

Environmental product declaration (EPD)

As per EN 15804+A1

Okoume and phenolic (PF) resin plywood panel, made in France

Data for 1 m³



Collective EPD

This EPD are based on collective EPD approach verified according to the French program INIES and available on site www.inies.fr

Issue date

Collective EPD publication date

06/05/2019

Realised by



INSTITUT
TECHNOLOGIQUE

Initiated by
U I P C

Union des Industries
du Panneau Contreplaqué

Reading guide

Abbreviations > **LCA** > Life cycle assessment
ADP > Abiotic depletion potential
EPD > Environmental product declaration
FDES > French EPD

DTU > French "Unified Technical Documents"
PCR > Product category rules
FU > Functional unit
WIP > Waste incineration plant

General information

Manufacturer > Companies producing plywood panels in France corresponding to the description given below. A list of companies that can claim this french EPD is available from :
and information UIPC - Union des industries du panneau contreplaqué : 23 rue du Départ, 75014, Paris, www.uipc-contreplaque.fr

Declared by > Institut technologique FCBA : 10 rue Galilée 77420 Champs-sur-Marne, www.fcba.fr

Produced by > Institut technologique FCBA : 10 rue Galilée 77420 Champs-sur-Marne, www.fcba.fr

EPD information > Collective EPD from 'cradle-to-gate and end of life of product' (modules A1 to A3 and C1 to C4 + D)

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Valid until > 06/05/2024

Warning on comparability > EPD comparison is possible by ensuring that :

- the same functional requirements as defined by the 2 EPD are met, and
- the environmental and technical performances of any assembled systems, components, or products excluded are the same, and
- the amounts of any material excluded are the same, and
- excluded processes or life cycle stages are the same, and
- the influence of the product systems on the operational aspects and impacts of the building are taken into account.

Product description

Name and identification > Okoume and phenolic (PF) resin plywood panel, made in France

Visual >
representation



Main components > Following table presents the main components of the installed product and the quantity by functional unit

Component	Material	Weight (kg / FU)	Volume (m ³ / FU)
Wood	Wood (okoume)	435	1
Glue	Phenolic (pf) resin	81	0
TOTAL		516	1

Other characteristics > None.

Use > -

Suitability for use > The plywood panel must comply with the following standards requirements EN 636 - Plywood - Specifications.

Reference service life > According to plywood use.

Content declaration > The product does not contain substances from the list of substances of very high concern that are candidates for authorization by the European Chemicals Agency.

Carbon storage > The following information relates in particular to the storage of carbon are given as complementary environmental information.
and biosourced content

Parameter	Unit	Value
Biogenic carbon content	kg CO ₂ éq. / FU	716,3
Biosourced content	kg / FU	435,0

Manufacturing process > The main manufacturing stages of the product are: cutting, debarking, peeling, trimming, drying, sizing, pressing, edging and sanding.

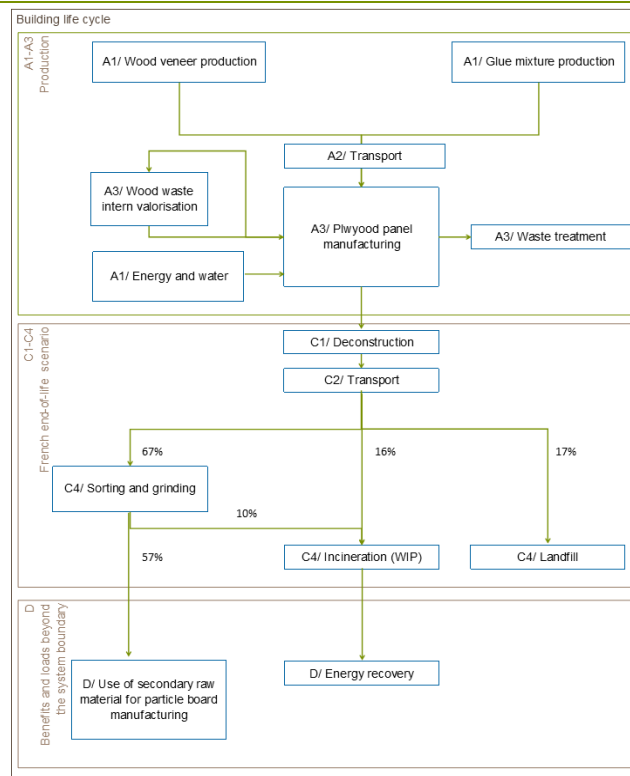
Distribution > Packaging materials aren't included.

LCA rules

PCR > EN 15804+A1 and EN 16485 are used as PCR.

Reference flow > 1 m³ of surface using a plywood panel of okoume and phenolic (PF) resin.

Process flow >
diagram



Cut-off rules > All material and energy fluxes known to be capable of causing significant emissions to air, water or soil have been included.

Allocations > Losses generated during manufacturing were accounted for as waste and 100% allocated to the product. In accordance with EN 16485, the energy and biogenic carbon contents have been allocated to reflect the physical flows.

Data quality > Primary data come from the average data collected on site (reference year 2016).

