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▶ 1 PATENT FILED: PI 2018703367
 ▶ 1 TRADEMARK: 2018073780

myeco-POFA Shield: A Remedy for Fungi Growing World



Fungus growth affects our well being

Introduction

● **myeco-POFA Shield** is a nano-solution, first of its kind that is extracted and engineered based on palm oil fuel ash waste (POFA) . **3 million metric tons** of POFA dumped annually occupies valuable land, create environmental pollution and health hazard. Therefore, the waste is converted to **myeco-POFA Shield** for consumer to prevent fungus growth.

Problem Statement

- Fungi are everywhere. Invasive fungal infections has caused various problem to humankind
- Adverse health effect- infect the heart, blood, brain, bones and other internal organs-kill about 1.5 million people worldwide every year.
 - Businesses lose- \$61 billion a year because of Sick Building Syndrome
 - Fungus infections is one of the key issues in entire Hospitals

Inventiveness and Novelty

- Non-toxic active ingredient based on waste materials
- It is a nano-coating liquid that can bind easily on concrete, tiles, textile
- Non-toxic active ingredient based on waste materials with WCA 171° with tilting angle of 2°.
- Excellent durability due to self-healing characteristic

Intellectual Property Status

- 1 patent filed- PI 2018703367
- 1 trademark- 2018073780

Usefulness and Application

myeco-POFA Shield has a broad prospect of applications in construction and building, transportation, textile production and anti-corrosion. The benefits are as follows

- "Waste to wealth" initiative that contributing to Sustainable Development Goals (SDG)
- Prevent fungus growth due to lotus effect which keeps surface dry
- Greatly reduces the need of fungicides or hazardous cleaning products to remove fungus
- Reduce conventional cleaning thus saving water, time, energy and environment

Status of Invention

Prototype ready and Field Validation ongoing

Market and commercial potential

Global Fungicide Market is 19 billion US Dollar for 2018 and expected to grow up to 21 billion US Dollar in 2021. Potential future revenue for Malaysia is estimated at an average of 0.01% per annum-2.1 million, covering 5% of the total 139 Government & 91 private Hospitals exist in Malaysia.

Potential Partners

Process Tech Design Sdn Bhd
 Ceramic Tiles Company

Knowledge Management

ISI Publication-2 (Surface & Coatings Technology, Journal of Nanomaterials)
 International Conference Proceeding - 2
 Financial support by RUI and FRGS

Impact of the product

myeco-POFA Shield reduces the use of toxic fungicides thus safe the environment. It contributes the global needs to address fungal infection in various segments- buildings, healthcare & shipping. The utilization of palm oil fuel ash waste to form an affordable product support our nation vision of waste to wealth for sustainable tomorrow.



myeco-POFA Shield demonstrates excellent inhibition against fungus growth due to hydrophobic nature of the coating



Field Validation of myeco-POFA Shield in Transportation & Buildings

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