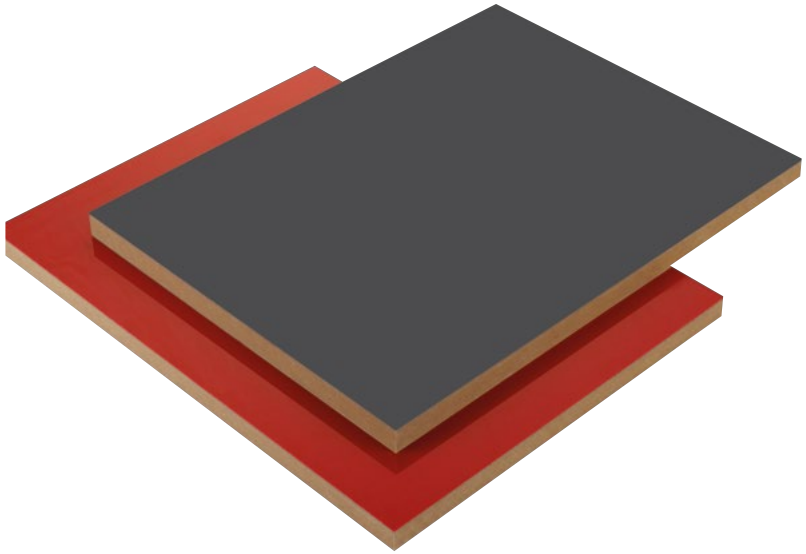


KASTAMONU

High Gloss Panel (MDF Based)

ENVIRONMENTAL PRODUCT DECLARATION

In accordance with ISO 14025 and EN 15804:2012+A2:2019

S-P Code
S-P-01993

Publication Date
10.02.2021

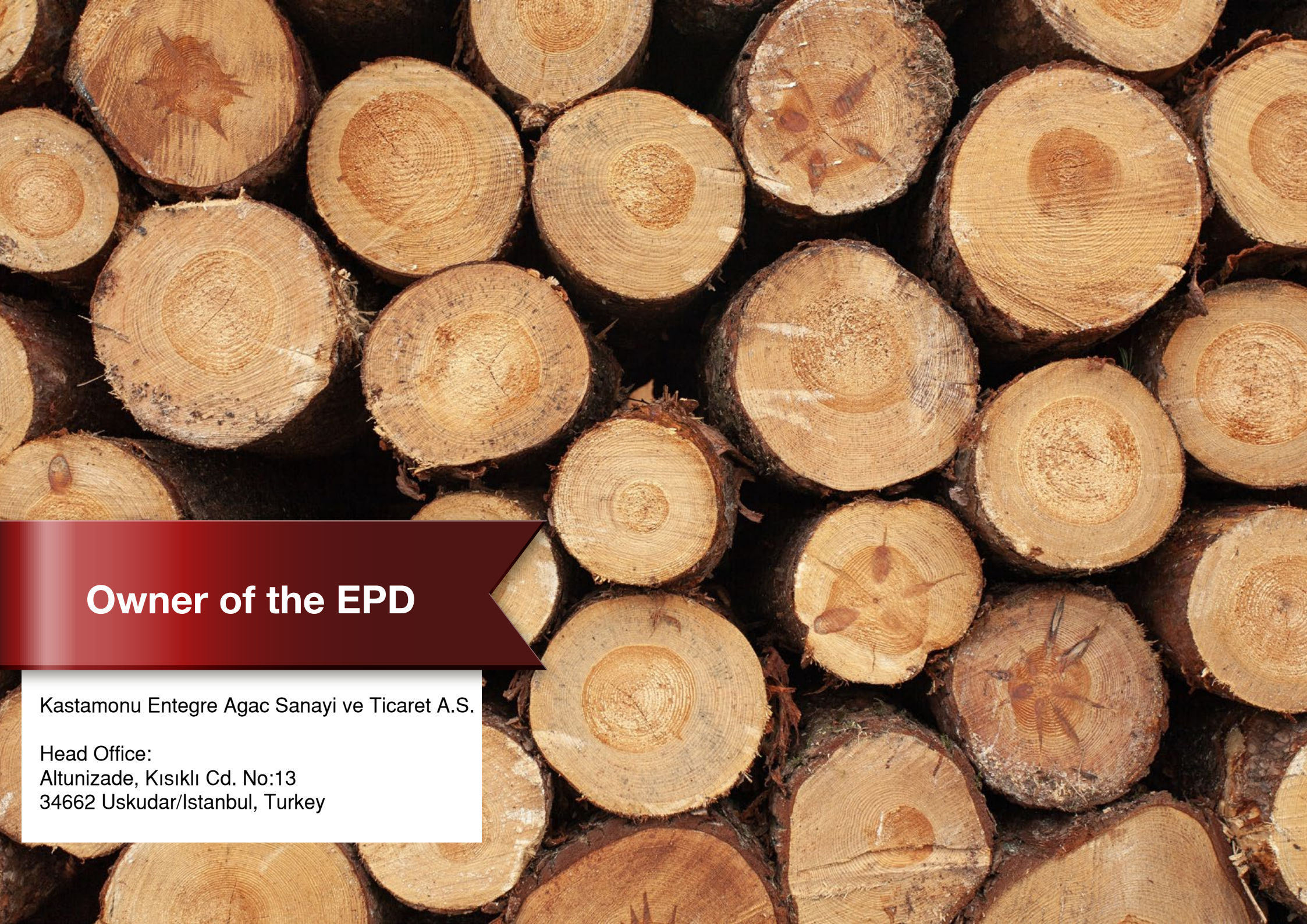
Programme
EPD Turkey

Validity Date
09.02.2026

Version : V 1.2, Revised Date: 01.10.2022

TURKEY EPD®
ENVIRONMENTAL PRODUCT DECLARATIONS

ECO PLATFORM EPD VERIFIED



Owner of the EPD

Kastamonu Entegre Agac Sanayi ve Ticaret A.S.

Head Office:
Altunizade, Kısıklı Cd. No:13
34662 Uskudar/Istanbul, Turkey

Program Information

Programme	EPD Turkey, managed and run by: SÜRATAM – Turkish Centre for Sustainable Production Research & Design, www.suratam.org Nef 09 B Blok No:7/15 34415 Kağıthane/Istanbul, Turkey www.epdturkey.org info@epdturkey.org	The International EPD® System EPD International AB Box 210 60 SE-100 31 Stockholm, Sweden www.environdec.com info@environdec.com

Product Category Rules (PCR): 2019:14 Version 1.1, 2019-09-14, Construction Products and CPC 54 Construction Services, EN 15804:2012 + A2:2019 Sustainability of Construction Works, c-PCR-006 Wood and wood-based products for use in construction (EN 16485)

Independent third-party verification of the declaration and data, according to ISO 14025:2006:

EPD process certification **X** EPD verification

Third party verifier: Vladimír Kocí, PhD

Approved by: The International EPD® System

Procedure for follow-up of data during EPD validity involves third party verifier:

Yes **X** No

The EPD owner has the sole ownership, liability, and responsibility for the EPD. EPDs within the same product category but from different programmes may not be comparable. EPDs of construction products may not be comparable if they do not comply with EN 15804.

