

# From plastic pollution to homes for the poor

Technology startup ByFusion is developing apparatus that can convert every type of waste plastic into a new building material, dubbed *RePlast*

**Compact:** Machine fits inside regular 12m (40ft) shipping container

**1 Plastic trash:**  
Enters machine

**2**

**Shredder:**  
Plastic reduced to smaller pieces

Minimal staff and training required to operate

**3 Water boiler and compactor:** Super-heated water and compression used to fuse plastics into *RePlast* building bricks. Process is non-toxic and uses no adhesives

Brick

600-gallon tank recycles waste water and can be used continuously for 10-16 weeks

Metal plate

## REPLAST WALL

■ No cement required between bricks. Instead, **metal plate** bolted to top of wall, using **steel rods**, keeps structure secure

■ Bricks are excellent insulators and could be used to build homes in poor parts of world. **Plastic waste sourced from ocean pollution**

Rebar steel rods

Tape  
Chicken wire  
Two layers of mortar

**ALL PLASTICS SUITABLE** (individually or mixed, clean or contaminated)



**PETE**

Polyethylene Terephthalate



**HDPE**

High Density Polyethylene



**V**

Vinyl



**LDPE**

Low Density Polyethylene



**PP**

Polypropylene



**PS**

Polyethylene



**Other**

Polystyrene\*

Sources: ByFusion, wire agencies

\*Cannot be used individually

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