

Standard Birch Plywood Puuinfo Oy

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PUUINFO

1. PRODUCT SPECIFICATION

Object definition

This RT Environmental Declaration applies to standard birch plywood manufactured in the following factories:

- Metsäliitto Cooperative, Wood products industry: Suolahti and Punkaharju plywood mills
- UPM-Kymmene Wood: Heinola, Joensuu, Jyväskylä, Kaukas and Savonlinna mills
- Visuvesi Oy: Visuvesi mill
- Koskisen Oy: Järvelä mill

Product description

Standard birch plywood consists of birch veneer and glue (mainly phenol formaldehyde).

Conversion factors

Unit weight	660 kg/m ³
Weight per square metre	6.1–20.4 kg/m ²
Humidity	9%



Photo: Puuinfo Oy

Technical properties

Areas of application: Transport equipment, concrete formwork systems, furniture and indoor cladding.

Birch plywood is suitable for applications requiring great strength, a beautiful appearance and/or repeated application.

- Gluing: Phenol formaldehyde glue according to EN 314-2 / Class 3 exterior.
- Thicknesses and weights: Thickness 9 .. 30 mm; weight 6.1–20.4 kg/m², maximum thickness 50 mm.
- Standard sizes (the first dimension is in the direction of the top veneer): 1,200/1,220/1,500 x 1,200–3,600 mm
 - o In addition, different manufacturers supply various standard sizes as well as customised sizes made to order
- Quality grades of the top veneer: See RT card RT 22-10731 for more information.
- Strength: According to Handbook of the Finnish plywood. The strength of joined plywood is 10–30% lower than that of standard board.

RT-Environmental declaration is based on the national methodology following the basic principles stated in the ISO standard series 14040 and 14020. The method considers also the preliminary results achieved within ISO CD 21930. It is developed in cooperation with Confederation of Finnish Construction Industries RT, The Building Information Foundation RTS, VTT Technical Research Centre of Finland and companies of construction business.

2. ECO-PROFILE OF THE PRODUCT

The eco-profile includes the life cycle stages from the acquisition of raw materials to the factory gate

2.1 USE OF RESOURCES

Energy

Use of energy	MJ/kg
Non-renewable energy resource consumption	14
Renewable energy resource consumption	6.1
Energy resource consumption in processes + transport	20.1

Energy in transport *	MJ/kg
Energy resource consumption in transports	Not specified

Energy in processes *	MJ/kg
Electric energy resource consumption	Not specified
Fossil energy resource consumption	Not specified
Biotic energy resource consumption	Not specified
Total energy resource consumption in processes	Not specified

Feedstock energy of raw materials*	MJ/kg
Fossil feedstock energy in raw materials	3.3
Biotic energy in raw materials	0.15
Total feedstock energy of raw materials	3.45

*Voluntary

Raw materials

Consumption of raw materials	g/kg
Non-renewable natural materials	98
Renewable natural materials	1,400
Hidden material flows	Not specified
Total consumption of raw materials	1,498

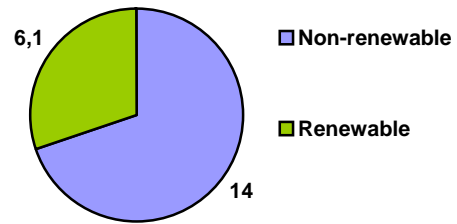
2.2 EMISSIONS

Emissions to air	g/kg
CO ₂	650
CO	2.5
SO ₂	2.7
NO _x	3.4
CH ₄	2.7
N ₂ O	3.3 × 10 ⁻³
NM VOC	0.79
PM ₁₀	1.1
Heavy metals (Hg, Cd, Pb, As, Cr, Zn, Ti)	0.56 × 10 ⁻³
Dust	0.35
Other particles	

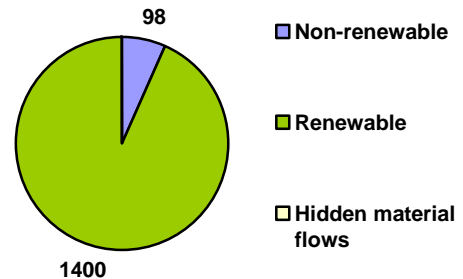
Emissions to water	g/kg
COD	0.33
BOD	0.10
P _{tot}	1.6 × 10 ⁻³
N _{tot}	0.012
Solids	0.065

Process waste	g/kg
Waste to dumping area	6.3
Hazardous waste	1.1

Energy in processes and transport
MJ/kg



Consumption of raw materials g/kg



3. OTHER ENVIRONMENTAL ASPECTS

CONSTRUCTION

- Transportation
- Spillage on site
- Emissions to indoor air

- The plywood products that belong to the emission class M1 are listed on the Building Information Foundation RTS Internet site at www.rts.fi.

RISKS

SERVICE LIFE

SERVICE AND MAINTENANCE FINAL DISPOSAL

Recycling

- Intact board in good condition can be recycled as a board product or incinerated in a suitable boiler.

Energy use

- Can be utilised as energy.
- Gross heating value 21 MJ/kg.

Waste treatment

- Deposition and quality: Can be deposited in a landfill.

ADDITIONAL INFORMATION

- Plywood contains stored carbon equivalent to 1,188 g CO₂/ kg birch plywood.
- The sold by-product energy is 0.51 MJ/kg.
- Plywood manufacturers employ certification systems guaranteeing that the raw material is acquired from forests managed according to sustainable forest management.