About Company

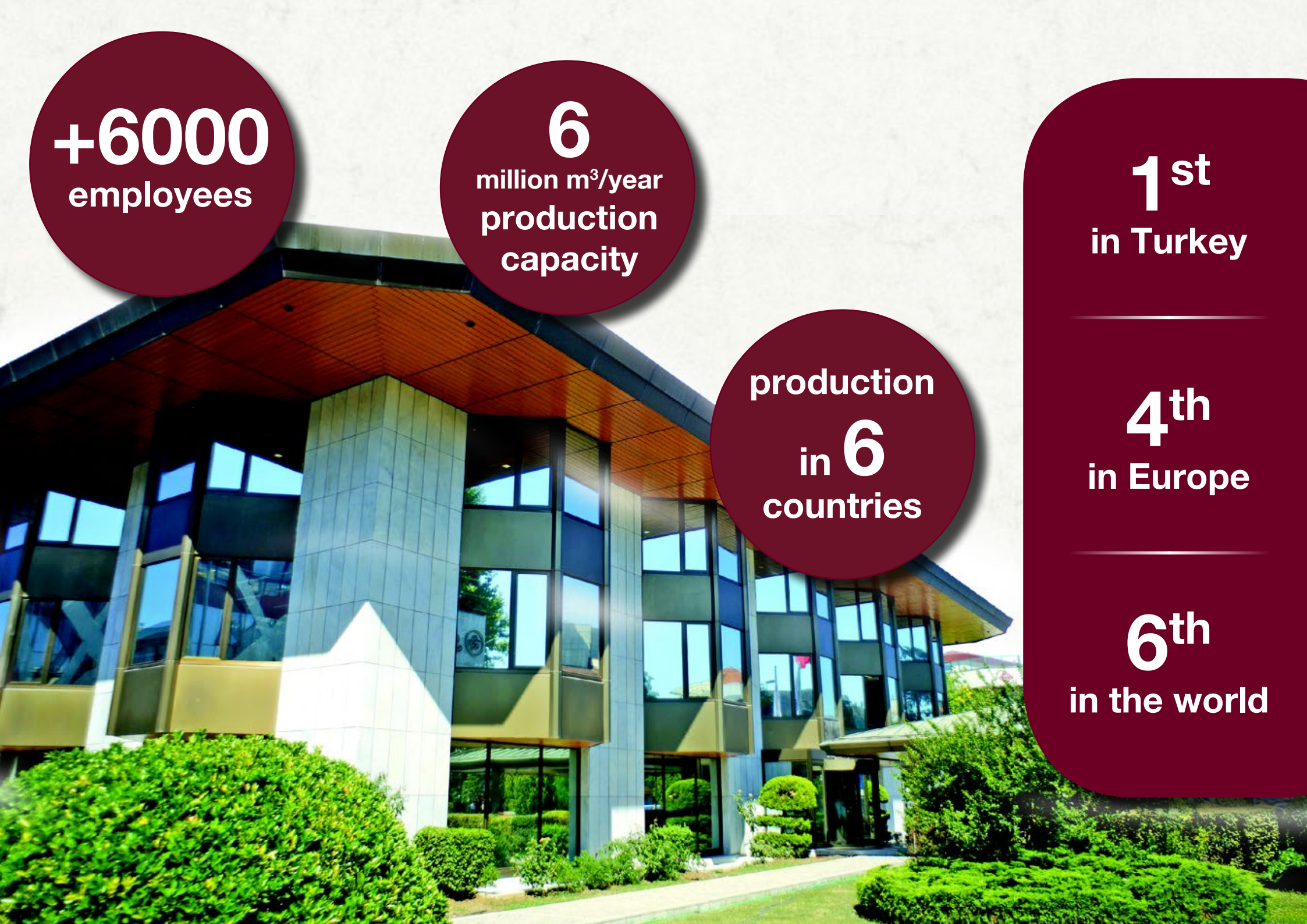
Maintaining its uninterrupted production for half a century in the wood-based panel industry, Kastamonu Entegre is a global-scale company engaged in production in 6 countries, with investments in Romania, Bulgaria, Bosnia and Herzegovina, Russia, Italy and Turkey. In the USA, it has a company that carries out wood chip supply and logistics processes.

Kastamonu Entegre has become the world's sixth largest company in the wood-based panel industry with its overseas investments extending more than 20 years, and has been among the top four manufacturers in Europe. It is one of the four largest manufacturers in the world with each of its main product groups; namely MDF, chipboard, laminate flooring, and door skin. It undertakes 6% of the world laminate flooring production alone. Not only the Turkey's industry leader with its 30% market share, Kastamonu Entegre, at the same time is by far the leader of the industry with its imports each year to 100 countries in six continents extending from China to America and Australia to Canada.

With its turnover of 1.3 billion dollars and its strength, knowledge and experience in production, it provides employment to more than 6 thousand people in its domestic and foreign production facilities as well as its offices. In its production facilities with a total of 6 million m^3/year wood-based panel production capacity, where it caters the requirements of furniture, decoration and construction industries with its MDF and particle board, laminate flooring, worktop and door skin products, it produces a volume that contributes to the formation of living spaces of 4 500 homes every day. Proud bearer of "The Biggest Turkish Investor of Italy" title, Kastamonu Entegre also happens to be the largest MDF producer and exporter of Russia.

Responding to the demands of its customers, Kastamonu Entegre can produce FSC, CARB2 / EPA Certified products and at E1, E0.5 (1/2), E0, F4Start quality by obtaining wood raw materials from 100% sustainable and renewable sources. In addition, E1 quality production is carried out in all its facilities. "Floorpan" and "Artfloor" are the first Turkish laminate flooring brands that have "Blue Angel" certificate, which shows that environmentally friendly materials are used in production and that the products do not contain any hazardous substances for human health. Acting with the mission of preserving natural balance and contributing to the society, the company is one of the three companies that prepared the sustainability report in the industry. It carries out studies on product and process development, efficiency increase, efficient resource utilization and advanced material technologies in its R&D center in Istanbul, which it has set up to develop technologies of the future.

The company has certifications such as ISO 9001 Quality Management, ISO 45001 Occupational Health and Safety Management, ISO 14001 Environmental Management, ISO 50001 Energy Management, and also the Turquality Certificate. Production is made in conformity with the TSE and European Norms (EN).


+6000
employees
6
million m³/year
production
capacity
production
in 6
countries
1st
in Turkey
4th
in Europe
6th
in the world

About Products

High Gloss Panels are wooden panels with decorative glossy surface obtained by applying glue and UV Acrylic lacquer/Acrylic/ PVC/PET on the surface of melamine faced MDF through various industrial processes using an advanced and unique technology. With the lacquer applied after the chemical contamination of hot coating process providing an excellent adhesion to the melamine coated surface, a surface with a scratch and wear resistance higher than the other glossy surfaces is obtained. Furthermore, the top layer hardened by means of UV rays is also resistant to discoloration by sun light and chemicals. In this way, excellent specular gloss is obtained. This technology provides a solution opening new ways in surface coating, highlighting the natural look and texture of the solid wood, substantially facilitating surface finishing application. High Gloss Panels resistant to wear,impacts and scratching reflects the naturalness of the wood while enriching your living space with specular gloss through different color options. High Gloss Panel Products that can be used in furniture production as the symbol of elegance and quality, ushers in a new age in the sector with its technology maintaining its glossy look for a long time.

GlossMAX
AKRİLİK LAKLI PANEL / ACRYLIC LACQUERED PANEL

GlossMAXPRO
AKRİLİK LAKLI PANEL / ACRYLIC LACQUERED PANEL

EvoGloss
High Gloss Panel

MATTPLUS
AKRİLİK LAKLI PANEL / ACRYLIC LACQUERED PANEL

non scratch ACRYLIC PANEL

industrial ACRYLIC PANEL

The average density of Kastamonu Entegre High Gloss Panel with a thickness of 8-18 mm is 704-770 kg/m^3.

The UN CPC code of the product is 3143.

Typical Material Composition, 1 m^3

Raw Material	Weight, %
Wood Chips	80-90
UMF Glue	9-11
UV Based Chemicals	0-1

Wood chips type can be varied and mainly sourced from pine, beech, and oak trees.

