**Upgrading mask protection with KRAIBURG TPE**

KRAIBURG TPE, a global TPE manufacturer of a diverse range of thermoplastic elastomer products and custom solutions for a variety of industries, collaborated with Indian OEM manufacturer Pune Polymers Pvt Ltd to improve mask design through the use of its THERMOLAST® TPE compound.

Reusable face masks are a critical component of global health protocols, and depending on the quality, they can limit virus transmissions effectively.

Since these barrier devices must be worn for long durations to prevent and contain the spread of disease, they should be comfortable for the wearer. Furthermore, fitments is a necessary aspect in reducing user discomfort.

Due to their flexibility, excellent design freedom, and efficient processability, thermoplastic elastomers (TPEs) fulfil the reusable mask industry’s criteria for mask applications.

KRAIBURG TPE, a recognized global manufacturer in superior TPE compounds supplied its THERMOLAST® TPE compound to Pune Polymers Pvt Ltd, an Indian-based OEM manufacturer, to produce the Jivanakk FFP3 (Filtering Face Piece 3) mask.

**Keeping users safe from virus infections**

FFP3 masks have been recommended for healthcare workers’ use who are at high risk of hospital-acquired infections, since they can provide thorough protection against Covid-19, especially when performing aerosol generating procedures.

The Jivanakk FFP3 mask design technology was developed by India's leading nuclear research facility, the Bhabha Atomic Research Centre. Jivanakk's innovative structure enables the mask to provide a comfortable yet snug fit on various facial shapes, while eliminating the fogging problem experienced by eyeglass wearers.

The mask’s HEPA filter is able to filter bacteria, viruses, and pollen with a size of 0.3 micron or larger at up to 99.97%. The filter, which can be used for 90 days or more, has a long-life cycle and can be easily adjusted by the user.

Furthermore, the mask can also be disassembled and washed with soap and water after extended use or when it becomes contaminated.

**Material advantages of THERMOLAST® compound**

KRAIBURG TPE’s THERMOLAST® compound was selected due to its excellent bonding with thermoplastic polyurethane (TPU), allowing for design flexibility, as requested by Pune Polymers for the Jivanakk FFP3 mask.

The soft touch texture of the TPE compound adds cushioned comfort to the mask wearer, and it also does not cause allergies or irritations on the skin.

In addition, the halogen-free compound conforms to food regulations such as EU Directive 10/2011, the Food and Drug Administration (FDA) Code of Federal Regulations (CFR), Title 21, and the EN71/3 European safety standard, as well as the RoHS and REACH standards.

**THERMOLAST® H for the healthcare sector in Asia-Pacific**

KRAIBURG TPE recently introduced its new THERMOLAST® H product line exclusively for the Asia Pacific healthcare and medical devices market.

Available in the THERMOLAST® H series of compounds is the high-quality HC/AP series material solution.

It satisfies the global criteria for food contact and medical grade materials, such as cytotoxicity ISO 10993-5 and GB/T 16886.5.

Furthermore, the HC/AP series’ exhibit exceptional properties, like adherence to polymers such as PP, haptics, and compression set, making it ideal for masks and medical device component applications.

With its easy processability advantage, the HC/AP series is also targeted at closures, flexible connections, medical tubing, syringe gaskets, catheter connectors, mouthpieces, and other medical device applications.



**(Photo: © 2022 KRAIBURG TPE)**

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

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KRAIBURG TPE ([www.kraiburg-tpe.com](http://www.kraiburg-tpe.com)) is a global manufacturer of thermoplastic elastomers. From its inception in 2001 as subsidiary of the historical KRAIBURG Group founded in 1947, KRAIBURG TPE has pioneered in TPE compounds, being the competence leader in this industry. The mission is to provide products that improve everyday life by offering safe, comfortable and more sustainable alternatives in plastics. With over 680 employees worldwide and production sites in Germany, the US, and Malaysia, the company offers a broad range of compounds for applications in the automotive, industrial, consumer, and for the 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.

**Pune Polymers**

Pune Polymers Pvt Ltd is traditionally a plastic molding company established in 1991. Over the years it has been providing services to major brands & OEMs in the Automotive, Defense, Home & Electrical Appliances, Pharmaceutical, Telecommunications & Paint industries.

With In-house injection, blow & extrusion molding machines and equipped with a full-fledged tool room & design team, Pune Polymers provides a complete solution to its customers right from product design to assembly & mass production.

In 2020, when COVID-19 hit the world and people were running around trying to find a mask that would truly protect them from this virus, grew an idea to develop a durable plastic face mask capable of sustaining more than just a day and providing complete protection to the users.

This endeavour of ours lead us to Bhabha Atomic Research Centre, where some of the brightest minds of the nation helped us in bringing life to this idea.