

Press Release

TPEs find a niche in medical PPEs

Kuala Lumpur, August 2020

Page 1 of 5

KRAIBURG TPE Technology
(M) Sdn Bhd
Lot 1839 Jalan KPB 6
Kawasan Perindustrian Balakong
43300 Seri Kembangan, Selangor,
Malaysia

Phone +60 3 9545 6393

Info-asia@kraiburg-tpe.com
www.kraiburg-tpe.com

TPEs find a niche in medical PPEs

KRAIBURG TPE, a recognized global leader in superior thermoplastic elastomer (TPE) compounds, offers a range of THERMOLAST® M compounds for personal protective equipment (PPE) applications in the medical sector.

Given the rise of diseases like Covid-19, the role of Personal Protective Equipment (PPE) in protecting the healthcare workforce has never been more important.

PPEs provide protection against cross-infections and pathogenic transmissions and have the potential to block infections originating in blood, body fluids or respiratory secretions.

Due to the levels of exposure risks in hospitals, it is required that PPEs, including disposable surgical masks and gowns, face shields, goggles, glasses, and shoe covers, are safely designed and manufactured. PPEs also have to be durable, comfortable to wear, and to provide adequate barrier against contact with body fluids and respiratory secretions; plus able to withstand the rigors of patient care for healthcare workers and medical front liners.

Innovative materials such as thermoplastic elastomers (TPEs) respond to the functional issues related to PPE designs, owing to their versatility and durability. The advantages of mechanical properties coupled with biocompatibility, make TPEs well-suited for medical applications in parts sealing, strips, handles, and more.

KRAIBURG TPE, a global TPE manufacturer of a wide range of thermoplastic elastomer products and custom solutions for multiple industries, offers custom-

Media Contact

Marlen Sittner
Head of Digital Marketing
Phone: +49 8638 9810-272
marlen.sittner@kraiburg-tpe.com

Asia Pacific
Bridget Ngang
Marketing Manager Asia Pacific
Phone: +603 9545 6301
bridget.ngang@kraiburg-tpe.com

Press Release

TPEs find a niche in medical PPEs

Kuala Lumpur, August 2020

Page 2 of 5

made TPE compounds, such as the high-quality custom-engineered THERMOLAST® M materials for medical PPE applications.

Medically fit compounds

Due to the use in of the compounds in a critical sector, KRAIBURG TPE's THERMOLAST® M compounds are produced exclusively on a special medical unit.

The compounds also meet the requirements of the VDI 2017 guideline for medical-grade plastics (MGPs), issued by the Association of German Engineers (VDI), as well as the Reach and RoHS standards and Regulation (EU) No 10/2011, for use in medical applications.

The US DMF-listed compounds also conform to US CFR 21 FDA (raw material conformity), and are certified to ISO 10993-10 (Intracutaneous irritation), ISO 10993-4 (Hemolysis), USP <88> (Biological Reactivity, Class VI), ISO10993-11 (Acute systemic toxicity) and ISO 10993-5 (Cytotoxicity).

Furthermore, most KRAIBURG TPE's THERMOLAST® M compounds are sterilizable with superheated steam of 121°C or 134°C, γ-gamma ray treatment (2 x 35 kGy), β-ray (electron beam) treatment (2 x 35 kGy) and EtO gas, making them applicable in the medical sector.

In addition to the easy sterilization properties, important features of the THERMOLAST® M compounds are their excellent elasticity and soft, flexible surface.

Targeted at the medical sector, the THERMOLAST® M compounds are free of allergens such as latex, as well as avoid potential environmental pollutants such as polyvinylchloride (PVC), phthalates, and BPA (bisphenol A).

Press Release

TPEs find a niche in medical PPEs

Kuala Lumpur, August 2020

Page 3 of 5

Durability factor of compounds

The THERMOLAST® M series includes the MC/LF compounds that can be applied in breathing masks, goggles, sealing for face shields and handles of glasses to protect users against viral and bacterial contaminants.

Benefits of this series are the hardness level of 30-90 Shore A, low surface friction, abrasion and scratch resistance and the translucent color. Furthermore, the MC/LF series of compounds can be easily processed through injection molding and extrusion, with properties of adhesion to PP.

THERMOLAST® M MC/LF Series

| Compound Name | Hardness | Color | Adhesion |
|---------------|---------------|-------------|----------|
| TMxLFT | 30-90 Shore A | Translucent | PP |

Material Advantages

- US DMF listed
- Adhesion to PP
- Low surface friction
- Abrasion resistance
- Scratch resistance
- Sterilizable (autoclave 134 °C, β -/γ-radiation 2x35 kGy, EtO)
- Optimized mechanical properties
- VDI 2017
- Regulation (EU) No 10/2011
- USP <88> (Biological Reactivity, Class VI)
- US CFR 21 FDA (raw material conformity)
- US FDA CFR 21
- ISO 10993-4 (Hemolysis)
- ISO 10993-5 (Cytotoxicity)
- ISO 10993-10 (Intracutaneous irritation)
- ISO 10993-11 (Acute systemic toxicity)

All values published in this data sheet are rounded average values.

Meanwhile, the MC/AD/PA compounds in the THERMOLAST® M series are suitable for applications such as face shield head comfort pads and face mask seals that are used to protect users against infectious diseases.

Press Release

TPEs find a niche in medical PPEs

Kuala Lumpur, August 2020

Page 4 of 5

Properties of the injection moldable compound are the hardness level of 60-70 Shore A, and its adhesion with nylons, such as PA6 and PA12. Available in a natural color, it is also easily colorable in effect colors, to allow for customization in medical PPE applications.

THERMOLAST® M MC/AD/PA Series

| Compound Name | Hardness | Color | Adhesion |
|---------------|---------------|---------|------------|
| TMxAPO | 60-70 Shore A | Natural | PA6 & PA12 |

Material Advantages

- Colorable, also in effect colors
- Sterilizable (β -/ γ -radiation 2x35 kGy, EtO)
- Adhesion to PA6 and PA12
- VDI 2017
- US CFR 21 FDA (raw material conformity)
- Regulation (EU) No 10/2011
- ISO 10993-5 (Cytotoxicity)
- ISO 10993-10 (Intracutaneous irritation)

All values published in this data sheet are rounded average values.



© Copyright 2020 KRAIBURG TPE.

(Photo: © 2020 KRAIBURG TPE)

For high-resolution photography, please contact Bridget Ngang
bridget.ngang@kraiburg-tpe.com , +6 03 9545 6301).

Press Release

TPEs find a niche in medical PPEs

Kuala Lumpur, August 2020

Page 5 of 5

Follow Us on WeChat



About KRAIBURG TPE

KRAIBURG TPE (www.kraiburg-tpe.com) is a global manufacturer of thermoplastic elastomers. From its beginning in 2001 as a subsidiary of the historical KRAIBURG Group founded in 1947, KRAIBURG TPE has pioneered in TPE compounds, today being the competence leader in this industry. With production sites in Germany, the U.S., and Malaysia, the company offers a broad range of compounds for applications in the automotive, industrial, consumer, and strictly regulated medical sectors. The established THERMOLAST®, COPEC®, HIPEX®, and For Tec E® product lines are processed by injection molding or extrusion and provide numerous processing and product design advantages to manufacturers. KRAIBURG TPE features innovative capabilities as well as true global customer orientation, customized product solutions and reliable service. The company is certified to ISO 50001 at its headquarters in Germany and holds ISO 9001 and ISO 14001 certifications at all global sites. In 2019, KRAIBURG TPE, with 645 employees worldwide, generated sales of 190 million euro.