Thickness Range

8-18 mm

Dimensions

1220x2800 mm
2100x2800 mm

GLOSSMAX MEDELAMS Technical Specifications

Technical Data	Test Standard	Unit	Thickness Range		
			6<t≤9	9<t≤12	12<t≤19
Tolerances on Nominal Dimensions -Thickness Compared to Rated Values - Thickness T Relative to Nominal Value	EN 14323	mm	<15 / ≥15 to 20 mm ; +0.5 /-0.3; >20 mm; ± 0.5 - <15 / ≥15 to 20 mm ; $t_{max} - t_{min} \leq 0.6$		
Lengt And Width	EN 14323	mm	± 5		
Flatness	EN 14323	mm/m	only for balancd surfaces which t ≥ 15mm; ≤ 2		
Edge Damage	EN 14323	mm	≤ 10		
Surface Defects	EN 14323	mm^2/m^2	points≤ 2		
Surface Defects	EN 14323	mm/m^2	line ≤ 20		
Resistance to Scratching	EN 14323	N	Class B 2≤t<3.5		
Resistance to Cracking	EN 14323	Rating	≥ 3		
Resistance to Staining	EN 14323	Rating	≥ 3		
Gloss	EN 14323	Gloss Unit (GU)	20° min.85		
Cross Cut	EN ISO 2409	Class	0 or 1		
Surface Soundness	EN 311	N/mm^2	≥ 1		
Formaldehyde Release	EN ISO 12460-3	mg/m^2h	E0 < 1.75, E1 ≤ 3,.5 E2, 3,.5 < release ≤ 8		
Mirror Effect	TSE K 479	Observation	Min.6		
Light Fastness (Xenon Arc Lamp)	EN 15187	Scale	Grey Scale ≥ 4 Blue Wool > 6, *Suitable * For pigmented products only		

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Note 2: For current TSE document / document scope, it is recommended to contact the relevant sales executive.

Note 3: GLOSSMAX MEDELAMS match all of the technical specifications of the MEDEPANS.

GLOSSMAX PRO MEDELAMS Technical Specifications

Technical Data	Test Standard	Unit	Thickness Range		
			6<t≤9	9<t≤12	12<t≤19
Tolerances on Nominal Dimensions -Thickness Compared to Rated Values - Thickness T Relative to Nominal Value	EN 14323	mm	<15 / ≥15 to 20 mm ; +0.5 /-0.3; >20 mm; ± 0.5 - <15 / ≥15 to 20 mm ; $t_{max} - t_{min} \leq 0.6$		
Lengt And Width	EN 14323	mm	± 5		
Flatness	EN 14323	mm/m	only for balancd surfaces which t ≥ 15mm; ≤ 2		
Edge Damage	EN 14323	mm	≤ 10		
Surface Defects	EN 14323	mm^2/m^2	points≤ 2		
Surface Defects	EN 14323	mm/m^2	line ≤ 20		
Resistance to Scratching	EN 14323	N	Class B 2≤t<3.5		
Resistance to Cracking	EN 14323	Rating	≥ 3		
Resistance to Staining	EN 14323	Rating	≥ 3		
Gloss	EN 14323	Gloss Unit (GU)	20° min.85		
Cross Cut	EN ISO 2409	Class	0 or 1		
Surface Soundness	EN 311	N/mm^2	≥ 1		
Formaldehyde Release	EN ISO 12460-3	mg/m^2h	E0 < 1.75, E1 ≤ 3,.5 E2, 3,.5 < release ≤ 8		
Mirror Effect	TSE K 479	Observation	Min.6		
Light Fastness (Xenon Arc Lamp)	EN 15187	Scale	Grey Scale ≥ 4 Blue Wool > 6, *Suitable * For pigmented products only		

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Note 3: GLOSSMAX PRO MEDELAMS match all of the technical specifications of the MEDEPANS.

MATTPLUS MEDELAMS Technical Specifications

Technical Data	Test Standard	Unit	Thickness Range		
			6<t≤9	9<t≤12	12<t≤19
Tolerances on Nominal Dimensions -Thickness Compared to Rated Values - Thickness T Relative to Nominal Value	EN 14323	mm	<15 / ≥15 to 20 mm ; +0.5 /-0.3; >20 mm; ± 0.5 - <15 / ≥15 to 20 mm ; $t_{max} - t_{min} \leq 0.6$		
Lengt And Width	EN 14323	mm	± 5		
Flatness	EN 14323	mm/m	only for balancd surfaces which t ≥ 15mm; ≤ 2		
Edge Damage	EN 14323	mm	≤ 10		
Surface Defects	EN 14323	mm^2/m^2	points≤ 2		
Surface Defects	EN 14323	mm/m^2	line ≤ 20		
Resistance to Scratching	EN 14323	N	Class B 2≤t<3.5		
Resistance to Cracking	EN 14323	Rating	≥ 3		
Resistance to Staining	EN 14323	Rating	≥ 3		
Cross Cut	EN ISO 2409	Class	0 or 1		
Surface Soundness	EN 311	N/mm^2	≥ 1		
Formaldehyde Release	EN ISO 12460-3	mg/m^2h	E0 < 1.75, E1 ≤ 3,.5 E2, 3,.5 < release ≤ 8		
Mirror Effect	TSE K 479	Observation	Min.6		
Light Fastness (Xenon Arc Lamp)	EN 15187	Scale	Grey Scale ≥ 4 Blue Wool > 6, *Suitable * For pigmented products only		

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Note 3: MATTPLUS MEDELAMS match all of the technical specifications of the MEDEPANS.

EVOGLOSS Technical Specifications

Technical Data	Test Standard	Unit		Thickness Range	
				t<15	15≤t≤20
Thickness Compared to Rated Values -Thickness T Within The Board	EN 14323	mm		+0.5/-0.3 $t_{max} - t_{min} \leq 0.6$	
Lengt And Width	EN 14323	mm		± 5	
Flatness	EN 14323	mm/m		-	≤ 2
Density	EN 323	%		±7	
Surface Defects	EN 14323	m^2		4 pieces in 1 m^2 between 0-2.5 mm 3 pieces in 1 m^2 between 2.5 - 6 mm 2 pieces in 1 m^2 between 6-10 mm 1 piece in 1 m^2 between 10-15 mm	
Surface Resistance to Micro-Scratch	CEN/TS 16611(Method A)	% change		≤ 10	
Resistance to Scratching	EN 15186 (Method B)	N		≥ 0.5	
Surface Resistance To Dry Temperature (70°)	EN 12722	Rating		5	
Light Fastness (Xenon Arc Lamp)	EN 15187	Scale		Grey scale ≥4/5 Blue wool scale >6	
Mirror Effect	TSE K 479	Observation		min 6	
Gloss (60°)	EN 13722	Gloss Unit (GU)		70	
Color Difference (By Referance Sample)	EN 13721	ΔE (L, a, b)		<1	
Resistance to Cold Liquids	EN 12720+A1	Class		min. 3 (16 h)	
Surface Resistance to Wet Temperature (70 °C)	EN 12721	Rating	Pet	5	
			Pvc&Pvc+Pad	4	
Formaldehyde Release	EN ISO 12460-3	mg/m^2h		E0 < 1.75, E1 ≤ 3.5 E2 ; 3.5 < release ≤ 8	

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ACRYLIC PANEL Technical Specifications

Technical Data	Test Standard	Unit	Thickness Range	
			t<15	15≤t≤20
Thickness Compared to Rated Values	EN 14323	mm	+0.5/-0.3 $t_{max} - t_{min} \leq 0.6$	
Lengt and Width	EN 14323	mm	± 5	
Flatness	EN 14323	mm/m	-	≤ 2 (only for balanced surfaces)
Surface Deffects	EN 14323	m^2	4 pieces in 1 m^2 between 0-2.5 mm 3 pieces in 1 m^2 between 2.5-6 mm 2 pieces in 1 m^2 between 6-10 mm 1 piece in 1 m^2 between 10-15 mm	
Surface Resistance to Micro-Scratch	CEN/TS 16611 (Method A)	% change	≤ 10	
Resistance to Scratching	EN 15186 (Method B)	N	≥1	
Surface Resistance To Dry Temperature (70°)	EN 12722	Rating	5	
Light Fastness (Xenon Arc Lamp)	EN 15187	Scale	Grey scale ≥ 4/5 Blue wool scale > 6	
Mirror Effect	TSE K 479	Observation	min. 6	
Gloss (60°)	EN 13722	Gloss Unit (GU)	70	
Color Difference (By Referance Sample)	EN 13721	ΔE (L, a, b)	<1	
Resistance to Cold Liquids	EN 12720+A1	Rating	min. 3 (16 h)	
Surface Resistance to Wet Temperature (70 °C)	EN 12721	Rating	5	
Formaldehyde Release	EN ISO 12460-3	mg/m^2h	E0 < 1.75 E1 ≤ 3.5 E2; 3.5 < release ≤ 8	

