

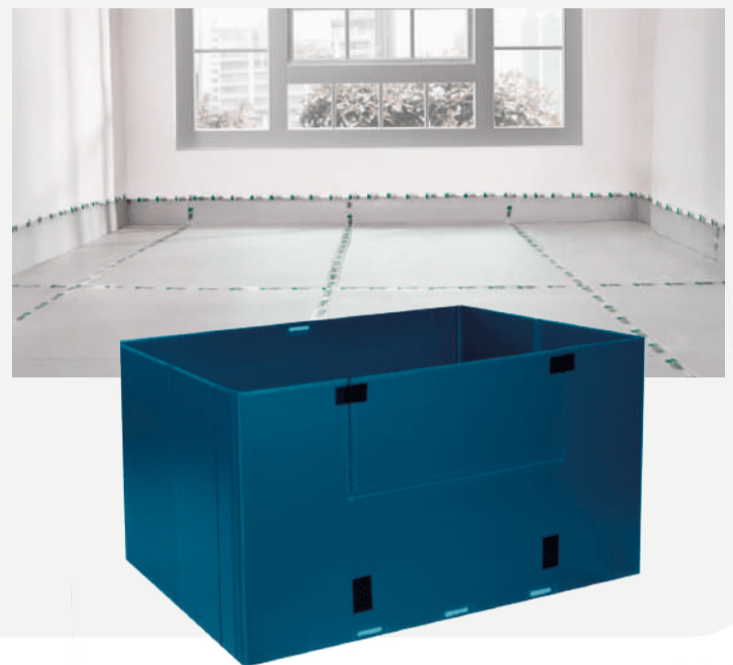
Lightweight, shock resistant Hollow-Sheet with 47% lower carbon footprint

GCR and OMIPA validate durable, reusable & recyclable X-type hollow sheets for Industrial Packaging and Building & Construction.

Challenge

In these applications, hollow sheets must withstand heavy loads and impacts. Traditionally, converters rely on PP copolymer and recycled content sourced in a close loop from their own sheet production to secure these properties.

The challenge was to prove on **OMIPA extrusion lines that recycled PP homopolymer could reach high recycled content levels while maintaining mechanical performance and process efficiency.** But moving from copolymer to homopolymer meant a trade-off. Homopolymer brings stiffness but less impact resistance, so balancing properties with Granic® mineral masterbatches was key.



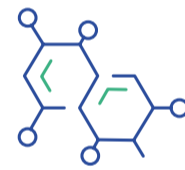
+20%
line
speed



47%
lower CO₂
footprint



100%
recyclable



6%
less
material use

Applications

Formwork panels, protection boards, collapsible pallet boxes

Solution

OMIPA and GCR validated a formulation on OMIPA's X-wall hollow sheet extrusion lines, combining:

- **Ciclic® 45E:** recycled PP homopolymer for high recycled content
- **Granic® 1522 & 1052:** mineral masterbatches to enhance impact resistance, flexibility, dimensional stability of the sheet and processability

Hollow sheets with **47% lower carbon footprint** can be reliably produced, with higher output, lower energy demand, and uncompromised strength.

OMIPA and GCR proved that demanding hollow sheet applications can achieve higher recycled content, improved efficiency, and a lower carbon footprint—without compromise.

The results

- **Compression and impact strength** fully aligned with specifications
- Long lifespan
- Light weight
- **20% higher line speed** -> more output per hour
- **14% increase in torque efficiency** -> lower energy demand from the screw
- **6% material savings** -> equal performance with fewer resources
- **47% lower CO₂ footprint** -> significant contribution to sustainability goals
- **100% recyclable**