

HOSTAPHAN™

Flame Reduced and Flame Retardant Protective Films



MITSUBISHI
CHEMICAL
GROUP

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.

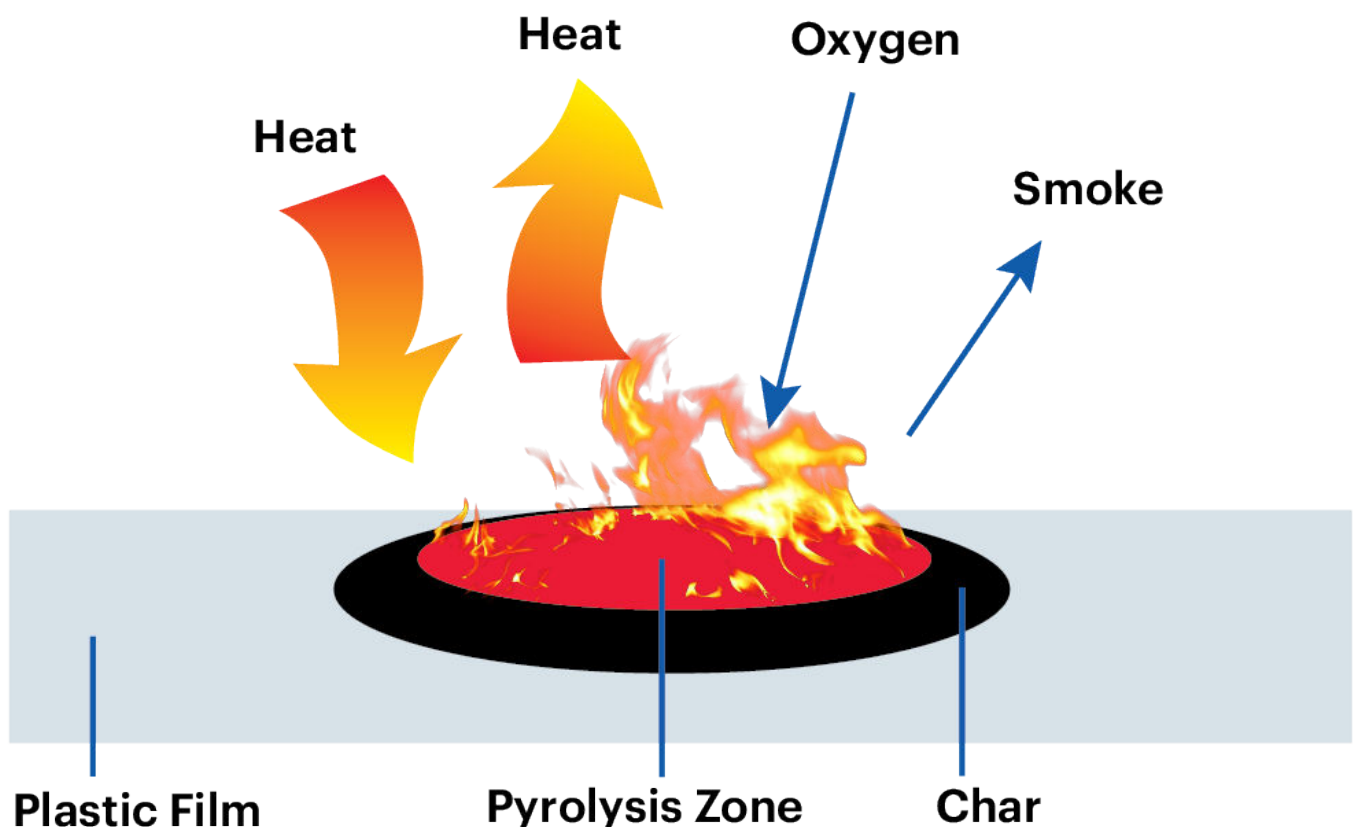
Flame Reduced and Flame Retardant HOSTAPHAN™ Films

Safety requirements in many applications dictate that low flammable materials be used. Standard plastics do not meet these requirements. The flame retardant “HOSTAPHAN™ Protective Films” from Mitsubishi Polyester Film GmbH are biaxially oriented films made from polyethylene terephthalate (PET). They contain an efficient, halogen-free flame retardant. While retaining the excellent product properties of our polyester films, such as high mechanical strength and dimensional stability at ambient temperatures, these films also meet the requirements of different fire classes.