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INDUSTRIAL ACRYLIC PANEL Technical Specifications

Technical Data	Test Standard	Unit	Thickness Range
			15≤t≤20
Thickness Compared to Rated Values -Thickness T Within The Board	EN 14323	mm	+0.5/-0.3 $t_{max} - t_{min} \leq 0.6$
Lengt and Width	EN 14323	mm	± 5
Flatness	EN 14323	mm/m	≤ 2
Surface Resistance to Micro-Scratch	KEAS Specific	% change	70-100
Resistance to Scratching	KEAS Specific	N	0.1-0.5
Surface Resistance To Dry Temperature (70°)	EN 12722	Rating	5
Light Fastness (Xenon Arc Lamp)	EN 15187	Scale	Grey scale ≥ 4/5 Blue wool scale > 6
Mirror Effect	TSE K 479	Observation	min. 6
Gloss (60°)	EN 13722	Gloss Unit (GU)	70
Color Difference (By Referance Sample)	EN 13721	ΔE (L, a, b)	<1
Resistance to Cold Liquids	KEAS Specific	Rating	1-3 (16 h)
Surface Resistance to Wet Temperature (70 °C)	EN 12721	Rating	5
Formaldehyde Release	EN ISO 12460-3	mg/m²h	E0 < 1.75
			1.75 < E1 ≤ 3.5
			3.5 < E2 ≤ 8

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As Kastamonu Entegre, we adopt an ethical, transparent, equitable and accountable management approach in the awareness of our environmental, economic and social contributions and impacts.

We engage in activities that strengthen our corporate structure, and we take sustainable development-based growth as the basis, in line with our target of becoming a global brand.

In determining our strategies, we always consider the expectations and opinions of our stakeholders and create a strong bond by ensuring their satisfaction. We conduct practices with an employee-oriented perspective that takes into account their expectations and needs, thereby creating an efficient and peaceful working environment.

Besides ensuring the health and safety of all our employees, we also contribute to their training and development activities.

Pursuant to our responsible purchasing approach, we perform our raw material supply processes based on sustainable forest management. We support initiatives related to this model and contribute positively to their development.

Our innovation and R&D processes enable us to develop and manufacture products that create high quality, environmentally friendly and healthy living spaces using state-of-the-art technology.

We respect human rights and encourage equal opportunity.

We pay regard to energy and water efficiency; we implement renewable and innovative energy projects accordingly.

We contribute to the welfare of the local community by creating employment and economic value in our geographic locations.

KASTAMONU ENTEGRE
Sustainability Policy

LCA Information

Declared Unit	1 m³ of GLOSSMAX MEDELAM with an average density 770 kg/m³ 1 m³ of GLOSSMAX PRO MEDELAM with an average density 768 kg/m³ 1 m³ of MATTPLUS MEDELAM with an average density 765 kg/m³ 1 m³ of EVOGLOSS with an average density 720 kg/m³ 1 m³ of ACRYLIC PANEL with an average density 704 kg/m³ 1 m³ of INDUSTRIAL ACRYLIC PANEL with an average density 704 kg/m³
Time Representativeness	2019
Database(s) and LCA Software Used	TLCID ver. 1.0 (Turkish Lifecycle Inventory Database), Ecoinvent 3.6, SimaPro 9.1

The inventory for the LCA study is based on the 2019 production figures for High Gloss Panels products by Kastamonu Entegre production plants in Gebze, Adana and Russia.

This EPD's system boundary is cradle to gate. The system boundary covers A1 - A3 product stages, C1 - C4 end of life and D stages.

Product Stage			**Constrcution Process Stage**		**Use Stage**							**End of Life Stage**				**Benefits and Loads**
Raw Material Supply	Transport	Manufacturing	Transport	Construction Installation	Use	Maintenance	Repair	Replacement	Refurbishment	Operational Energy Use	Operational Water Use	Deconstruction, demolition	Transport	Waste Processing	Disposal	Future reuse, recycling or energy recovery potentials
A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
X	X	X	ND	ND	ND	ND	ND	ND	ND	ND	ND	X	X	X	X	X

X = Included in LCA, ND = Not Declared

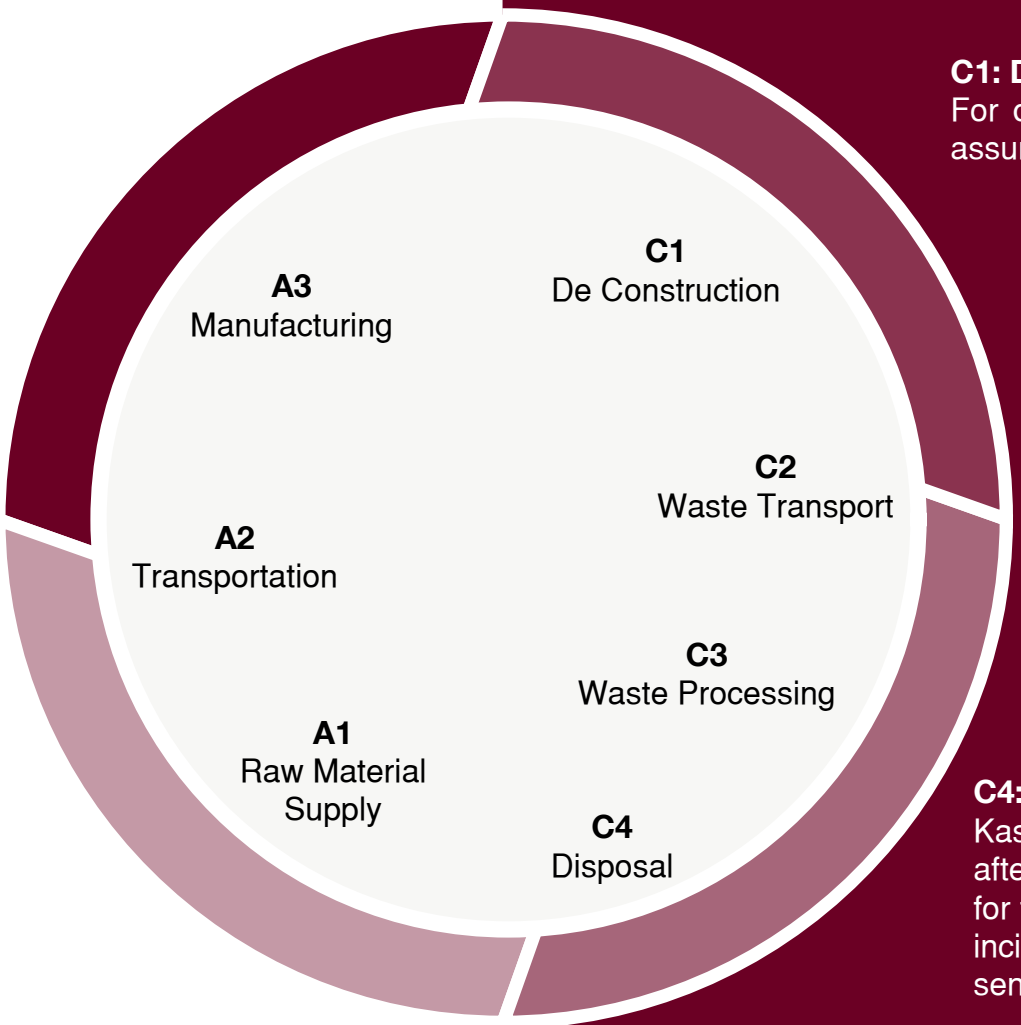
System Boundary

A1: Raw Material Supply
Kastamonu Entegre's productions start from wood. The company supplies its raw materials necessary from suitable forests. Raw material supply includes raw material extraction/preparation and pre-treatment processes before production.

A2: Transportation
Transport is relevant for delivery of raw materials and other materials to the plant and the transport of materials within the plant. Transport of raw materials to production sites is taken as the weight average values for transport from raw materials supplier in 2019.

