

Circular Packaging Solutions Powered by Additive Manufacturing (AM) and Polyethylene

Stage	R&D	Introduction consideration	Practical stage
Keyword	Mechanical Recycling	Chemical Recycling	

Use

Custom-Made Packaging Materials
(e.g., exhibition items, artworks)

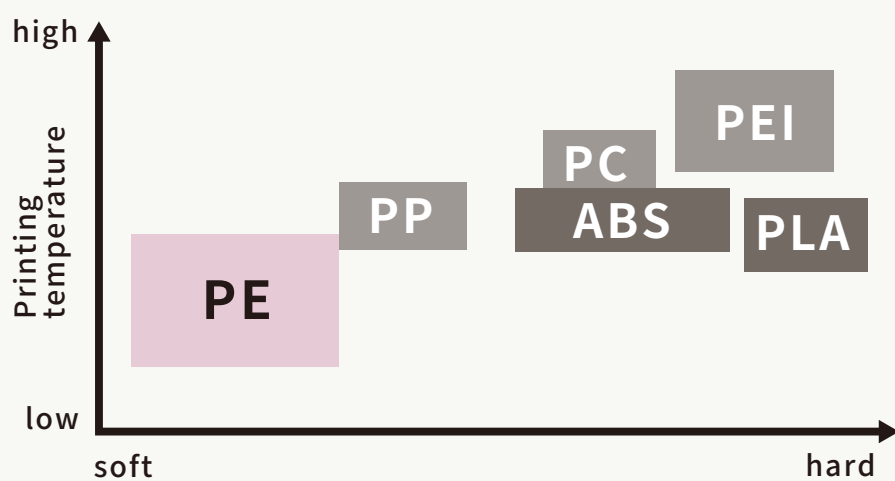
Challenge

- Lack of dedicated packaging increases the risk of damage from vibration and impact during transport.
- Complex-shaped works are difficult to secure properly.
- Cushioning materials must be adjusted for each item, resulting in inconsistent repacking quality.
- Packaging materials are often discarded after transportation.

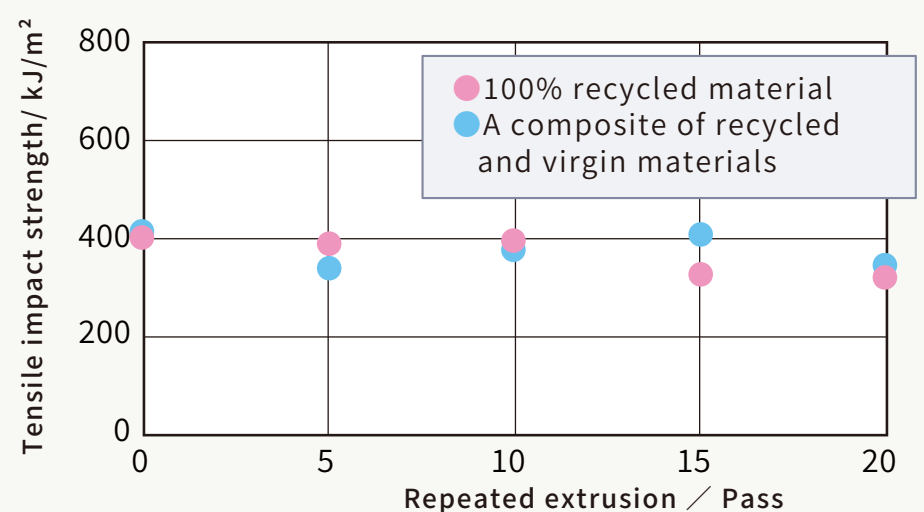
Solution

3D-Printed Packaging Materials that Conform to Product Shapes, Enabled by Flexible Polyethylene

- High cushioning performance utilizing the flexibility of polyethylene



- Minimal property degradation even after repeated reuse (Measured according to JIS K 7160)



Benefit

Circular Packaging that Enables the Cycle

Printing → Transportation → Exhibition → Collection → Reuse



- Improved transportation quality
- Reduced packaging waste
- Shortened dismantling and repacking time
- Enhanced resource circulation and reduced environmental impact

Contact |  Japan Polyethylene Corporation

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