

Disposable Coffee Cups Recycling

Authors : Sasan Mohammadi

Abstract : Due to our passion for coffee, we use 16 billion throwaway coffee cups yearly. Coffee lovers throughout the globe have discovered the hard way that their paper cups are not recyclable, despite what coffee businesses have repeatedly assured them [1] A disposable, single-use coffee cup comprises a paper and polyethylene layer. Polyethylene is a typical material used to fill a coffee cup's inside to keep its structure and provide water and heat resistance. In addition, the polyethylene layer prevents recycling since it is difficult to separate the plastic liner from the paper layer [2]. In addition, owing to the plastic membrane lining many of these cups, they cannot be recycled and may take up to 30 years to biodegrade [3]. Most of researcher try to separate plastic part ,but it is not economical and easy.For this purposes,it is not yet happen. In our research we don't separate plastic, just we make a homogeneous pulp with cold water.then fix it in mold and dry it,after completely drying cycle we heated the product in 100 degree of centigrade this cause a sintering effect by plastic particle between paper fibers.This method increase 30 percent the strength of product.This product has a good sound proof and thermal isolation. This means we can use it as insulator.with low density we can control the the density by percentage of air solved in pulp.

Keywords : recycling, disposable coffee cup, insulator, low density

Conference Title : ICEBESE 2023 : International Conference on Environmental, Biological, Ecological Sciences and Engineering

Conference Location : Toronto, Canada

Conference Dates : June 19-20, 2023