

# Malaysian Green Precured Tyre Tread Liner

**RESEARCH INSTITUTION** Universiti Sains Malaysia (USM)

**INDUSTRY COLLABORATOR** Eversafe Rubber Works Sdn Bhd

**DATE OF COMPLETION** July 2022

**PROJECT DURATION** 45 months (including 9 months of extension due to MCO)

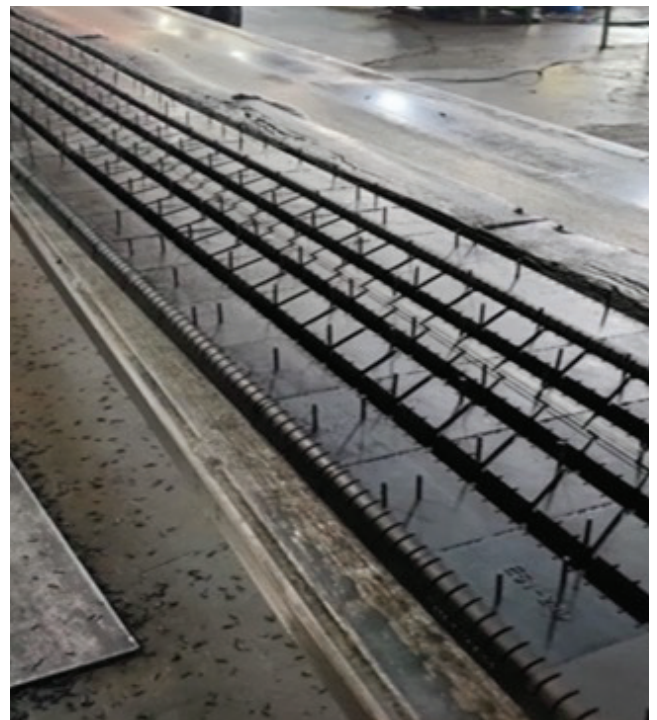
**MRC GRANT APPROVED** RM167,858.10

**PROJECT OUTPUT** Formulation of Green Precured Tyre Tread Liner using Epoxidised Palm Oil

Eversafe Rubber Works Sdn Bhd and Universiti Sains Malaysia (USM) have collaborated to develop a new pre-cured tyre tread liner that is greener and performs better than their current product. To improve the compound's green credentials, epoxidized palm oil (EPO) is used as a substitute for the current petroleum-based processing oil. By using EPO and adjusting the silica and carbon black content, the new tyre tread has recorded green percentage of 70% compared to 51% of their current product. Hence the green percentage has increased by 37%. The new formulation also demonstrates positive results in tensile strength, modulus and wear resistance.



Added advantages of the new formulation include reduced rolling resistance, improved wet skid resistance, higher retention towards thermal aging and enhanced thermal stability. The prototype for the tyre has passed the endurance test conducted at Malaysian Rubber Board (MRB) and successfully underwent road trial tests conducted by Eversafe, while the patent application for the tyre tread's formulation is currently pending.



Moving forward, commercialisation of the new tyre tread is rapidly underway and Eversafe's strategy is to export the tyre tread to overseas markets.

**USM Representative:** Assoc Prof. Dr Nadras bt Othman  
**Eversafe Representative:** Mr Anuar Atan - General Manager