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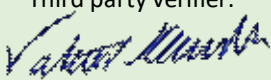
# Environmental product declaration

in accordance with ISO 14025 and EN 15804

## Glulam timber from Pölkky Oy



<b>Program operator, publisher:</b>	Rakennustietosäätiö RTS The Building Information Foundation RTS Malminkatu 16 A, 00100 Helsinki. <a href="http://cer.rts.fi">http://cer.rts.fi</a>
<b>Owner of the declaration:</b>	Pölkky Oy
<b>Name of the product:</b>	Glulam timber from Pölkky Oy
<b>Declaration number:</b>	RTS_412_25
<b>Issue date:</b>	26.8.2025
<b>Valid to:</b>	26.8.2030
<b>Scope of the declaration</b>	<p>This environmental product declaration covers the environmental impacts of glue laminated timber produced at Pölkky Oy's production facility in Kuusamo. The collected data represents the year 2022.</p> <p>The declaration has been prepared in accordance with SFS-EN 15804:2012 + A2:2019, EN 16485:2014 wood PCR and ISO 14025 standards and the additional requirements stated in the RTS PCR (English version, 26.08.2020). EPD of construction products may not be comparable if they do not comply with EN15804 and seen in a building context.</p> <p>This declaration covers the life cycle stages from cradle to gate, end of life stage and benefits and loads beyond the system boundary.</p>
<b>Logo</b>	<b>Signatures</b>     Jukka Seppänen RTS EPD Committee Secretary Laura Apilo Managing Director

<b>Verified according to the requirements of EN 15804:2019 (Product group rules)</b>	
<b>Independent verification of the declaration and data, according to the ISO 14025:2010 is</b>	
<input type="checkbox"/> Internal	<input checked="" type="checkbox"/> External
Third party verifier:  16.06.2025 Valter Kainila, Ramboll Finland Oy	

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## 1 General information

### 1.1 Owner of the declaration

Pölkky Oy  
Kemijärventie 73  
93600 Kuusamo

Tel.: +358 20 764 0200  
Email: office@polkky.fi

### 1.2 Description of the organisation

Pölkky Oy is the largest private wood processing company in Northern Finland. Pölkky Oy owns the entire process from wood procurement to sawmill operations and the manufacturing of processed products. Our main products include high quality spruce and pine sawn timber, planed spruce and pine S4S (surfaced four sides), profile boards, ceilings, and floorings, impregnated S4S and decking, glulam and components for wooden frame houses. Our range of timber products has been developed to correspond to the special needs of the end users.

In addition to our timber products, Pölkky Oy also offers a variety of by-products such as wood chips and sawdust. The by-products can be used for example in the pulp industry, heat production, gardening or animal shelters. Utilizing the by-products underlines our principle that nothing goes to waste from the raw materials.

Pölkky Oy is part of Pfeifer Group which is one of the leading timber processing companies in Central Europe.

### 1.3 Product name and code

Glulam timber from Pölkky Oy

### 1.4 Production sites

Pölkky Oy Kuusamo, Kemijärventie 73, 93600 Kuusamo

The geographic representative country is Finland.

### 1.5 Additional information

Additional information from:  
Mikael Kostamo, Pölkky Oy  
Sustainable Development Manager  
Email: Mikael.kostamo@polkky.fi

### 1.6 Product category rules and scope of life cycle assessment

The declaration has been prepared in accordance with SFS-EN 15804:2012 + A2:2019, EN 16485:2014 Wood PCR and ISO 14025 standards and the additional requirements stated in the RTS PCR (English version, 26.08.2020).

This EPD covers life cycle stages for glulam timber from cradle to gate with options, modules C1-C4, and module D.

### 1.7 Author of the life cycle assessment and environmental report

Pölkky Oy, Kemijärventie 73, 93600 Kuusamo. <https://polkky.com/fi/>  
Telephone.: +358 20 764 0200. Email: [office@polkky.fi](mailto:office@polkky.fi)

Author: M.Sc. Mikael Kostamo

### 1.8 Verification

The declaration has been prepared in accordance with SFS-EN 15804:2012 + A2:2019, EN 16485:2014 Wood PCR and ISO 14025 standards and the additional requirements stated in the RTS PCR (English version, 26.08.2020).

This declaration was verified by third party verifier according to abovementioned standards and PCR rules by: Valtteri Kainila, Ramboll Finland Oy

Verification date: 16.06.2025

Verification is valid until: 16.06.2030

### 1.9 Declaration issue date and validity

Declaration issue date 26.8.2025. The declaration is valid 5 years.

