

ENVIRONMENTAL PRODUCT DECLARATION

as per ISO 14025 and EN 15804+A1


Owner of the Declaration	OJSC Mozyr woodworking integrated plant
Programme holder	Institut Bauen und Umwelt e.V. (IBU)
Publisher	Institut Bauen und Umwelt e.V. (IBU)
Declaration number	EPD-OJS-20200179-IBB1-EN
Issue date	31/03/2021
Valid to	30/03/2026

Wood Fibre Insulating Boards "BELTERMO"[®]
OJSC Mozyr woodworking integrated plant

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General Information

<p>OJSC Mozyr woodworking integrated plant</p>	<p>Wood Fibre Insulating Boards "BELTERMO"®</p>
<p>Programme holder IBU – Institut Bauen und Umwelt e.V. Panoramastr. 1 10178 Berlin Germany</p>	<p>Owner of the declaration OJSC Mozyr woodworking integrated plant 120a Socialistic str. 247760 Mozyr</p>
<p>Declaration number EPD-OJS-20200179-IBB1-EN</p>	<p>Declared product / declared unit This Declaration refers to 1m³ wood fibre insulating board manufactured in a dry process with an average weighted density of 159,17 kg/m³.</p>
<p>This declaration is based on the product category rules: Wood based panels, 12.2018 (PCR checked and approved by the SVR)</p>	<p>Scope: This Declaration applies for wood fibre insulating board manufactured in a dry process by OJSC Mozyr woodworkin integrated plant at its location in Mozyr city, Belarus.</p>
<p>Issue date 31/03/2021</p>	<p>The owner of the declaration shall be liable for the underlying information and evidence; the IBU shall not be liable with respect to manufacturer information, life cycle assessment data and evidences. The EPD was created according to the specifications of <i>EN 15804+A1</i>. In the following, the standard will be simplified as <i>EN 15804</i>.</p>
<p>Valid to 30/03/2026</p>	<p>Verification</p> <p>The standard <i>EN 15804</i> serves as the core PCR Independent verification of the declaration and data according to <i>ISO 14025:2010</i></p> <p><input type="checkbox"/> internally <input checked="" type="checkbox"/> externally</p>
	
<p>Dipl. Ing. Hans Peters (chairman of Institut Bauen und Umwelt e.V.)</p>	
	
<p>Dr. Alexander Röder (Managing Director Institut Bauen und Umwelt e.V.)</p>	<p>Vito D'Incognito (Independent verifier appointed by SVR)</p>

Product

Product description/Product definition

The wood fibre insulating boards, produced by Mozyr woodworking integrated plant (WIP), are board-shaped wood-based materials manufactured from wood fibres in accordance with EN 13171. Under the trademarks there are the next types of boards: -Top, -Ultra, -Floor, -Instal, -Multi, -Safe, -Room, -Kombi, -Universal.

For the placing on the market of the product in the European Union/European Free Trade Association (EU/EFTA) (with the exception of Switzerland) Regulation (EU) No. 305/2011 (CPR) applies. The product needs a declaration of performance taking into consideration *EN 13171:2012*, Thermal insulation products for buildings - Factory-made wood fibre (WF) products - Specification, and the CE-marking. For the application and use the respective national provisions apply.

Application

The insulating board can be used in both new and old buildings. It has a wide field of application, ranging from the insulation between rafters and the cavity insulation in walls, timber-framed as well as post-and-intel constructions to the insulation of wood-beamed ceilings, of top-floor ceilings and installation levels. Detailed description of the application of each type of board can be found on the manufacturer's website.

Technical Data

The following technical (construction) data is of relevance for Mozyr woodworking integrated plant Wood fibre insulating boards. The references for test methods are as follows: test for Thermal conductivity, Comprehensive strength, Water vapor transmission coefficient -

Constructional data

Name	Value	Unit
Gross density	159.17	kg/m ³
Thermal conductivity	0.04	W/(mK)
Compressive strength	CS (10/Y) 60 - CS (10/Y) 150	kPa
Tensile Strength	TR 5-TR 15	kPa
Water vapour transmission coefficient	2.7-6.9	MU
Short Term water absorption	1.0-2.0	WS

Performance data of the product in accordance with the declaration of performance with respect to its essential characteristics according to EN 13171:2012, Thermal insulation products for buildings - Factory-made wood fibre (WF) products - Specification,.

Base materials/Ancillary materials

The average composition of a boards was calculated based on the amount of raw materials used and the production of boards in 2019.

Name	Value	Unit
Softwood	91,57	%
MDI	6,15	%
Paraffin emulsion	2,28	%

Reference service life

When used as designated, the useful life of Mozyr wood fibre insulating boards complies with at least the useful life of the respective building. No Reference Service Life is declared on account of the multiple application possibilities.

LCA: Calculation rules

Declared Unit

The unit taken as a basis for the Declaration is one cubic metre (1 m³) wood fibre insulating board with a normalized by Mozyrs' products range density of 159,17 kg/m³.

Declared unit

Name	Value	Unit
Declared unit	1	m ³
Conversion factor to 1 kg	159.17	-
Mass reference	159.17	kg/m ³

The information module A1 comprises the provision of all semi-finished goods that can be found in the declared unit as material. Transportation of these substances is considered in Module A2. Module A3 contains all work and expenditures of the manufacture of the product and its packaging from the cradle to the gate, except the aspects already considered in modules A1 and A2. Module C2 describes the transportation as far as the disposal site. For module c4, the landfill scenario was considered as the most likely End-of-life scenario.