A3: Manufacturing
Kastamonu Entegre's manufacturing flows are given as below respectively. Some process can be vary according to production plant.

1 - Debarking logs
2 - Chipping
3 - Refining wood fibres
4 - Gluing fibres
5 - Drying fibres
6 - Mat formation
7 - Pressing
8 - Cutting & trimming
9 - Cooling
10 - Sanding
11 - Quality control
12 - Storage



C1: Deconstruction and Demolition
For deconstruction stage, 0.323 MJ electricity use per kg of material was assumed (Gervasio et al., 2018)

C2: Waste Transport
A distance of 200 km is assumed for the transport of the deconstructed material to the disposal area.

C3: Waste Processing
If the wastes are going to landfill or incineration, there is no need for any waste process.

C4: Disposal
Kastamonu Entegre's products may dispose with any disposal scenario after construction and demolition as their final fate and modelled as such for this EPD. It is assumed that 75% of the wastes used as raw material for incineration plants due to their high calorific value and 25% of the wastes send to the landfill site.

D Stage (Benefits and Load)
For benefits and loads beyond, a calorific value of 18.6 MJ per kg of High Gloss Panel was assumed (Günther et al., 2012) to calculate the amount of avoided electicity production from heat. In this stage, the production efficiency of the plant which electricity generation from incineration is assumed as %20.

More Information

Production Plants and Allocations

Kastamonu Entegre has production facilities for wood-based products in Turkey, Italy, Russia, Romania, and Bulgaria. Raw material contents are modeled for each product and each factory. Water consumption, energy consumption and raw material transportation were weighted according to 2019 production figures.

In addition, hazardous and non-hazardous waste amounts were also allocated from the 2019 total waste generation.

Packaging

Products by Kastamonu Entegre is delivered en users in film plastic packaging, corrugated board, or composite packaging. The packaging of the final product is included in the LCA.

Cut-Off Criteria

%1 cut-off applied. Data for elementary flows to and from the product system contributing to a minimum of 99% of the declared environmental impacts have been included.

REACH

The product contains formaldehyde which is a substance of very high concern (SVHC) and is subject to authorization under the REACH Regulation. For details, test results are provided in the additional information section and table of technical spesifications.

LCA Modelling, Calculation and Data Quality

The results of the LCA with the indicators as per EPD requirement are given in the LCA result tables. All energy calculations were obtained using Cumulative Energy Demand (LHV) methodology, while fresh water use is calculated with selected inventory flows in SimaPro according to the PCR.

There are no co-product allocations within the LCA study underlying this EPD.

The SimaPro 9.1 LCA software and the Ecoinvent 3.6 LCA database were used to calculate the environmental impacts. The regional energy datasets were used for all energy calculations.

Raw materials, energy and water consumption, waste and material and product transport data is collected from Kastamonu Entegre. All primary data collected from Kastamonu Entegre is for the period year of 2019.

Geographical Scope

The geographical scope of this EPD is global. The assumptions of the end of life (C modules) and benefit (D module) stages can be referred to as the global.

LCA Results

Environmental Impacts for 1 m^3 of GLOSSMAX MEDELAM							
Impact Category	Unit	A1-A3	C1	C2	C3	C4	D
GWP - Fossil	kg CO_2 eq	553	40.7	14.0	0	6.67	-427
GWP - Biogenic	kg CO_2 eq	-1168	0.371	0.010	0	863	-1.97
GWP - Luluc	kg CO_2 eq	0.95	0.388	0.004	0	0.002	-0.855
GWP - Total	kg CO_2 eq	-614	41.4	14.0	0	870	-430
ODP	kg CFC-11 eq	94.8E-6	1.15E-6	3.29E-6	0	1.25E-6	-17.8E-6
AP	mol H+ eq	4.89	0.268	0.059	0	0.194	-2.13
EP - Freshwater	kg PO_4 eq	58.6E-3	42.9E-3	991E-6	0	3.93E-3	-211E-3
EP - Marine	kg N eq	942E-3	43.5E-3	17.9E-3	0	161E-3	-406E-3
EP - Terrestrial	mol N eq	13.7E+0	394E-3	196E-3	0	1.02E+0	-4.08E+0
POCP	kg NMVOC	3.009	0.108	0.063	0	0.273	-1.09
ADPE	kg Sb eq	3.32E-3	98.0E-6	239E-6	0	45.2E-6	-528E-6
ADPF	MJ	9886	447	218	0	96.1	-5540
WDP	m^3 depriv.	694	19.0	0.707	0	2.05	-67.1
PM	disease inc.	48.8E-6	1.14E-6	1.27E-6	0	1.75E-6	-15.6E-6
IR	kBq U-235 eq	25.27	0.604	1.11	0	0.510	-62.5
ETP - FW	CTUe	6720	391	173	0	166	-7507
HTTP - C	CTUh	4.99E-6	7.19E-9	4.27E-9	0	171E-9	-85.8E-9
HTTP - NC	CTUh	4.56E-6	346E-9	198E-9	0	582E-9	-3.62E-6
SQP	Pt	88958	25.8	249	0	129	-867
Acronyms	GWP-total: Climate change, GWP-fossil: Climate change- fossil, GWP-biogenic: Climate change - biogenic, GWP-luluc: Climate change - land use and transformation, ODP: Ozone layer depletion, AP: Acidification terrestrial and freshwater, EP-freshwater: Eutrophication freshwater, EP-marine: Eutrophication marine, EP-terrestrial: Eutrophication terrestrial, POCP: Photochemical oxidation, ADPE: Abiotic depletion - elements, ADPF: Abiotic depletion - fossil resources, WDP: Water scarcity, PM: Respiratory inorganics - particulate matter, IR: Ionising radiation, ETP-FW: Ecotoxicity freshwater, HTP-c: Cancer human health effects, HTP-nc: Non-cancer human health effects, SQP: Land use related impacts, soil quality.							
Legend	A1: Raw Material Supply, A2: Transport, A3: Manufacturing, C1: De-Construction, C2: Waste Transport, C3: Waste Processing, C4: Disposal, D: Benefits and Loads Beyond the System Boundary.						

Biogenic Carbon Content	Unit	A1-A3
Biogenic carbon content in product	kg C / m^3 product	319
Note: 1 kg biogenic carbon is equivalent to 44/12 kg of CO_2.		

Resource Use for 1 m^3 of GLOSSMAX MEDELAM							
Impact Category	Unit	A1-A3	C1	C2	C3	C4	D
PERE	MJ	13919	107	2.74	0	4.05	-630
PERM	MJ	0	0	0	0	0	0
PERT	MJ	13919	107	2.74	0	4.05	-630
PENRE	MJ	9887	447	218	0	96.1	-5539
PENRM	MJ	0	0	0	0	0	0
PENRT	MJ	9887	447	218	0	96.1	-5539
SM	kg	0	0	0	0	0	0
RSF	MJ	0	0	0	0	0	0
NRSF	MJ	0	0	0	0	0	0
FW	m^3	2.01	0.170	0.045	0	0.675	-1.78
Waste & Output Flows for 1 m^3 of GLOSSMAX MEDELAM							
Impact Category	Unit	A1-A3	C1	C2	C3	C4	D
HWD	kg	0.466	0	0	0	0	0
NHWD	kg	3.33	0	0	0	0	0
RWD	kg	0	0	0	0	0	0
CRU	kg	0	0	0	0	0	0
MFR	kg	0	0	0	0	0	0
MER	kg	56.1	0	0	578	0	0
EE (Electrical)	MJ	0	0	0	0	2167	0
EE (Thermal)	MJ	0	0	0	0	0	0

PERE: Use of renewable primary energy excluding resources used as raw materials, PERM: Use of renewable primary energy resources used as raw materials, PERT: Total use of renewable primary energy, PENRE: Use of non-renewable primary energy excluding resources used as raw materials, PENRM: Use of non-renewable primary energy resources used as raw materials, PENRT: Total use of non-renewable primary energy, SM: Secondary material, RSF: Renewable secondary fuels, NRSF: Non-renewable secondary fuels, FW: Net use of fresh water, HWD: Hazardous waste disposed, NHWD: Non-hazardous waste disposed, RWD: Radioactive waste disposed, CRU: Components for reuse, MFR: Material for recycling, MER: Materials for energy recovery, EE (Electrical): Exported energy electrical, EE (Thermal): Exported energy, Thermal.

