

New building material uses recycled potato peels as MDF alternative



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At Springwise, we have seen a number of innovations aimed at recycling food. These have ranged from turning [used gum](#) into shoes and turning food waste into [textiles](#). Now, London-based designers Rowan Minkley and Robert Nicoll have found a way to turn waste potato peelings into a replacement for MDF and chipboard. Their product, called [Chip\[s\] Board](#) is biodegradable and does not contain any formaldehyde or other toxic resins and chemicals.

To create the material, raw peelings are first collected from manufacturers of processed potato products, then put through a refinement process to create a binding agent. This is then used to bind other organic fibres, such as potato skins, bamboo, recycled wood or spent hops. The resulting composite then undergoes heat pressing to form a robust sheet of board that can be turned into a wide variety of products, including furniture and building materials. Once they have reached the end of their life span, products made from Chip[s] Board can be sent to an industrial composter and turned into fertiliser for growing more potatoes (or anything else).

Minkley and Nicoll were inspired to find an environmentally-friendly alternative to MDF after realising that around 140,000 tonnes of MDF is incinerated each year because it cannot be recycled. After finding out that a number of Italian companies make a recyclable paper out of potato peels, the pair decided to create a similar building material. The forming and pressing processes used to create

Chip[s] Board are similar to those used in MDF manufacturing, except toxic formaldehyde-based resins are replaced with the waste-derived biodegradable binders.

Takeaway: Because it uses a manufacturing process similar to that of MDF, the new Chip[s] Board can be produced commercially on existing equipment. It now needs companies to take it up as a viable alternative to other building materials. What other uses might there be for an environmentally-friendly chipboard?

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