## 2 Product information

### 2.1 Description of the product and its use

The declaration is made for average glulam timber manufactured at Pölkky Oy Kuusamo's production site. Glulam timber is made of responsibly sourced pine (*Pinus sylvestris*) and spruce (*Picea abies*). Log procurement and the manufacturing processes at Pölkky Oy are FSC® and PEFC certified.<sup>1</sup>

Glulam timber is manufactured by gluing wood lamellas together with adhesive. Dimensions and lengths of the products can vary a lot. Glue laminated timber is used in construction for beams, columns, and arches, offering strength, durability, and design flexibility in structural applications. Moisture content for glulam timber products varies between 8–15 % depending on the product. Technical properties of Pölkky Oy's glulam timber presented in the part 2.3.

The process including the whole life cycle of the glulam timber is shown in the figure 1. Softwood logs are cut down in the forest, transported to the roadside with a forest tractor, and then taken to the sawmill by log trucks. Pölkky Oy's sawmills are equipped with log sorters to receive and sort the logs, saw lines to process them according to orders, kilns, and a heat plant that utilizes the by-products from the mill. Electricity is sourced from the grid. Fuel for the machinery represents a significant portion of the fossil energy consumption at the sites. The glulam timber is made from the sawn timber produced at Pölkky Oy's production sites. In the glulam production line, the timber is planed and glued together. Glulam line has also a separate line for packaging the finished products.

Sawn timber used in the process is produced at Pölkky Oy's own production facilities and it is modelled by Pölkky Oy's EPD's for sawn timber.