Basic Principles for Burning Process of Plastics

Heat generates volatile flammable decomposition products (Pyrolysis)

- Decomposition products react with oxygen → flames
- Flames generate heat which accelerates fire → self-excitation
- Halogen-free flame retardant agent in HOSTAPHAN™ flame reduced films increases char generation → fire goes out



ENVIRONMENTALLY FRIENDLY:

THE FLAME RETARDANT USED CONTAINS NO
HALOGENS SUCH AS CHLORINE OR BROMINE!

Applications for Flame Reduced and Flame Retardant HOSTAPHAN™ Films

- Electrical Insulation
- Panels for trains, boats and airplanes
- Window blinds
- Tapes
- Labels
- Textiles
- Buildings & Constructions

Advantages of our Flame Reduced and Flame Retardant HOSTAPHAN™ Films:

- Outstanding flame protective properties
- Halogen-free
- High tensile strength and tear resistance
- Excellent electrical insulation properties



Flame Reduced HOSTAPHAN™ Films

HOSTAPHAN™ WUF – White film with UV-protection and improved fire behavior

HOSTAPHAN™ WUF is a white film, which offers besides its good weathering resistance an improved fire behavior compared with a white standard PET film.

HOSTAPHAN™ MUFK – Flame reduced matte film with UV-protection

HOSTAPHAN™ MUFK is a matte film, which offers besides its good weathering resistance an improved fire behavior compared with a matte standard PET film.

HOSTAPHAN™ BFO – Black film with improved fire behavior

HOSTAPHAN™ BFO is a black film with a high optical density, which offers an improved fire behavior compared with a black standard PET film.



Flame Retardant HOSTAPHAN™ Films

HOSTAPHAN™ RUF – Flame retardant film with UV-protection

HOSTAPHAN™ RUF is a high transparent glossy and UV-stable film with outstanding flame protective properties.

- Building material class B1 and B2 (DIN 4102-1)
- Rail transport (DIN 5510)
 - Fire class S 4
 - Smoke development SR 2
 - Drip rating ST 2
- Air transport (FAR/JAR 25.853)
 - Smoke density according to FAR 25.853 (d)
 - Smoke density according to ABD 0031
 - Toxicity according to ABD 0031
 - Flammability/Vertical test (12s) according to App. F
- Automotive use according to FMVSS 302 (DIN 75200)

HOSTAPHAN™ GF – Flame retardant glass clear film

HOSTAPHAN™ GF is a glass clear glossy film with outstanding flame protective properties.

HOSTAPHAN™ RNF – Extremely flame retardant film

HOSTAPHAN™ RNF is a high transparent glossy and halogen-free film, which is UL certified UL94 VTM-O.

HOSTAPHAN™ WF – Extremely flame retardant white film

HOSTAPHAN™ WF is a white halogen-free film, which fulfills UL94 VTM-O in internal tests.



Flame Reduced and Flame Retardant HOSTAPHAN™ Film Types

Product Type	Description	Thickness in μm
Flame Reduced Film		
HOSTAPHAN™ WUF	White film with UV protection and improved fire behavior	30
HOSTAPHAN™ MUFK	Flame reduced matte film with UV-protection	15
HOSTAPHAN™ BFO	Black film with improved fire behavior	25
Flame Retardant Film		
HOSTAPHAN™ RUF	Flame retardant film with UV protection	19
HOSTAPHAN™ GF	Flame retardant glass clear film	100
HOSTAPHAN™ RNF	Extremely flame retardant film	175
HOSTAPHAN™ WF	Extremely flame retardant white film	50



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.

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