Secondary data come from ecoinvent database version 3 and the LCA database developed by FCBA (based on the report DHUP/CODIFAB/FBF/CSTB/FCBA 2012)

Environmental parameters from the LCA

		Product stage	End-of-life stage				Life cycle	Benefices and loads beyond the system boundary	
		Raw material supply, transport and manufacturing	Deconstruction, demolition	Transport	Waste processing	Disposal	Sub-total	Sub-total	Reuse, recovery and/or recycling
Parameters describing environmental impacts		A1-A3	C1	C2	C3	C4	C1-C4	A-C	D
Global warming potential	kg CO ₂ éq. / FU	-285		2,94	415	252	669	384	-145
Depletion potential of the stratospheric ozone layer	kg CFC-11 éq. / FU	5,12 E-05		4,54 E-07	5,09 E-07	5,11 E-07	1,47 E-06	5,27 E-05	-1,55 E-05
Acidification potential of soil and water	kg SO ₂ éq. / FU	3,29		0,0165	0,0302	0,0362	0,0829	3,37	-0,356
Eutrophication potential	kg PO ₄ ³⁻ éq. / FU	0,535		0,0037	0,00637	0,00968	0,0197	0,555	-0,00434
Formation potential of tropospheric ozone	kg éthène éq. / FU	0,183		0,000476	0,000847	0,0111	0,0125	0,195	-0,018
Abiotic depletion potential (ADP-elements) for non fossil resources	kg Sb éq. / FU	0,00011		3,13 E-06	4,83 E-06	3,58 E-06	1,15 E-05	0,000121	-2,27 E-05
Abiotic depletion potential (ADP-elements) for fossil resources	MJ / FU	7 850		43,6	61,8	34,6	140	7 990	-2 110
Air pollution	m ³ / FU	61 100		215	502	1 380	2 090	63 200	-2 200
Water pollution	m ³ / FU	192		0,957	1,88	1,99	4,83	197	-13,5
Parameters describing resource use									
Use of renewable primary energy excluding renewable primary energy resources used as raw materials	MJ / FU	5 710		0,282	-26,4	0,65	-25,5	5 680	973
Use of renewable primary energy resources used as raw materials	MJ / FU	7 310			-4 140		-4 140	3 160	
Total use of renewable primary energy resources	MJ / FU	13 000		0,282	-4 170	0,65	-4 170	8 850	973
Use of non renewable primary energy excluding non renewable primary energy resources used as raw materials	MJ / FU	6 350		45	1 450	38,6	1 530	7 890	-2 750
Use of non renewable primary energy resources used as raw materials	MJ / FU	2 440			-1 380		-1 380	1 060	
Total use of non renewable primary energy resources	MJ / FU	8 790		45	63,7	38,6	147	8 940	-2 750
Use of secondary material	kg / FU	0,000765						0,000765	
Use of renewable secondary fuels	MJ / FU								
Use of non renewable secondary fuels	MJ / FU								
Net use of fresh water	m ³ / FU	0,969		0,00641	0,00794	0,136	0,15	1,12	-0,407
Parameters describing waste categories									
Hazardous waste disposed	kg / FU	4,35		0,0153	0,077	1,62	1,71	6,07	-1,04
Non hazardous waste disposed	kg / FU	37,6		0,166	0,195	94,8	95,2	133	-15,9
Radioactive waste disposed	kg / FU	0,025		1,80 E-05	2,53 E-05	0,000152	0,000195	0,0252	-0,00903
Parameters describing output flow									
Components for re-use	kg / FU								
Materials for recycling	kg / FU	0,0373			272	54,4	326	326	7,84
Materials for energy recovery	kg / FU	-46,7						-46,7	
Materials for energy recovery (heat)	MJ / FU					362	362	362	
Materials for energy recovery (electricity)	kWh / FU					52,3	52,3	52,3	

Scenarios and additional technical information

Stage		Parameter	Value	
Product stage	A1-A3 Raw material, transport and manufacturing	Wood specie(s)	Okoume	
		Glue type	phenolic (PF) resin	
		Weight of glue	81 kg/FU	
		Volumic mass	516 kg/FU	
Stage		Parameter	Value	
End-of-life stage	C	End-of-life scenario	The end-of-life is based on the average french end-of-life scenario for construction wood waste : 67% of wood waste reach a sorting platform (with subsequent recycling of wood into wood particle board and incineration of grinding 'dust'), 16% are incinerated with energy recovery, 17% are landfilled. This scenario is described in the following report : FCBA CSTB DHUP CODIFAB FBF, Convention DHUP CSTB 2009 Action 33 Sous-action 6 – ACV & DEP pour des produits et composants de la construction bois – Volet 2 Prise en compte de la fin de vie des produits bois – Phase 3 Modélisation ACV et calculs d'impacts pour le recyclage matière et la réutilisation, 2012.	
		Collection proces	Collected separately	345,7 kg / FU
			Collected with mixed construction waste	170,3 kg / FU
		Recovery system	Reuse	None
			Recycling	345,7 kg / FU
		Disposal	Energy recovery	None
			Incineration	82,6 kg / FU
		Landfill	87,7 kg / FU	
Reuse, recovery and/or recycling potential	D	Stage description	According to appendix H of the EN 15804/CN (french complement), the benefits and loads beyond the system's boundaries include : - at recycling level, transport and transformation of wood chips as secondary raw material for wood particle board manufacturing, and substitution of virgin raw material (forestry, logging, transport, grinding, drying), - at incineration level, substitution of recovered thermal and electrical energy. The different processes are described in the report quoted above.	