickness in $\mu\text{m}$
HOSTAPHAN™ RNK	Film with high transparency and gloss	6, 8, 10, 12, 15, 19, 23, 36
HOSTAPHAN™ RNKR	Optimized UV-transmission	6, 8, 10, 12, 15, 19, 23, 36
HOSTAPHAN™ RNK 2CSR	Film with adhesion promoting coating	12, 19, 23, 36, 50, 75
HOSTAPHAN™ RNK 2DEG	Film with adhesion coating for metallization	10, 12, 30, 36
HOSTAPHAN™ RLKF 2DEG, 2CSR, 2600	Films with adhesion coating and modified shrinkage properties	8, 10, 12
HOSTAPHAN™ RPK	Film with modified shrinkage properties	12, 15
HOSTAPHAN™ RCB CT02I	Film with adhesion coating for UV-and solvent based inks, coatings and adhesives	12, 15
HOSTAPHAN™ RCB/RPK CT02B	Both sides CT02 coated film	12, 15, 19
HOSTAPHAN™ WDW/WDW CSRE	White films	12, 23, 36
HOSTAPHAN™ PCR RN3C	RNK film with 30% PCR	6, 12, 16, 19
HOSTAPHAN™ PCR DM3C	RLDM film with 30% PCR	19
HOSTAPHAN™ RD	Film for holograms with one extra smooth surface	12, 23, 36
HOSTAPHAN™ RLDM/RLDL	Films for holograms with modified shrinkage properties	16, 19, 23
HOSTAPHAN™ PCR 7RD	RD film with 70% PCR	23
HOSTAPHAN™ PCR 7RN CT02I	RCB CT02I film with 70% PCR	12, 15

For detailed technical information you can obtain a special technical data sheet for each film grade.

# SURFACE TOPOGRAPHY OF HOSTAPHAN™ RD/RLDM/RLDL





## Your Partner in Innovation

Partnering with Mitsubishi Chemical Group ensures working with a supplier who has a global network of researchers on the cutting edge of PET innovation. Whether your challenge is product or service related, we commit to bringing you new ideas to discover the next ground-breaking solution for your business.



## Our Global R&D Team

- Dedicated R&D Team for your development needs with collaboration globally across our R&D Teams
- Pilot line capability available for small scale production and initial new product developments

Please note that when our HOSTAPHAN™ boPET films are combined with other materials or articles, the performance of the final product depends on all components and the geometry. Rigorous qualification and safety testing of the final product is always necessary, as unexpected interactions could occur.

This brochure reflects our state of knowledge at the time this was prepared. The purpose is to provide an overview of the characteristics of our products and their potential uses. It neither guarantees specific properties nor the suitability of products in specific applications. The user must observe industrial property rights, such as patents or trademarks. The quality of our products is covered by the terms of the General Conditions of Sale of Mitsubishi Polyester Film GmbH.

## Contact one of our HOSTAPHAN™ Film experts

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