<sup>1</sup> FSC Trademark licence code: FSC-C163097

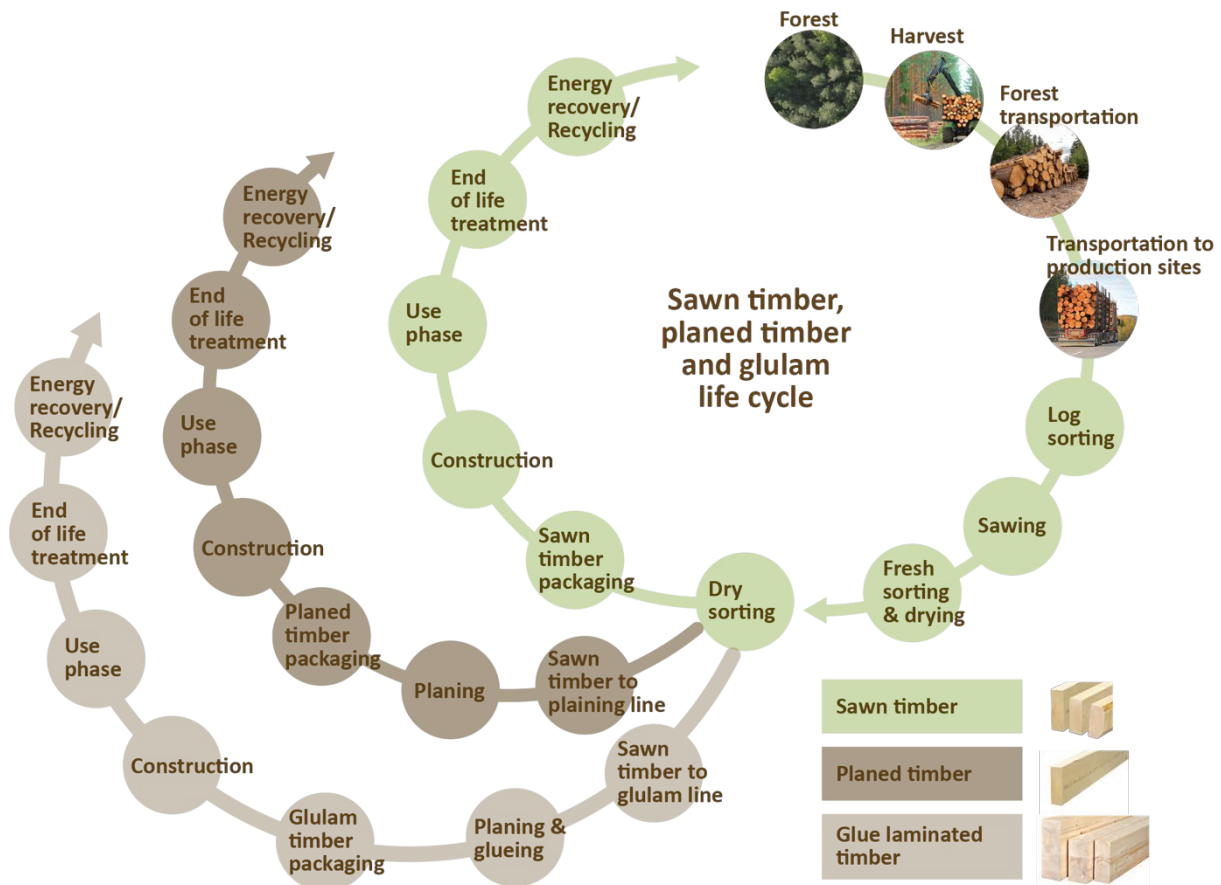


Figure 1. Life cycle of glulam timber

## 2.2 Results of environmental information reported per kilogram

Table 1. Glulam timber key information per kilogram

Indicators	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
Climate change – total	kg CO <sub>2</sub> eq.	-1,06E+00	3,15E-02	5,19E-02	5,19E-02	1,17E-02	1,36E+00	2,01E-04	-4,55E-01
Abiotic depletion, minerals & metals	kg Sb eq.	4,75E-08	2,28E-10	3,25E-10	3,25E-10	8,61E-11	3,98E-10	2,15E-12	-4,83E-09
Abiotic depletion of fossil resources	MJ, net calorific value	3,20E+00	4,55E-01	6,91E-01	6,92E-01	1,84E-01	1,32E-01	2,39E-03	-9,87E+00
Water use	m <sup>3</sup> world eq. Deprived	1,41E-02	9,96E-05	1,07E-04	1,07E-04	4,86E-05	-3,76E-04	4,98E-06	-1,84E-02
Biogenic carbon content in product	kg C/kg	4,31E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Use of secondary material	kg/kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00

### 2.3 Product standard

Pölkky Oy's glulam has a CE certificate which follows the standard EN 14080:2013. Technical properties of the product are shown in the table 2.

Table 2. Technical properties of glulam.

Property	Classification / value
Strength classification	GL24c, GL28c, GL30c and GL32c
Fire classification	D-s2, d0
Moisture content, when leaving factory.	8–15 %

### 2.4 Physical properties

Moisture content for glulam timber varies between 8–15 % The average density of glulam timber in the model is 470 kg/m<sup>3</sup>.

### 2.5 The main raw materials of the products

The raw materials of the products are 25 % spruce (*Picea abies*) and 75 % pine (*Pinus sylvestris*). Glulam timber consists of wood and glue. Product main composition is shown in the following table.

Table 3. The product main composition.

Product structure	Material	Quantity p%*	Origin of the materials
Metals	-	0	-
Stone-based materials (minerals)	-	0	-
Fossil materials	Glue	1	Austria / Finland
Bio-based materials	Wood	99	Finland

The finished product is protected with plastic wrapping and secured with plastic band. The weight of the packaging material relative to the product is less than 0.5%.

### 2.6 Substances under European Chemicals Agency's REACH SVHC restrictions

The products do not include substances from ECHA's Candidate List of Substances of Very High Concern.

### 3 Scope of life cycle assessment

#### 3.1 Declared unit

The unit for which the calculations are made is 1m<sup>3</sup> of glulam timber. The density used in this EPD is 470kg/m<sup>3</sup>.

The results for the glulam timber represent the of the outcomes from Pölkky Oy’s Kuusamo’s production facility when producing 1 m<sup>3</sup> of glulam timber. The glulam beams are only produced at one production facility. The calculation basis used is one full year, the year 2022.

#### 3.2 System boundaries

This EPD covers life cycle stages for glulam timber from cradle to gate with options, modules C1-C4, and module D. The product phase, transportation to the building site and installation A1-A5 are included as well as the deconstruction, transportation to waste processing and the waste processing C1-C4. Also, the module D, information beyond construction works life cycle, is in the scope.

The system boundaries are shown in the figure 2. The modules marked with green signs are included in the EPD and the modules marked with red signs are excluded.

A1-A3 Product Stage			A4-A5 Construction Stage		B1-B7 Use Stage							C1-C4 End of Life Stage				D Other supple- mentary Informa- tion
A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	
Raw Material Supply	Transport	Manufacturing	Transport	Construction Installation	Use	Maintenance	Repair	Replacement	Refurbishment	Operational Energy	Operational Water	Deconstruction/Demolition	Transport	Waste Processing	Disposal	Future Reuse, Recycling or Energy Recovery Potentials

Figure 2. The modules included in this EPD. The modules marked with green signs are included in the EPD and the modules marked with red signs are excluded.

#### 3.3 Life cycle stages

Data for A1-A3 have been collected from the Kuusamo’s production site. Module A1-A3 includes all the raw materials used, also forest management activities, transports to production site, energy production and consumption (electricity, heat and fuels), including primary production and processing of raw materials and fuels. Production of glulam timber consists of first sawing the raw-material and then the glulam production line. Glulam line consists of sawn timber package dismantling, planing, finger jointing process, glueing, trimming and packaging of finished products. The main raw material is wood harvested from sustainable forests and glue. Pölkky Oy’s whole chain of custody is FSC® and PEFC certified. Also waste treatment and transportations from the production facility are included.

Transportation to customer, module A4, for glulam timber, includes transportation from the production site to the Oulu harbour in Finland with full trailers for the declared unit 1 m<sup>3</sup>. From Oulu harbour there the goods are transported to UK, and the final transportation in UK from the harbour to customer in the scenario is estimated to be 100 km.

