

# Sustainable Drywall Materials from Organic Waste

## Technology Overview

This technology incorporates the use of organic waste in drywall materials, which are commonly used in interior walls of commercial and industrial building. The organic waste improves flexural strength, thermal insulation, acoustic insulation of various wall matrixes and at the same time enhances fire safety. The use of this technology would lead to reduced carbon footprint and improved product performances. The technology is cost-effective as it does not need to use expensive building materials.

## Features & Specifications

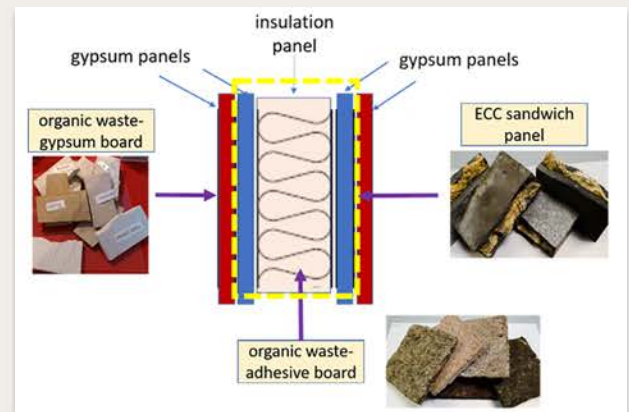
This technology includes:

- organic waste-adhesive board to replace Rockwool panel;
- organic waste-Engineered Cementitious Composite (ECC) sandwich panel as a low-cost drywall system; and
- organic waste-gypsum board as a sustainable drywall panel. The three components of the invention can be used together to form a complete drywall system or they can also be implemented separately in the system.

Organic waste-adhesive boards has good thermal insulation properties and enhanced fire safety.

Organic waste-ECC sandwich panel prototypes built has satisfactory acoustic insulation.

Organic waste-gypsum boards has improved flexural strength.



## Collaborators

DP Architects Pte Ltd  
UglyGood Pte Ltd

## Customer Benefits

- The use of organic waste helps in the recycling of waste, and is environmental-friendly and sustainable.
- The elimination of additional expensive building materials makes the product cost-effective.
- The performance of the new materials is better than traditional materials.

## Potential Applications

- The new materials can be used in the interior walls of the commercial and industrial buildings. With the increase in urbanisation, more buildings are required. This technology can help to reduce the cost and improve the performance of buildings.
- The new materials can be used for building modular low-cost sustainable housing in rural areas of developing countries.

