



Technical Features of Syntrewood

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General description of Syntrewood

Description: pressed material from recycled urban waste (containers for plastic).

Composition: contents between 85-90% of polyolefin (Polypropylene and Polyethylene) and 10-15% of other plastics (PET, PS, etc.), card board, paper and aluminum.

Material processing features:

The hold productive process is controlled by 3 robots with 3 extruders, 5 presses in each one, which obtains the final product by press.

Our presses can shape pieces until 1000x600x200 mm, with a weight between 1.5 - 7 kg.

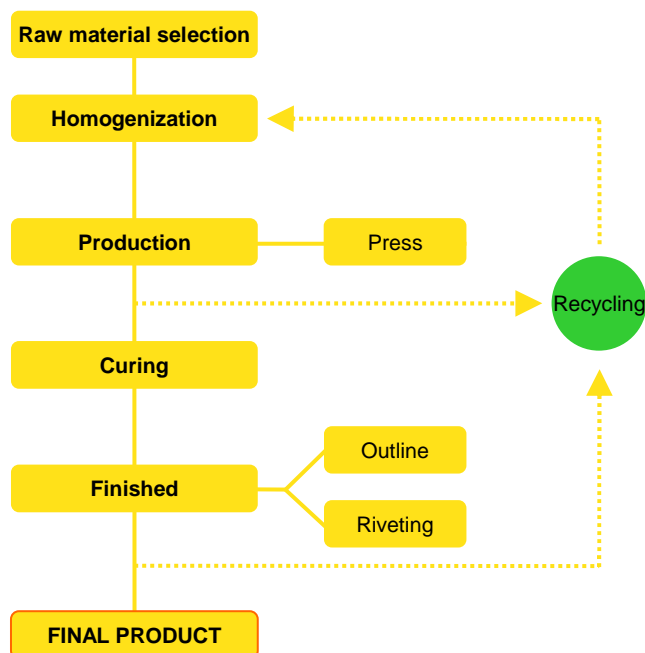


Raw material



Press

Syntrewood processing



Technical Features of Syntrewood processing

Generals

Density	0.98 kg/dm ³
Fragment recycled:	100%
Composition:	85-90% de polyolefin (PE+PP), 10-15% an others plastics (PET, PS etc.) card board, paper and aluminium.

Determination of Flexural properties (UNE EN ISO 178)

Maximum resistance	18.1 Mpa (N/mm ²)
Flexural Modulus	852 Mpa (N/mm ²)

Tensural features (UNE EN ISO 527)

Maximum resistance	7.8 Mpa (N/mm ²)
Elongation to the maximum load	1.96 %
Fracture Toughness	7.4 Mpa (N/mm ²)
Elongation break	2.03 %

Toughness

Boll drop test (UNE PV3905): temperature = -40°C; ball weight = 500g; drop height = 600mm	No cracks or breaks after impact (temperature -40°C) 34.53 N/mm ²
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Weather

Weather change resistance (-35°C / +80°C)	Changes in the material are not detected
Humidity Resistance (50°C, 95% relative humidity)	Changes in the material are not detected
Water Absorption (UNE EN ISO 62)	
24 hours	0.20 %
28 days	0.87 %
Methods of exposure to laboratory light sources sources (UNE EN ISO 4892-2:2000) exposure: 300 hours	3/4 out of 5: without contrast

Fire test (UNE 23721-90)

Flammation time	104 s
Flame duration	1096 s

Determination of formaldehyde release (PV 3925)	3 mg/Kg or less
Fogging (DIN 75201)	4.08 mg

Thermal properties

Temperature in use (max)	From +60 to +100 °C
Temperature in use (min)	From -20 to -40 °C
Specific heat	From 1800 to 2000 J/kg.K
Thermal expansion	From 100 to 200 10 ⁻⁶ /K

* Test made by Applus Laboratory

Design Features with Syntrewood of Onadis

- The manufacturer process used is the recycled plastic press
- The maximum dimensions per piece is 900x600x200mm.
- The moulds allow press piece with thickness that could be between 5 - 20 mm.
- The weight for each press piece could be between 1.5 - 7.0 kg with a tolerance of +/- 2%.
- The moulds could have more than one figure, obtaining multiples pieces by means for pressing.
- Bended surfaces are completely available.
- It can be treated like wood, allowing cut, stapling, screws and the insertion of nuts.
- The natural colour is dark grey, but it can be tinged or pigmented obtaining a range of dark colours like ochre, black and green.
- It is possible to obtain different textures and roughs finishes.
- Due to its weather resistance, it can be used outdoors.



Wine rack made of Syntrewood
Designed by Antoni Blanc
Honorable mention prizes of ADI-FAD Delta