

## ABSTRACT

The main athletics track are the SBR, EPDM granules and Polyurethane. Nowadays, application of manufacturing product need a material that can give the best characteristic such as getting on hardy, strong, safe and easy to manufacture. In this project, silicone rubber resins from elastomer polymer were used as the matrix materials and the natural fibers as the reinforcement. Types of natural fibers that have been selected are rice husk fibers. The matrix materials are usually functioning to attach the reinforcement each other. The rice husk is grinded for 1 mm. From testing on the composite material, it shows value of hardness, impact strength, and Young modulus for tensile test and compression test is 17.9, 0.36 J/mm<sup>2</sup>, 40.94 kPa, with increasing 98.89 percent, 176.9 percent, 1055.84 percent and 157.83 percent compared to silicone rubber without reinforcement, respectively. For friction test, the purpose composites athletics track getting average value of 70. This average value is over from IAAF standard requirement for  $\geq 47$  of friction value. Overall for this project, although the purpose composites is under researching, the result show the composite be able to emulate with the main athletics track component and it can be made and used in Malaysia.

## Athletics Track Surface



Dual Layer System



SCI System



Spray Coat System



Sandwich System

## Material, Process & Product



Dry rice husk before mixture



Rice husk after mixture



Coloured athletics track



Original Colour of athletics track

## FIELD OF INVENTION

The present invention relates to natural composite material to be a athletics track particularly for any application requiring slip resistance, longevity, noise reduction, safety, low maintenance and attractive appearance. Even yet more particularly the present invention relates to the filler arrangement and low cost of material parallel with easy process of fabrication.

## CONCLUSION

- ~ Low cost and easy of fabrication process
- ~ New material for athletics track and any mat product
- ~ Biodegradable material and also suitable as noise absorbing material

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