Environmental Impacts for 1 m^3 of GLOSSMAX PRO MEDELAM							
Impact Category	Unit	A1-A3	C1	C2	C3	C4	D
GWP - Fossil	kg CO_2 eq	572	40.6	14.0	0	6.65	-426
GWP - Biogenic	kg CO_2 eq	-1169	0.370	0.010	0	861	-1.96
GWP - Luluc	kg CO_2 eq	0.96	0.387	0.004	0	0.002	-0.853
GWP - Total	kg CO_2 eq	-596	41.3	14.0	0	867	-429
ODP	kg CFC-11 eq	95.3E-6	1.15E-6	3.28E-6	0	1.24E-6	-17.7E-6
AP	mol H+ eq	4.96	0.267	0.059	0	0.194	-2.13
EP - Freshwater	kg PO_4 eq	63.8E-3	42.8E-3	988E-6	0	3.92E-3	-210E-3
EP - Marine	kg N eq	958E-3	43.4E-3	17.8E-3	0	160E-3	-405E-3
EP - Terrestrial	mol N eq	13.9E+0	393E-3	195E-3	0	1.02E+0	-4.07E+0
POCP	kg NMVOC	3.08	0.108	0.063	0	0.272	-1.09
ADPE	kg Sb eq	3.51E-3	97.7E-6	238E-6	0	45.1E-6	-526E-6
ADPF	MJ	10424	446	217	0	95.9	-5525
WDP	m^3 depriv.	708	19.0	0.705	0	2.04	-67.0
PM	disease inc.	49.5E-6	1.14E-6	1.26E-6	0	1.75E-6	-15.5E-6
IR	kBq U-235 eq	26.59	0.602	1.11	0	0.509	-62.4
ETP - FW	CTUe	6953	390	173	0	166	-7488
HTTP - C	CTUh	4.99E-6	7.17E-9	4.26E-9	0	171E-9	-85.6E-9
HTTP - NC	CTUh	4.70E-6	346E-9	197E-9	0	581E-9	-3.61E-6
SQP	Pt	89043	25.7	249	0	129	-865
Acronyms	GWP-total: Climate change, GWP-fossil: Climate change- fossil, GWP-biogenic: Climate change - biogenic, GWP-luluc: Climate change - land use and transformation, ODP: Ozone layer depletion, AP: Acidification terrestrial and freshwater, EP-freshwater: Eutrophication freshwater, EP-marine: Eutrophication marine, EP-terrestrial: Eutrophication terrestrial, POCP: Photochemical oxidation, ADPE: Abiotic depletion - elements, ADPF: Abiotic depletion - fossil resources, WDP: Water scarcity, PM: Respiratory inorganics - particulate matter, IR: Ionising radiation, ETP-FW: Ecotoxicity freshwater, HTP-c: Cancer human health effects, HTP-nc: Non-cancer human health effects, SQP: Land use related impacts, soil quality.							
Legend	A1: Raw Material Supply, A2: Transport, A3: Manufacturing, C1: De-Construction, C2: Waste Transport, C3: Waste Processing, C4: Disposal, D: Benefits and Loads Beyond the System Boundary.						

Biogenic Carbon Content	Unit	A1-A3
Biogenic carbon content in product	kg C / m^3 product	319
Note: 1 kg biogenic carbon is equivalent to 44/12 kg of CO_2.		

Resource Use for 1 m^3 of GLOSSMAX PRO MEDELAM							
Impact Category	Unit	A1-A3	C1	C2	C3	C4	D
PERE	MJ	13940	107	2.73	0	4.04	-628
PERM	MJ	0	0	0	0	0	0
PERT	MJ	13940	107	2.73	0	4.04	-628
PENRE	MJ	10425	446	217	0	95.9	-5525
PENRM	MJ	0	0	0	0	0	0
PENRT	MJ	10425	446	217	0	95.9	-5525
SM	kg	0	0	0	0	0	0
RSF	MJ	0	0	0	0	0	0
NRSF	MJ	0	0	0	0	0	0
FW	m^3	2.05	0.170	0.045	0	0.673	-1.77
Waste & Output Flows for 1 m^3 of GLOSSMAX PRO MEDELAM							
Impact Category	Unit	A1-A3	C1	C2	C3	C4	D
HWD	kg	0.466	0	0	0	0	0
NHWD	kg	3.33	0	0	0	0	0
RWD	kg	0	0	0	0	0	0
CRU	kg	0	0	0	0	0	0
MFR	kg	0	0	0	0	0	0
MER	kg	56.1	0	0	576	0	0
EE (Electrical)	MJ	0	0	0	0	2160	0
EE (Thermal)	MJ	0	0	0	0	0	0

PERE: Use of renewable primary energy excluding resources used as raw materials, PERM: Use of renewable primary energy resources used as raw materials, PERT: Total use of renewable primary energy, PENRE: Use of non-renewable primary energy excluding resources used as raw materials, PENRM: Use of non-renewable primary energy resources used as raw materials, PENRT: Total use of non-renewable primary energy, SM: Secondary material, RSF: Renewable secondary fuels, NRSF: Non-renewable secondary fuels, FW: Net use of fresh water, HWD: Hazardous waste disposed, NHWD: Non-hazardous waste disposed, RWD: Radioactive waste disposed, CRU: Components for reuse, MFR: Material for recycling, MER: Materials for energy recovery, EE (Electrical): Exported energy electrical, EE (Thermal): Exported energy, Thermal.

Environmental Impacts for 1 m^3 of MATTPLUS MEDELAM							
Impact Category	Unit	A1-A3	C1	C2	C3	C4	D
GWP - Fossil	kg CO_2 eq	554	40.4	13.9	0	6.62	-424
GWP - Biogenic	kg CO_2 eq	-1168	0.369	0.010	0	857	-1.95
GWP - Luluc	kg CO_2 eq	0.952	0.385	0.004	0	0.002	-0.850
GWP - Total	kg CO_2 eq	-614	41.2	13.9	0	864	-427
ODP	kg CFC-11 eq	94.8E-6	1.14E-6	3.27E-6	0	1.24E-6	-17.6E-6
AP	mol H+ eq	4.87	0.266	0.058	0	0.193	-2.12
EP - Freshwater	kg PO_4 eq	61.1E-3	42.6E-3	984E-6	0	3.90E-3	-210E-3
EP - Marine	kg N eq	940E-3	43.2E-3	17.8E-3	0	160E-3	-404E-3
EP - Terrestrial	mol N eq	13.7E+0	392E-3	194E-3	0	1.01E+0	-4.05E+0
POCP	kg NMVOC	3.00	0.107	0.062	0	0.271	-1.08
ADPE	kg Sb eq	3.32E-3	97.4E-6	237E-6	0	44.9E-6	-524E-6
ADPF	MJ	9913	444	216	0	95.5	-5504
WDP	m^3 depriv.	698	18.9	0.703	0	2.04	-66.7
PM	disease inc.	48.7E-6	1.13E-6	1.26E-6	0	1.74E-6	-15.5E-6
IR	kBq U-235 eq	26.82	0.600	1.101	0	0.507	-62.1
ETP - FW	CTUe	6719	389	172	0	165	-7459
HTTP - C	CTUh	4.98E-6	7.14E-9	4.24E-9	0	170E-9	-85.3E-9
HTTP - NC	CTUh	4.55E-6	344E-9	196E-9	0	579E-9	-3.60E-6
SQP	Pt	88963	25.6	248	0	128	-861
Acronyms	GWP-total: Climate change, GWP-fossil: Climate change- fossil, GWP-biogenic: Climate change - biogenic, GWP-luluc: Climate change - land use and transformation, ODP: Ozone layer depletion, AP: Acidification terrestrial and freshwater, EP-freshwater: Eutrophication freshwater, EP-marine: Eutrophication marine, EP-terrestrial: Eutrophication terrestrial, POCP: Photochemical oxidation, ADPE: Abiotic depletion - elements, ADPF: Abiotic depletion - fossil resources, WDP: Water scarcity, PM: Respiratory inorganics - particulate matter, IR: Ionising radiation, ETP-FW: Ecotoxicity freshwater, HTP-c: Cancer human health effects, HTP-nc: Non-cancer human health effects, SQP: Land use related impacts, soil quality.							
Legend	A1: Raw Material Supply, A2: Transport, A3: Manufacturing, C1: De-Construction, C2: Waste Transport, C3: Waste Processing, C4: Disposal, D: Benefits and Loads Beyond the System Boundary.						

