#### INVENTORS

NURUL AFIFAH BINTI AHMAD LUTPI SITI NUR AFIQAH BINTI MOHAMED

#### CONTACT DETAILS

FACULTY OF ENGINEERING TECHNOLOGY, UNIVERSITI MALAYSIA PERLIS (UNIMAP) Kampus UniCITI ALam SUNGAI CHUCHUH, MUKIM TITI TINGGI, 02100, PADANG BESAR, PERLIS. E-MAIL:

niknoriman@unimap.edu.my

# ECO INFILLS





## PRODUCT DESCRIPTION

blending of natural rubber and recycled silicone rubber, would become a good solution to minimize the issues related to infection risk, latex allergy and chemical exposure while retaining the performances of the artificial turf surfaces. The blending was evaluated as the base materials that suitable to be used in many outdoor surfaces/applications. The rubber blend grinded into relatively small particles, particularly to absorb stress exerted by humans and animals while jumping or walking on the artificial surfaces. The infills also can be

varied into several colors, based on the applications

## PRODUCT ADVANTAGES

- Increase athletes performances
- > Excellent drainage
- Color fastness

requirements.

- **▶** Good in damping properties
- Can withstand extremely in high temperature environment

#### NOVELTIES

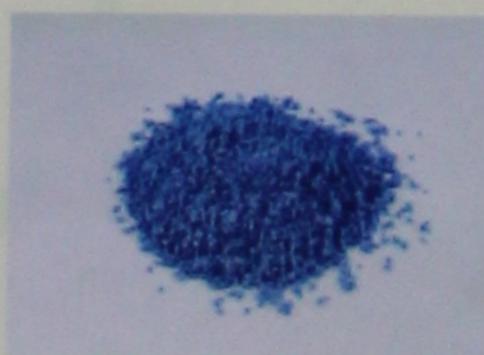
- Environmental friendly
- Low cost on raw materials (recycled silicone catheter)
- >Low infection risk
- Reliability

#### POTENTIAL APPLICATION

- Artificial sports pitch (football, horsemill, etc)
- > Parts exercise
- Landscaping
- Playgrounds
- > Athletic tracks
- **Equestrian**



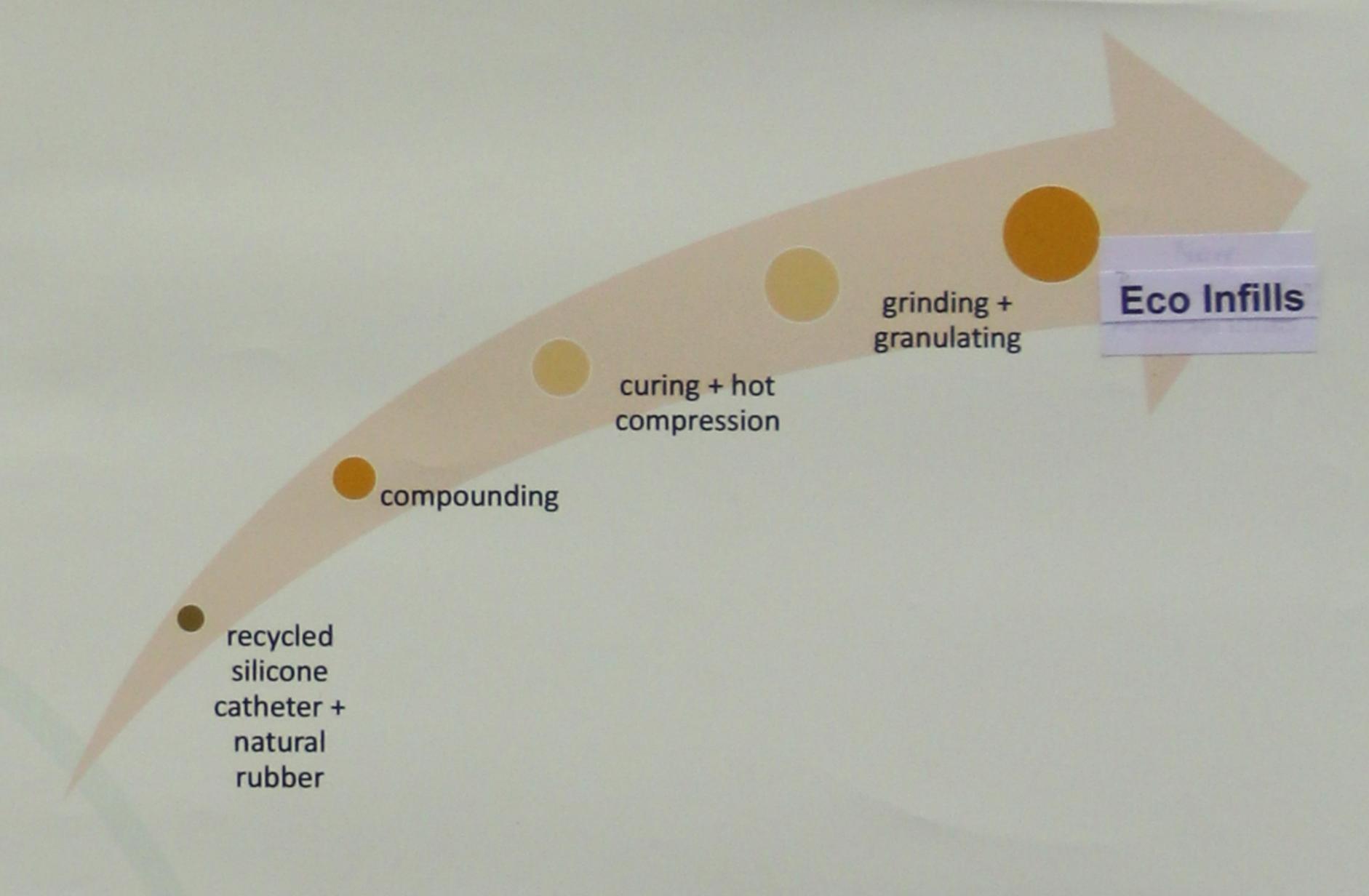




#### PROBLEMS STATEMENT

The application of recycled tyre as infills on the artificial turf surfaces has caused some potential health and safety considerations related to the turf have generated public concerns, including heat stress, injury, infection risk, latex allergy and chemical exposure. Silicone rubber is well-known for its antimicrobial properties and had been widely used in medical devices in order to avoid the bacterial growth.

#### PROCESS FLOW



## PRODUCT PERFORMANCES

-		
L	Properties	New multipurpose artificial infills
	Shape	Spherical moderate angular
	Abrasion resistance	97%
	Bulk density	420g/L
- ,	Deformation during load	78%

## INDUSTRIAL COLLABORATION

