

ABSTRACT

This study examines the exploration of HMR (High Moisture Resistance) and HDPE (High-Density Polyethylene) materials to develop furniture boards into alternative, environmentally friendly furniture boards. The background is the high waste of HDPE and HMR plastic that is not optimally utilized and the need for sustainable material innovation in the furniture industry. This study was conducted using an observation, interview, and literature study approach to consider the optimal ratio to produce boards resistant to loads, heat, and humid conditions. The exploration used a composition ratio of 200:50, 190:60, and 180:70 between HDPE and HMR to show that the mixture can reduce the dependence of plywood in the furniture industry. This study aims to process waste and encourage innovation using materials without adverse environmental impacts.

Keywords: *HMR, HDPE, eco-friendly furniture, recycled materials.*