Biogenic Carbon Content	Unit	A1-A3
Biogenic carbon content in product	kg C / m^3 product	319
Note: 1 kg biogenic carbon is equivalent to 44/12 kg of CO_2.		

Resource Use for 1 m^3 of MATTPLUS MEDELAM							
Impact Category	Unit	A1-A3	C1	C2	C3	C4	D
PERE	MJ	13928	106	2.72	0	4.03	-626
PERM	MJ	0	0	0	0	0	0
PERT	MJ	13928	106	2.72	0	4.03	-626
PENRE	MJ	9914	444	216	0	95.5	-5503
PENRM	MJ	0	0	0	0	0	0
PENRT	MJ	9914	444	216	0	95.5	-5503
SM	kg	0	0	0	0	0	0
RSF	MJ	0	0	0	0	0	0
NRSF	MJ	0	0	0	0	0	0
FW	m^3	2.00	0.169	0.045	0	0.671	-1.76
Waste & Output Flows for 1 m^3 of MATTPLUS MEDELAM							
Impact Category	Unit	A1-A3	C1	C2	C3	C4	D
HWD	kg	0.466	0	0	0	0	0
NHWD	kg	3.33	0	0	0	0	0
RWD	kg	0	0	0	0	0	0
CRU	kg	0	0	0	0	0	0
MFR	kg	0	0	0	0	0	0
MER	kg	56.1	0	0	574	0	0
EE (Electrical)	MJ	0	0	0	0	2153	0
EE (Thermal)	MJ	0	0	0	0	0	0

PERE: Use of renewable primary energy excluding resources used as raw materials, PERM: Use of renewable primary energy resources used as raw materials, PERT: Total use of renewable primary energy, PENRE: Use of non-renewable primary energy excluding resources used as raw materials, PENRM: Use of non-renewable primary energy resources used as raw materials, PENRT: Total use of non-renewable primary energy, SM: Secondary material, RSF: Renewable secondary fuels, NRSF: Non-renewable secondary fuels, FW: Net use of fresh water, HWD: Hazardous waste disposed, NHWD: Non-hazardous waste disposed, RWD: Radioactive waste disposed, CRU: Components for reuse, MFR: Material for recycling, MER: Materials for energy recovery, EE (Electrical): Exported energy electrical, EE (Thermal): Exported energy, Thermal.

Environmental Impacts for 1 m^3 of EVOGLOSS							
Impact Category	Unit	A1-A3	C1	C2	C3	C4	D
GWP - Fossil	kg CO_2 eq	278	38.0	13.1	0	6.23	-399
GWP - Biogenic	kg CO_2 eq	-1225	0.347	0.010	0	807	-1.84
GWP - Luluc	kg CO_2 eq	1.48	0.363	0.004	0	0.002	-0.800
GWP - Total	kg CO_2 eq	-946	38.7	13.1	0	813	-402
ODP	kg CFC-11 eq	40.1E-6	1.07E-6	3.08E-6	0	1.17E-6	-16.6E-6
AP	mol H+ eq	1.92	0.250	0.055	0	0.182	-2.00
EP - Freshwater	kg PO_4 eq	95.5E-3	40.1E-3	927E-6	0	3.67E-3	-197E-3
EP - Marine	kg N eq	413E-3	40.7E-3	16.7E-3	0	150E-3	-380E-3
EP - Terrestrial	mol N eq	5.56E+0	369E-3	183E-3	0	954E-3	-3.81E+0
POCP	kg NMVOC	1.33	0.101	0.059	0	0.255	-1.02
ADPE	kg Sb eq	1.39E-3	91.6E-6	223E-6	0	42.2E-6	-493E-6
ADPF	MJ	4492	418	204	0	89.9	-5180
WDP	m^3 depriv.	323	17.8	0.661	0	1.92	-62.8
PM	disease inc.	28.1E-6	1.07E-6	1.18E-6	0	1.64E-6	-14.6E-6
IR	kBq U-235 eq	10.8	0.564	1.04	0	0.477	-58.5
ETP - FW	CTUe	4691	366	162	0	155	-7020
HTTP - C	CTUh	2.02E-6	6.72E-9	3.99E-9	0	160E-9	-80.2E-9
HTTP - NC	CTUh	3.14E-6	324E-9	185E-9	0	545E-9	-3.39E-6
SQP	Pt	96448	24.1	233	0	121	-811
Acronyms	GWP-total: Climate change, GWP-fossil: Climate change- fossil, GWP-biogenic: Climate change - biogenic, GWP-luluc: Climate change - land use and transformation, ODP: Ozone layer depletion, AP: Acidification terrestrial and freshwater, EP-freshwater: Eutrophication freshwater, EP-marine: Eutrophication marine, EP-terrestrial: Eutrophication terrestrial, POCP: Photochemical oxidation, ADPE: Abiotic depletion - elements, ADPF: Abiotic depletion - fossil resources, WDP: Water scarcity, PM: Respiratory inorganics - particulate matter, IR: Ionising radiation, ETP-FW: Ecotoxicity freshwater, HTP-c: Cancer human health effects, HTP-nc: Non-cancer human health effects, SQP: Land use related impacts, soil quality.							
Legend	A1: Raw Material Supply, A2: Transport, A3: Manufacturing, C1: De-Construction, C2: Waste Transport, C3: Waste Processing, C4: Disposal, D: Benefits and Loads Beyond the System Boundary.						

Biogenic Carbon Content	Unit	A1-A3
Biogenic carbon content in product	kg C / m^3 product	334
Note: 1 kg biogenic carbon is equivalent to 44/12 kg of CO_2.		

Resource Use for 1 m^3 of EVOGLOSS							
Impact Category	Unit	A1-A3	C1	C2	C3	C4	D
PERE	MJ	15475	100	2.56	0	3.79	-589
PERM	MJ	0	0	0	0	0	0
PERT	MJ	15475	100	2.56	0	3.79	-589
PENRE	MJ	4493	418	204	0	89.9	-5180
PENRM	MJ	0	0	0	0	0	0
PENRT	MJ	4493	418	204	0	89.9	-5180
SM	kg	0	0	0	0	0	0
RSF	MJ	0	0	0	0	0	0
NRSF	MJ	0	0	0	0	0	0
FW	m^3	1.79	0.159	0.042	0	0.631	-1.66
Waste & Output Flows for 1 m^3 of EVOGLOSS							
Impact Category	Unit	A1-A3	C1	C2	C3	C4	D
HWD	kg	0.054	0	0	0	0	0
NHWD	kg	10.1	0	0	0	0	0
RWD	kg	0	0	0	0	0	0
CRU	kg	0	0	0	0	0	0
MFR	kg	0	0	0	0	0	0
MER	kg	108	0	0	540	0	0
EE (Electrical)	MJ	0	0	0	0	2023	0
EE (Thermal)	MJ	0	0	0	0	0	0

PERE: Use of renewable primary energy excluding resources used as raw materials, PERM: Use of renewable primary energy resources used as raw materials, PERT: Total use of renewable primary energy, PENRE: Use of non-renewable primary energy excluding resources used as raw materials, PENRM: Use of non-renewable primary energy resources used as raw materials, PENRT: Total use of non-renewable primary energy, SM: Secondary material, RSF: Renewable secondary fuels, NRSF: Non-renewable secondary fuels, FW: Net use of fresh water, HWD: Hazardous waste disposed, NHWD: Non-hazardous waste disposed, RWD: Radioactive waste disposed, CRU: Components for reuse, MFR: Material for recycling, MER: Materials for energy recovery, EE (Electrical): Exported energy electrical, EE (Thermal): Exported energy, Thermal.