In the modules A5 construction and C1 demolition the work is done by a drill driver and a crane. It is estimated that there is no production loss in the installation phase. The potential amount of production loss from the installation of glulam timber cannot be determined by the manufacturer, as it is highly dependent on the specific application and installation method. Glulam timber products have a wide range of uses and cutting losses or off-cuts vary significantly depending on the end use. The model assumes that the 1 m<sup>3</sup> of installed product used as a functional unit can be directly installed without the need to modify them or discard any individual planks for example due to quality issue.

In modules C and D, 90% of the used glulam timber is expected to be crushed and burned for energy and 10 % is expected to be reused as glulam. In the module D, 90% of the glulam timber is directed to energy recovery as biofuel, and the resulting heat substitutes average district heating production in Finland. The remaining 10 %, which is reused, is calculated to replace virgin material.

The disposal of wood waste in landfills for end-of-life treatment is restricted by legislation in many countries, and economic incentives, such as taxes, drive wood waste towards energy recovery instead of landfilling. For this reason, it is reasonable to assume in the model that wood waste does not end up in landfills at all (CEPS 2024). The biogenic carbon content coming to the system in A1 is released in C3.

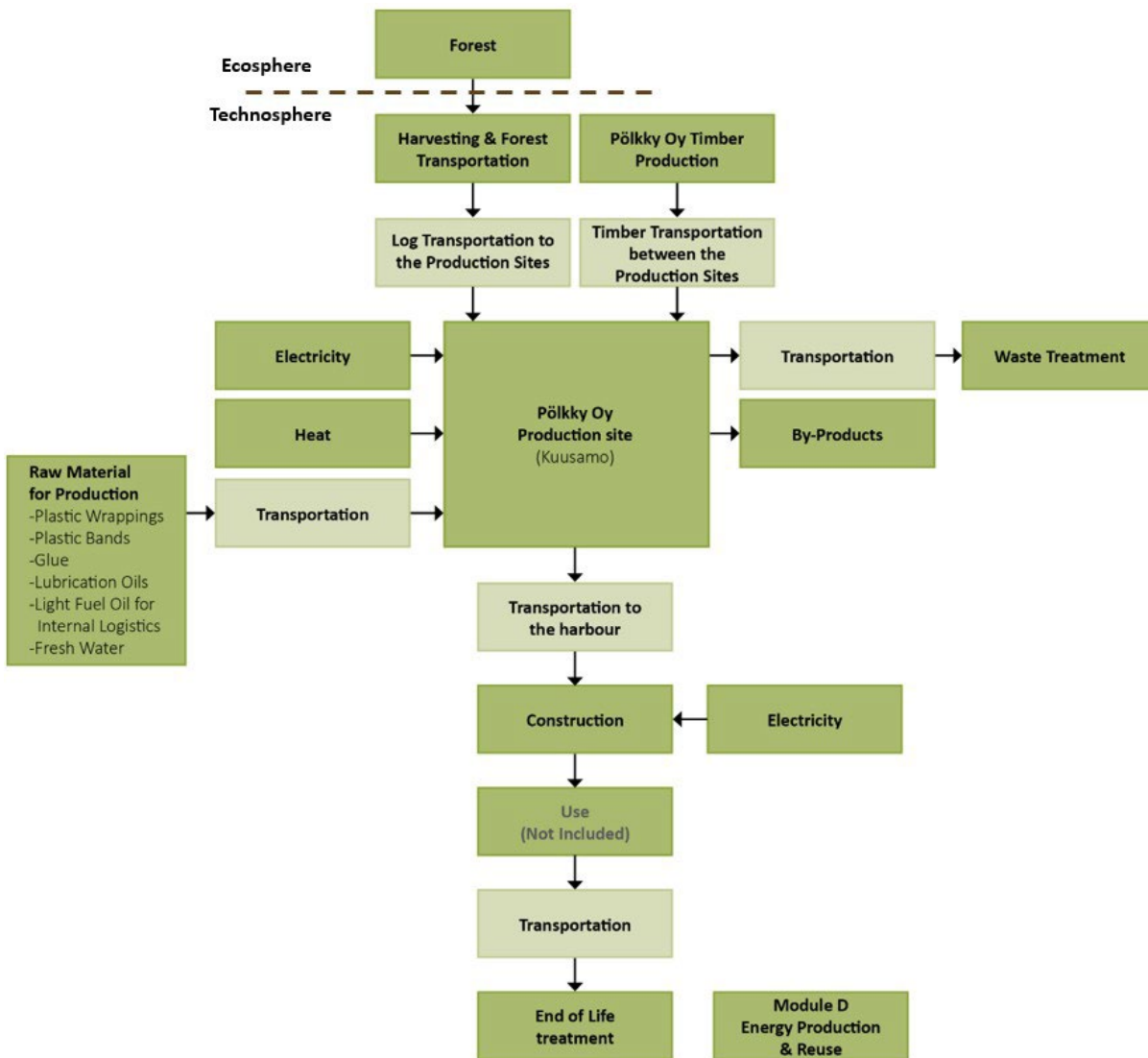


Figure 3. System boundaries of the EPD for glulam timber

### 3.4 System boundary exclusions

The production of production equipment and means of transport, as well as the machinery, equipment and production goods needed for production and in production are excluded from the scope of the assessment, as are the commuting of workers.

