Technical Features of Syntrewood
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.), cardboard, 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.

Syntrewood processing
Technical Features of Syntrewood processing

Generals
Density
Fragment recycled:
Composition:

0.98 kg/dm3
100%
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
Flexural Modulus

18.1 Mpa (N/mm2)
852 Mpa (N/mm2)

Tensural features (UNE EN ISO 527)
Maximum resistance
Elongation to the maximum load
Fracture Toughness
Elongation break

7.8 Mpa (N/mm2)
1.96 %
7.4 Mpa (N/mm2)
2.03 %

Toughness
Boll drop test (UNE PV3905): temperature = -40ºC; ball weight = 500g; drop height = 600mm

No cracks or breaks after impact (temperature -40ºC) 34.53 N/mm2

Weather
Weather change resistance (-35ºC / +80ºC)
Humidity Resistance (50ºC, 95% relative humidity)
Water Absorption (UNE EN ISO 62)
24 hours
28 days

0.20 %
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
Flame duration

104 s
1096 s

Determination of formaldehyde release (PV 3925)
Fogging (DIN 75201)

3 mg/Kg or less
4.08 mg

Thermal properties
Temperature in use (max)
Temperature in use (min)
Specific heat
Thermal expansion

From +60 to +100 ºC
From -20 to -40 ºC
From 1800 to 2000 J/kg.K
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