





Vistamaxx[™] performance polymers

Vistamaxx[™] performance polymers for enhancing the anti-slip performance and softness of mats while allowing for improved potential recyclability^{*}

By adding Vistamaxx[™] 6102 to its EVA (ethylene vinyl acetate) formulations, TRAPO is able to create a new generation of car mat series. The new Classic Mark IV mat displayed softer and better cushioning with improved anti-slip properties as compared to the current Classic Mark III mat.

Challenge

TRAPO, a leading automotive accessories brand in Malaysia, Singapore, Thailand and Indonesia, has always been looking for new and innovative solutions to help improve performance of its car mats and provide more value to users. In past years, the TRAPO Classic car mat series has used hook and loop fasteners at the back of its car mats to provide an anti-slip feature. However, hook and loop fasteners can cause damage to car floorboards, as shown in Figure 1. Therefore, TRAPO seeks to formulate a new series of mats that can help reduce or eliminate hook and loop fastener usage to avoid this problem while providing good anti-slip performance.



Figure 1: Floorboard Damage by using hook and loop fastener

Solution

With these requirements in mind, ExxonMobil introduced Vistamaxx™ performance polymers to TRAPO for their new car mat formulation and with a few trials, gave birth to TRAPO new Classic Mark IV mats.

Softer and better cushioning

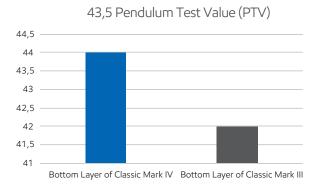
By adding Vistamaxx[™] 6102 to the formulation of the Classic Mark IV mat, the foam became softer which helped to create a better cushioning effect as compared to Classic Mark III.



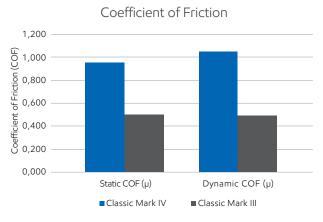


Improved anti-slip performance

Surface Frictional Properties using the British Pendulum Tester shown a 5% improvement.



Coefficient of friction testing conducted by ExxonMobil showed a 91% and 115% improvement on the static and dynamic coefficient of friction (COF) of Classic Mark IV over Classic Mark III mat.



 $^{^{*}}$ Recyclable in communities with programs and facilities in place that collect and recycle floor mats



New opportunity – Closing the loop of TRAPO product lifecycle.

As a brand that values sustainability as one of its core pillars, TRAPO R&D leveraged Vistamaxx™ performance polymers to help design the new Classic Mark IV mat, which makes it possible to recycle* the whole mat.

There is also no need for any separation of the layers before recycling. This will potentially reduce wastage, increase productivity and enable TRAPO to initiate a recycling program to collect these car mats when they have reached their end of lifecycle. TRAPO aims to repurpose them back to the formulation to produce new products / new car mats for the consumer.



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