The screws required for the installation are excluded from the model, as their quantity is small. Also, the plastic waste handling, which comes from unwrapping the timber packages at the construction site, is excluded from the modelling as the amount of plastic waste from 1 m<sup>3</sup> timber package is small. The screws and the plastic represent less than 1% from the weight of the product. No other material or energy flows have been excluded from the system boundaries.

### 3.5 Allocation

Allocation rules are used according to the ISO14044:2006. Allocation was avoided when possible and when necessary, allocation is made based on physical shares and avoiding double calculations. Allocation was needed to evaluate the share of energy used to produce sawn timber, planed timber and glulam timber at Kuusamo's site.

Sawn timber and glulam production generates by-products, such as sawn dust, chips, bark and shavings. In the model it was estimated that from 1 m<sup>3</sup> of logs, approximately half converts to sawn timber and remaining to by-products. From the produced sawn timber, a small production loss is estimated in the glulam line due to planing and cutting the sawn timber in the process.

The environmental impacts have been allocated in the model to the products based on how they physically relate to them. For example, fresh chips, bark, and fresh sawdust produced in the sawing process are not assigned heat production burdens, as they leave the process before drying process. The burden from electricity consumption again is also allocated to the by-products because they are produced on the same sawing line as the timber, which consumes the most electricity at the site. Physical allocation was used because co-products have low economic value compared to the main products, contributing less than 25 % of the total revenue.

## 4 Indicators describing environmental impacts and use of natural resources

Environmental indicators are shown in the following tables. The results for the glulam timber represent the outcomes from Pölkky Oy's Kuusamo's production facility when producing 1 m<sup>3</sup> of glulam timber. The glulam beams are only produced at one production facility, so the result comparison between different sites is not necessary.

#### 4.1 Core environmental impacts per declared unit

Table 4. The core environmental impacts for glulam timber.

Indicators	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
Climate change, total	kg CO <sub>2</sub> eq.	-5,00E+02	1,48E+01	2,44E+01	2,44E+01	5,48E+00	6,39E+02	9,44E-02	-2,14E+02
Climate change, fossil	kg CO <sub>2</sub> eq.	1,17E+02	1,48E+01	2,43E+01	2,44E+01	5,46E+00	6,63E+00	5,04E-02	-3,49E+02
Climate change, bio-genic	kg CO <sub>2</sub> eq.	-6,17E+02	2,16E-02	3,92E-02	3,92E-02	1,30E-02	6,32E+02	4,39E-02	1,35E+02
Climate change, LU-LUC	kg CO <sub>2</sub> eq.	1,54E-01	7,71E-03	3,60E-03	3,60E-03	2,05E-03	2,17E-03	5,22E-05	2,80E-02
Ozone depletion	kg CFC-11 eq.	8,77E-06	3,38E-06	5,18E-06	5,19E-06	1,36E-06	4,60E-07	1,44E-08	-3,75E-06
Acidification	mol H <sup>+</sup> eq.	3,59E-01	2,26E-01	2,52E-01	2,52E-01	1,74E-02	7,09E-02	7,56E-04	-9,93E-01
Eutrophication aquatic freshwater	kg PO <sub>4</sub> eq.	3,27E-02	7,62E-04	7,89E-04	7,89E-04	3,54E-04	2,92E-03	3,44E-04	-3,27E-02
Eutrophication aquatic marine	kg N eq.	9,72E-02	5,50E-02	1,12E-01	1,12E-01	3,90E-03	3,72E-02	1,39E-04	-1,11E-01
Eutrophication terrestrial	mol N eq.	8,85E-01	6,10E-01	1,22E+00	1,22E+00	4,26E-02	3,57E-01	1,51E-03	-7,46E-01
Photochemical ozone formation	kg NMVOC eq.	2,80E-01	1,67E-01	3,36E-01	3,36E-01	1,68E-02	8,79E-02	4,68E-04	-7,49E-01
Depletion of abiotic resources - minerals & metals *	kg Sb eq.	2,23E-05	1,07E-07	1,53E-07	1,53E-07	4,05E-08	1,87E-07	1,01E-09	-2,27E-06
Depletion of abiotic resources - fossil fuels *	MJ, net calorific value	1,50E+03	2,14E+02	3,25E+02	3,25E+02	8,65E+01	6,19E+01	1,12E+00	-4,64E+03
Water use *	m <sup>3</sup> world eq. Deprived	6,61E+00	4,68E-02	5,04E-02	5,04E-02	2,29E-02	-1,77E-01	2,34E-03	-8,66E+00

\* The results of this environmental impact indicator shall be used with care as the uncertainties on these results are high or as there is limited experience with the indicator.

