

## A Story of SandyP and its friend, PROPATCHmax

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*For year 2020, academic Dr Muhd Norhasri Muhd Sidek along with his team member; Puan Siti Rahimah Rosseli and Puan Nor Hafida Hashim had turned their research ideas into two innovation products which used Palm Oil Fuel Ash (POFA) as main ingredient. POFA is a waste product from the oil palm industry. One of the revenues to Malaysia is contributed by oil palm industries. However, the emergence of the industry also creates other problems in waste management. To cater the issue, this research project focuses on producing future sand named as SandyP and PROPATCHmax for repairing work.*



SandyP is basically a sand substitution, originally designed for the needs to improve the IBS wall to be lightweight and at the same time to function as load-bearing wall. On the contrary, PROPATCHmax serves for solid structural repairing work as it is used as a patching material. Realizing the potential of these products, it is essential to create a versatile and ready to use packaging to serve the individual and industrial needs using green waste materials. SandyP is packed with POFA which was sieved to sand particle size while PROPATCHmax is a mixture of POFA and treated PET. In PROPATCHmax, the combination gives dual reaction that comes from POFA as a filler and treated PET which act as fibre to enhance the tensile property. Both products showed good improvement in workability and strength through several conducted testings.

Through the waste utilization in SandyP and PROPATCHmax, it also creates greener environment for our country and gives a good impact for socio economic. SandyP and PROPATCHmax are the outcomes resulted from the collaboration between the team members and several industrial players; United Oil Palm Industries Sdn. Bhd., Wasilah Global Group Berhad and TML Technologies Sdn. Bhd. As for product recognitions, PROPATCHmax won Gold Medal in Digital International Invention, Innovation and Design (DIIID) 2020 while SandyP won Gold Medal and short listed as one of the product pitching finalists for Invention, Innovation & Design Exposition (IIDEX) 2019 which held on 2-4 November 2020. SandyP proudly won a Diamond Award for Science & and Technology (Invention) category, secured a winning trophy, a certificate of achievement and a cash prize sponsored by Bank Islam Sdn. Bhd.



SandyP team members for IIDEX 2020

PROPATCHmax team members for DIIID 2020