System boundary

EPD type: cradle to gate – with options. This Environmental Product Declaration refers to the product stage - modules A1-A3, including provision of raw materials, transport, manufacture and packaging materials, and parts of the end-of-life stage (modules C2 and C4).

Comparability

Basically, a comparison or an evaluation of EPD data is only possible if all the data sets to be compared were created according to EN 15804 and the building context, respectively the product-specific characteristics of performance, are taken into account.

. The background database for this EPD is *GaBi professional + extension XIV databases content version 2021*.

LCA: Scenarios and additional technical information

After the demolition of the building, it is assumed, for waste wood removed from it, that it is initially transported across a distance of 100 km to the landfill site, where it is decomposed. Landfill site including landfill gas treatment, leachate treatment, sludge treatment and deposition. Distribution of landfill gas: 22 % flare, 28 % used, 50 % emissions

End of life (C1-C4)

Name	Value	Unit
Collected separately waste type	159.17	kg
Landfilling	159.17	kg

LCA: Results

DESCRIPTION OF THE SYSTEM BOUNDARY (X = INCLUDED IN LCA; MND = MODULE NOT DECLARED; MNR = MODULE NOT RELEVANT)

PRODUCT STAGE			CONSTRUCTION PROCESS STAGE		USE STAGE								END OF LIFE STAGE				BENEFITS AND LOADS BEYOND THE SYSTEM BOUNDARIES
Raw material supply	Transport	Manufacturing	Transport from the gate to the site	Assembly	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	De-construction demolition	Transport	Waste processing	Disposal	Reuse-Recovery-Recycling-potential	
A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D	
X	X	X	MND	MND	MND	MND	MNR	MNR	MNR	MND	MND	MND	X	MND	X	MND	

RESULTS OF THE LCA - ENVIRONMENTAL IMPACT according to EN 15804+A1: 1 m3 Wood fibre insulating boards

Parameter	Unit	A1-A3	C2	C4
Global warming potential	[kg CO ₂ -Eq.]	1.39E+2	8.51E-1	1.86E+2
Depletion potential of the stratospheric ozone layer	[kg CFC11-Eq.]	5.79E-13	1.05E-16	-1.90E-14
Acidification potential of land and water	[kg SO ₂ -Eq.]	1.87E-1	1.77E-3	3.66E-2
Eutrophication potential	[kg (PO ₄) ³⁻ -Eq.]	4.14E-2	4.29E-4	1.48E-1
Formation potential of tropospheric ozone photochemical oxidants	[kg ethene-Eq.]	1.52E-2	-6.32E-3	4.59E-2
Abiotic depletion potential for non-fossil resources	[kg Sb-Eq.]	1.50E-5	6.26E-8	5.51E-7
Abiotic depletion potential for fossil resources	[MJ]	2.61E+3	1.09E+1	1.11E+2

RESULTS OF THE LCA - RESOURCE USE according to EN 15804+A1: 1 m3 Wood fibre insulating boards

Parameter	Unit	A1-A3	C2	C4
Renewable primary energy as energy carrier	[MJ]	5.91E+3	IND	8.34E+0
Renewable primary energy resources as material utilization	[MJ]	2.86E+3	IND	IND
Total use of renewable primary energy resources	[MJ]	8.77E+3	6.10E-1	8.34E+0
Non-renewable primary energy as energy carrier	[MJ]	2.56E+3	1.90E+1	1.15E+2
Non-renewable primary energy as material utilization	[MJ]	0.00	0.00	0.00
Total use of non-renewable primary energy resources	[MJ]	2284.50	0.00	0.00
Use of secondary material	[kg]	IND	IND	IND
Use of renewable secondary fuels	[MJ]	IND	IND	IND
Use of non-renewable secondary fuels	[MJ]	IND	IND	IND
Use of net fresh water	[m ³]	3.57E+1	0.00E+0	3.45E+0

RESULTS OF THE LCA – OUTPUT FLOWS AND WASTE CATEGORIES according to EN 15804+A1: 1 m3 Wood fibre insulating boards

Parameter	Unit	A1-A3	C2	C4
Hazardous waste disposed	[kg]	4.89E-7	5.51E-10	2.07E-8
Non-hazardous waste disposed	[kg]	1.51E+0	1.63E-3	6.52E+1
Radioactive waste disposed	[kg]	1.06E-2	1.32E-5	1.33E-3
Components for re-use	[kg]	IND	IND	IND
Materials for recycling	[kg]	IND	IND	IND
Materials for energy recovery	[kg]	IND	IND	IND
Exported electrical energy	[MJ]	IND	IND	IND
Exported thermal energy	[MJ]	IND	IND	IND

References

Institut Bauen und Umwelt

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EN 15804

EN 15804:2012-04+A1 2013, Sustainability of construction works — Environmental Product Declarations — Core rules for the product category of construction products.

ISO 14025

EN ISO 14025:2011-10, Environmental labels and declarations — Type III environmental declarations — Principles and procedures.

ISO 14001

EN ISO 14001:2015 Environmental management systems — Requirements

ISO 9001

EN ISO 9001:2005 Quality managements systems — Requirements

EN 13171

EN 13171:2012. Thermal insulation products for buildings - Factory-made wood fibre products (WF) - Specifications.

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EN 16485

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FSC-STD-40-003 V2-1 EN

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FSC-STD-40-004 V3-0 EN

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Product Category Rules Part B Wood based panels (2019), Institut Bauen und Umwelt e.V. (IBU), 2019-07.

GaBi Software

Version: GaBi ts 10.0.1.92 Sphera Solutions, GmbH

GaBi Professional + Extension XIV Database content version 2021

Sphera Solutions, GmbH

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