## 4.2 Additional environmental impacts per declared unit

Table 5. The additional environmental indicators for glulam timber.

Indicators	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
Particulate Matter emissions	Disease incidence	3,57E-06	9,45E-07	6,67E-06	6,67E-06	4,78E-07	7,25E-07	7,91E-09	3,79E-07
Ionizing radiation, human health **	kBq U235 eq.	1,27E+01	1,07E+00	1,69E+00	1,69E+00	4,50E-01	1,23E-01	6,26E-03	-3,63E+00
Eco-toxicity (freshwater) *	CTUe	1,68E+03	1,57E+02	1,88E+02	1,88E+02	6,97E+01	1,03E+02	9,12E+00	8,45E+02
Human toxicity, cancer effects *	CTUh	1,77E-07	6,53E-09	7,45E-09	7,46E-09	1,82E-09	1,42E-08	6,45E-11	-2,27E-08
Human toxicity, non-cancer effects *	CTUh	2,15E-06	1,40E-07	1,36E-07	1,36E-07	6,94E-08	5,71E-07	8,21E-10	-3,38E-07
Land use related impacts/Soils quality *	Dimensionless	4,69E+04	8,83E+01	6,81E+00	6,82E+00	8,26E+01	8,61E+00	1,97E+00	-4,93E+02

\* The results of this environmental impact indicator shall be used with care as the uncertainties on these results are high or as there is limited experienced with the indicator.

\*\* This impact category deals mainly with the eventual impact of low dose ionizing radiation on human health of the nuclear fuel cycle. It does not consider effects due to possible nuclear accidents, occupational exposure nor due to radioactive waste disposal in underground facilities. Potential ionizing radiation from the soil, from radon and from some construction materials is also not measured by this indicator.

### 4.3 Indicators describing the use of natural resources

Table 6. Use of Resources for glulam timber

	A1-A3	A4	A5	C1	C2	C3	C4	D
Use of renewable primary energy excluding renewable primary energy resources used as raw materials [MJ/unit]	7,14E+03	1,03E+01	9,36E-01	9,36E-01	6,49E+00	0,00E+00	0,00E+00	5,29E+03
Renewable primary energy resources used as raw materials [MJ/unit]	5,88E+03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	-5,88E+03	0,00E+00	5,88E+02
Total use of renewable primary energy resources [MJ/unit]	1,30E+04	1,03E+01	9,36E-01	9,36E-01	6,49E+00	-5,88E+03	0,00E+00	5,88E+03
Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials [MJ/unit]	3,26E+04	2,35E+02	2,64E+02	2,64E+02	3,46E+01	0,00E+00	0,00E+00	0,00E+00
Non-renewable primary energy resources used as raw materials [MJ/unit]	6,40E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Total use of non-renewable primary energy resources [MJ/unit]	3,27E+04	2,35E+02	2,64E+02	2,64E+02	3,46E+01	0,00E+00	0,00E+00	0,00E+00
Used recycled raw materials [kg/unit]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Use of renewable secondary fuels [MJ/unit]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Use of non-renewable secondary fuels [MJ/unit]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Total use of water [m <sup>3</sup> ]	4,22E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00

## 5 Other environmental indicators

### 5.1 Biogenic carbon content per declared unit

Table 7. Biogenic carbon content

<b>Biogenic carbon content in product</b>	<b>A3</b>
<b>Glulam timber</b>	202,3 C/m <sup>3</sup>
<b>Biogenic carbon content in packaging</b>	0 C / m <sup>3</sup>

The density of glulam timber is 470 kg/m<sup>3</sup> and the moisture content is 15 %. It is estimated that 1 % of the product is glue. Therefore, the dry mass of the product is 404,6 kg/m<sup>3</sup>. Biogenic carbon constitutes approximately 50% of the dry weight of wood.

The amount of biogenic carbon stored in the product differs from the reported GWP-biogenic value due to biogenic CO<sub>2</sub> emissions emitted during bio-based fuel combustion used in heat production at the site. These emissions are included in the GWP-biogenic category in accordance with EN 15804+A2.

## 5.2 Amount of wastes

Table 8. Wastes – glulam timber

Waste categories	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
Hazardous waste disposed	kg	3,18E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Non-hazardous waste disposed	kg	6,13E+00	0,00E+00	6,07E-01	4,80E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Radioactive waste disposed	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00

## 5.3 Other environmental indicators

Table 9. Other environmental indicators - glulam timber

Other environmental indicators	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
Components for reuse	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	4,70E+01	0,00E+00	0,00E+00
Materials for recycling	kg	5,50E+00	0,00E+00	6,07E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Materials for energy recovery	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy - Heat	MJ	9,52E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	5,29E+03	0,00E+00	0,00E+00
Exported energy - Electricity	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00

# 6 Scenarios and additional technical information

## 6.1 Energy in manufacturing phase

Environmental impacts from the heating were modelled based on Tilastokeskus fuel classification report and actual fuel mix used at the heat plant. In Kuusamo heat is produced 100 % by biofuels. The GWP-factor for heating is shown in the table below.

