

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202411058222 A

(19) INDIA

(22) Date of filing of Application :31/07/2024

(43) Publication Date : 16/08/2024

(54) Title of the invention : NOVEL POLYMER REINFORCED CELLULOSE COMPOSITE

(51) International classification :D21H0021160000, A61P0009000000, C08L0023120000, D21H0017140000, A61P0009120000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

ABSTRACT The present disclosure introduces a novel polymer reinforced cellulose composite 100 which is designed to address the limitations of traditional paper in packaging applications. The composite is fabricated using cellulose pulp 102 obtained from waste paper, a natural binder 104 to enhance mechanical properties, and a polymeric concoction 106 to improve wettability and hydrophobic characteristics. The process involves dissolving and crushing waste paper to form pulp, adding the natural binder and polymeric concoction, and mixing thoroughly to create a homogeneous slurry. The slurry is then spread over a metallic stencil 108 and transferred to a wet cotton cloth 110 for drying. Once dried, the material is pressed using a roller 112 to achieve a smooth, uniform surface.

No. of Pages : 20 No. of Claims : 10