

Bio4HUMAN - Identifying bio-based solutions for waste management applicable to the humanitarian sector

Bio-Based Solution Info Sheet

MYCELIUM PROTECTIVE MATERIAL



Baseline alternative

Plastic filling in parcels.



General description

Eco-friendly packaging solutions combining cardboard and natural shock-absorbing pads made from mycelium. It uses paper capsules filled with safepads to protect products during transport.

- 100% natural, bio-based composite made from mycelium (the root system of fungi) and agricultural or wood waste like sawdust or hemp shavings.
- Mycelium acts as a natural binder, replacing plastic foams in packaging.
- The technology allows for efficient, low-cost production and can be easily adapted to places like Africa because it grows fast on agricultural waste, requires minimum energy and equipment, builds itself into usable shapes, and is scalable and clean.



Lifespan

Reusable, like the conventional product.



Environmental aspects - added value

- End of life: 100% biodegradable (45 days in soil/compost, 180 days in water, 1-3 years outdoors).
- Do not use primary raw materials, but waste that has no further use except for palletization and incineration.



Additional comments

- Examples of implementation: packaging for construction products; edge and corner protection for packaged goods.
- The packaging system has already been used in transportation to African locations.



SCAN FOR BIO-BASED SOLUTIONS PORTFOLIO OF ALL SOLUTIONS

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