Table 10. Information about energy used in the manufacturing phase

<b>Electricity data source</b>	Ecoinvent database, version 3.8; electricity, high voltage, Residual mix, FI, 2014-01-01 - 2021-12-31
<b>GWP per 1 kWh electricity</b>	0.74 kg CO <sub>2</sub> -Eq
<b>District heating data source</b>	Modelled based on Tilastokeskus (2024) report and actual fuel mix used at the plants.
<b>GWP per 1 kWh energy</b>	Kuusamo 0,403 kg CO <sub>2</sub> -Eq

## 6.2 Transportations to the construction site A4

Table 11. Technical information about the transportations in the A4 for glulam timber

Scenario information	Quantity	Data source
<b>Full trailer, diesel</b>	0.0151 kg diesel/tkm	Ecoinvent database 3.8: Transport, freight, lorry >32 metric ton, EURO6
Specific transport emissions	0.0872 kg CO <sub>2</sub> -Eq /tkm	Ecoinvent database 3.8: Transport, freight, lorry >32 metric ton, EURO6
Average distance to harbour	217 km/full trailer	
Average distance to customer	100 km /full trailer	
Capacity utilization % (total)	76 %	Ahlskog, R. 2017
<b>Container ship, HFO</b>	0.00691 kg HFO / tkm	Ecoinvent database 3.8: transport, freight, sea, container ship
Specific transport emissions	0.00942 kg CO <sub>2</sub> -Eq/tkm	Ecoinvent database 3.8: transport, freight, sea, container ship
Average sea transportation distance	2700 km / container ship	
Bulk density of transported products kg/m <sup>3</sup>	470 kg/m <sup>3</sup>	

## 6.3 Additional technical information in the end-of-life phase

Table 12. Additional information about the end-of-life process

<b>Processes</b>	
<b>Collection process</b>	1 kg collected separately
<b>Recovery system for glulam timber</b>	0.1 kg for reuse 0.9 kg for energy recovery
<b>Disposal</b>	0 kg for final disposal
<b>Assumptions for scenario development, e.g. transportation</b>	The amount for reusing of glulam timber is expected to increase from the 0.1kg to 0.2–0.4 kg.

## 7 References

- Ahlskog, R. 2017. Digitalisaatio mullistaa logistiikan. Kuljetus & Logistiikka 5, 44
- CEPS. 2024. Improving waste wood circularity in the EU: Classification frameworks and policy options.
- Ecoinvent database. Version 3.8. Allocation, cut-off by classification.
- EN 14080:2013 Glued laminated timber and glued solid timber
- EN 15804:2019 Sustainability of construction works. Environmental Product Declarations. Core rules for the product category of construction products
- EN 16485: 2014 Round and sawn timber - Environmental Product Declarations - Product category rules for wood and wood-based products for use in construction
- RTS 2020. RTS PCR. Protocol for drawing up Environmental Product Declarations of building products (RTS EPD) Complies with the standard SFS-EN15804:2019. 26.08.2020.
- RTS 2021. The Finnish RTS EPD programme RTS EPD Guideline.
- ISO 14025:2011-10 Environmental labels and declarations. Type III environmental declarations. Principles and procedures
- ISO14040:2006. Environmental management – Life cycle assessment – Principles and framework
- ISO 14044:2006. Environmental management – Life cycle assessment -- Requirements and guidelines

## Attachments

ATTACHMENT I: FSC Certificate - SCS-COC-008223

ATTACHMENT II: PEFC Certificate - FIN-PEFC-COC-1523

SCS Global Services does hereby certify that an independent audit has been completed and conformity to the applicable standard(s) has been confirmed for:

# Pölkky Oy

Kemijärventie 73, Kuusamo, 93600, Finland

**This multi-site certificate covers the procurement, production and distribution of sawn timber, planed and impregnated timber, gluelam timber and side products using the credit system. It also covers a DDS for the control of wood sourced from the municipalities in Northern Finland. It also covers the sale of FSC Controlled Wood.**

The facility(s) are hereby Chain of Custody certified to sell products as:

## FSC Controlled Wood; FSC Mix

The assessment has been conducted by SCS Global Services in accordance with the protocols of the Forest Stewardship Council® A.C. (FSC®).

