Vistamaxx<sup>™</sup> performance polymers Case study

# **E**‰onMobil



# Vistamaxx<sup>™</sup> performance polymers for enhancing the anti-slip performance and softness of mats while allowing for improved potential recyclability<sup>\*</sup>.

By adding Vistamaxx<sup>™</sup> 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 a new and innovative solution to help improve performance of their car mat and providing more value to the user. For past years, TRAPO Classic car mat series have been using hook and loop fastener at the back of its car mat to provide the anti-slip feature. However, hook and loop fastener can cause damage to the car floorboard as shown in Figure 1. Therefore, TRAPO seeks to formulate a new series of mat that can help reduce or to 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<sup>™</sup> 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<sup>™</sup> 6102 to the formulation of the Classic Mark IV mat, the foam become softer which helped create a better cushioning effect as compared to Classic Mark III.



Hardness (Shore C)

\*Recyclable in communities with programs and facilities in place that collect and recycle floor mats

#### 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.



#### 43,5 Pendulum Test Value (PTV)

### **Result:**

## 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, increased productivity and enable TRAPO to initiate a recycling program to collect back these car mats when they reached their end of lifecycle which TRAPO aims to repurpose them back to the formulation to produce new product / new car mat to the consumer.



\*Recyclable in communities with programs and facilities in place that collect and recycle floor mats



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