FSC Standard: FSC-STD-40-003; FSC-STD-40-004; FSC-STD-40-005

Certificate Code: SCS-COC-008223

Trademark License Code: FSC-C163097

CW Code: SCS-CW-008223

Valid from: 24 February 2021    Expiry date: 23 February 2026

This certificate itself does not constitute evidence that a particular product supplied by the certificate holder is FSC-certified (or FSC Controlled Wood where applicable). Products offered, shipped or sold by the certificate holder can only be considered covered by the scope of this certificate when the required FSC claim is clearly stated on sales and delivery documents. The scope of this certificate is considered accurate on the date of issuance. The current validity and scope, including the full list of products, shall be verified on <http://info.fsc.org>. The certificate shall remain the property of SCS, and this certificate and all copies or reproductions of this certificate shall be returned to SCS immediately upon request. Where a certificate covers more than one site, the covered products and processes/ activities are performed by the network of Participating Sites, and not necessarily by each of them.



The mark of responsible forestry



A handwritten signature in black ink, appearing to read 'M. Schwartz'.

Maggie Schwartz, Vice President, Program Development  
SCS Global Services  
2000 Powell Street, Ste. 600, Emeryville, CA 94608 USA

# Pölkky Oy

This addendum contains the additionally certified locations approved by Pölkky Oy to participate in the use of the FSC® Chain of Custody Certification.

Certificate Number: (SCS-COC-008223)

## Additional Locations

Pölkky Oy Metsä: Kemijärventie 73, Kuusamo, 93600, (SCS-COC-008223-B)

Pölkky Oy Kajaani: Tehdaskatu 15, Kajaani, 87100, (SCS-COC-008223-C)

Pölkky Oy Kitka: Tolvantie 41, Kuusamo, 93900, (SCS-COC-008223-D)

Pölkky Oy Taivalkoski: Raamitie 1, Taivalkoski, 93400, (SCS-COC-008223-E)

Pölkky Oy Oulu: Moreenitie 17, Oulu, 90620, (SCS-COC-008223-F)

# PEFC CERTIFICATE

**Finotrol / Control Union Finland Oy herewith declares that**

**Pölkky Oy**

Kemijärventie 73  
FI-93600 Kuusamo

Including:

Pölkky Oy Metsä  
Pölkky Oy Kajaani  
Pölkky Oy Kitka  
Pölkky Oy Taivalkoski  
Pölkky Oy Oulu

managed Chain of Custody system complies with the international PEFC standards:

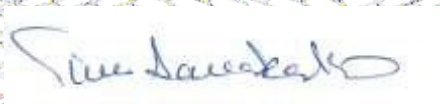
**PEFC ST 2002:2020 and PEFC ST 2001:2020** requirements in the following product categories:

**010100 Sawlogs and veneer logs, 010200 Pulpwood, 010300 Chips and Particles, 020100 Fuelwood, 030100 Sawnwood, 040200 Finger jointed lumber, 040300 Glue Laminated Products, 030300 Impregnated wood, 090200 Integrated Parts of Wooden Buildings and Constructions.**

The Chain of custody method used by the organization is **percentage method and credit method**.  
**This certificate was first issued on February 15, 2019, and it is updated June 2<sup>nd</sup> 2025, and is valid until November 27<sup>th</sup> 2028.**

**Certificate number: FIN-PEFC-COC-1523**

On behalf of Control Union Finland Oy (Finotrol), accredited certification body S038, 2<sup>nd</sup> of June.



Timo Aavakallio  
Quality manager



**Appendix of wood species. Certificate: FIN-PEFC-COC-1523**

PEFC Product Group	Wood Species	PEFC- method
010100 Sawlogs and Veneer Logs	Pine (Pinus sylvestris) Spruce (Picea abies) Larch (Larix decidua) Birch (Betula pubescens, Betula pendula) Aspen (Populus tremula)	Percentage method
010200 Pulpwood	Pine (Pinus sylvestris) Spruce (Picea abies) Larch (Larix decidua) Birch (Betula pubescens, Betula pendula) Aspen (Populus tremula)	Percentage method
010300 Chips and Particles	Pine (Pinus sylvestris) Spruce (Picea abies)	Percentage method
020100 Fuelwood	Pine (Pinus sylvestris) Spruce (Picea abies) Larch (Larix decidua) Birch (Betula pubescens, Betula pendula) Aspen (Populus tremula) Alder (Alnus incana, Alnus glutinosa))	Percentage method
030100 Sawn Timber	Pine (Pinus sylvestris) Spruce (Picea abies)	Credit method
040200 Finger Jointed Lumber	Pine (Pinus sylvestris) Spruce (Picea abies)	Credit method
040300 Glue Laminated Products	Pine (Pinus sylvestris) Spruce (Picea abies)	Credit method
030300 Impregnated or treated wood	Pine (Pinus sylvestris)	Credit method
090200 Integrated Parts of Wooden Buildings and Construction	Pine (Pinus sylvestris) Spruce (Picea abies)	Credit method