Environmental Impacts for 1 m^3 of ACRYLIC PANEL							
Impact Category	Unit	A1-A3	C1	C2	C3	C4	D
GWP - Fossil	kg CO_2 eq	269	37.2	12.8	0	6.09	-391
GWP - Biogenic	kg CO_2 eq	-1196	0.339	0.009	0	789	-1.80
GWP - Luluc	kg CO_2 eq	1.60	0.355	0.004	0	0.002	-0.782
GWP - Total	kg CO_2 eq	-925	37.9	12.8	0	795	-393
ODP	kg CFC-11 eq	37.2E-6	1.05E-6	3.01E-6	0	1.14E-6	-16.2E-6
AP	mol H+ eq	2.00	0.245	0.054	0	0.178	-1.95
EP - Freshwater	kg PO_4 eq	109E-3	39.2E-3	906E-6	0	3.59E-3	-193E-3
EP - Marine	kg N eq	423E-3	39.8E-3	16.3E-3	0	147E-3	-372E-3
EP - Terrestrial	mol N eq	5.65E+0	361E-3	179E-3	0	933E-3	-3.73E+0
POCP	kg NMVOC	1.34	0.099	0.058	0	0.249	-1.00
ADPE	kg Sb eq	1.41E-3	89.6E-6	218E-6	0	41.3E-6	-482E-6
ADPF	MJ	4276	409	199	0	87.9	-5065
WDP	m^3 depriv.	332	17.4	0.647	0	1.87	-61.4
PM	disease inc.	28.2E-6	1.04E-6	1.16E-6	0	1.60E-6	-14.3E-6
IR	kBq U-235 eq	10.8	0.552	1.01	0	0.466	-57.2
ETP - FW	CTUe	4760	358	158	0	152	-6864
HTTP - C	CTUh	2.02E-6	6.57E-9	3.91E-9	0	157E-9	-78.5E-9
HTTP - NC	CTUh	3.20E-6	317E-9	181E-9	0	532E-9	-3.31E-6
SQP	Pt	94237	23.6	228	0	118	-793
Acronyms	GWP-total: Climate change, GWP-fossil: Climate change- fossil, GWP-biogenic: Climate change - biogenic, GWP-luluc: Climate change - land use and transformation, ODP: Ozone layer depletion, AP: Acidification terrestrial and freshwater, EP-freshwater: Eutrophication freshwater, EP-marine: Eutrophication marine, EP-terrestrial: Eutrophication terrestrial, POCP: Photochemical oxidation, ADPE: Abiotic depletion - elements, ADPF: Abiotic depletion - fossil resources, WDP: Water scarcity, PM: Respiratory inorganics - particulate matter, IR: Ionising radiation, ETP-FW: Ecotoxicity freshwater, HTP-c: Cancer human health effects, HTP-nc: Non-cancer human health effects, SQP: Land use related impacts, soil quality.							
Legend	A1: Raw Material Supply, A2: Transport, A3: Manufacturing, C1: De-Construction, C2: Waste Transport, C3: Waste Processing, C4: Disposal, D: Benefits and Loads Beyond the System Boundary.						

Biogenic Carbon Content	Unit	A1-A3
Biogenic carbon content in product	kg C / m^3 product	326
Note: 1 kg biogenic carbon is equivalent to 44/12 kg of CO_2.		

Resource Use for 1 m^3 of ACRYLIC PANEL							
Impact Category	Unit	A1-A3	C1	C2	C3	C4	D
PERE	MJ	15160	97.8	2.51	0	3.70	-576
PERM	MJ	0	0	0	0	0	0
PERT	MJ	15160	97.8	2.51	0	3.70	-576
PENRE	MJ	4277	409	199	0	87.9	-5064
PENRM	MJ	0	0	0	0	0	0
PENRT	MJ	4277	409	199	0	87.9	-5064
SM	kg	0	0	0	0	0	0
RSF	MJ	0	0	0	0	0	0
NRSF	MJ	0	0	0	0	0	0
FW	m^3	1.84	0.156	0.041	0	0.617	-1.62
Waste & Output Flows for 1 m^3 of ACRYLIC PANEL							
Impact Category	Unit	A1-A3	C1	C2	C3	C4	D
HWD	kg	0.053	0	0	0	0	0
NHWD	kg	11.1	0	0	0	0	0
RWD	kg	0	0	0	0	0	0
CRU	kg	0	0	0	0	0	0
MFR	kg	0	0	0	0	0	0
MER	kg	107	0	0	528	0	0
EE (Electrical)	MJ	0	0	0	0	1980	0
EE (Thermal)	MJ	0	0	0	0	0	0

PERE: Use of renewable primary energy excluding resources used as raw materials, PERM: Use of renewable primary energy resources used as raw materials, PERT: Total use of renewable primary energy, PENRE: Use of non-renewable primary energy excluding resources used as raw materials, PENRM: Use of non-renewable primary energy resources used as raw materials, PENRT: Total use of non-renewable primary energy, SM: Secondary material, RSF: Renewable secondary fuels, NRSF: Non-renewable secondary fuels, FW: Net use of fresh water, HWD: Hazardous waste disposed, NHWD: Non-hazardous waste disposed, RWD: Radioactive waste disposed, CRU: Components for reuse, MFR: Material for recycling, MER: Materials for energy recovery, EE (Electrical): Exported energy electrical, EE (Thermal): Exported energy, Thermal.

Environmental Impacts for 1 m^3 of INDUSTRIAL ACRYLIC PANEL							
Impact Category	Unit	A1-A3	C1	C2	C3	C4	D
GWP - Fossil	kg CO_2 eq	279	37.2	12.8	0	6.09	-391
GWP - Biogenic	kg CO_2 eq	-1192	0.339	0.009	0	789	-1.80
GWP - Luluc	kg CO_2 eq	1.55	0.355	0.004	0	0.002	-0.782
GWP - Total	kg CO_2 eq	-911	37.9	12.8	0	795	-393
ODP	kg CFC-11 eq	39.4E-6	1.05E-6	3.01E-6	0	1.14E-6	-16.2E-6
AP	mol H+ eq	2.01	0.245	0.054	0	0.178	-1.95
EP - Freshwater	kg PO_4 eq	107E-3	39.2E-3	906E-6	0	3.59E-3	-193E-3
EP - Marine	kg N eq	424E-3	39.8E-3	16.3E-3	0	147E-3	-372E-3
EP - Terrestrial	mol N eq	5.67E+0	361E-3	179E-3	0	933E-3	-3.73E+0
POCP	kg NMVOC	1.36	0.099	0.058	0	0.249	-1.00
ADPE	kg Sb eq	1.54E-3	89.6E-6	218E-6	0	41.3E-6	-482E-6
ADPF	MJ	4505	409	199	0	87.9	-5065
WDP	m^3 depriv.	333	17.4	0.647	0	1.87	-61.4
PM	disease inc.	28.5E-6	1.04E-6	1.16E-6	0	1.60E-6	-14.3E-6
IR	kBq U-235 eq	11.4	0.552	1.01	0	0.466	-57.2
ETP - FW	CTUe	5114	358	158	0	152	-6864
HTTP - C	CTUh	2.04E-6	6.57E-9	3.91E-9	0	157E-9	-78.5E-9
HTTP - NC	CTUh	3.29E-6	317E-9	181E-9	0	532E-9	-3.31E-6
SQP	Pt	94028	23.6	228	0	118	-793
Acronyms	GWP-total: Climate change, GWP-fossil: Climate change- fossil, GWP-biogenic: Climate change - biogenic, GWP-luluc: Climate change - land use and transformation, ODP: Ozone layer depletion, AP: Acidification terrestrial and freshwater, EP-freshwater: Eutrophication freshwater, EP-marine: Eutrophication marine, EP-terrestrial: Eutrophication terrestrial, POCP: Photochemical oxidation, ADPE: Abiotic depletion - elements, ADPF: Abiotic depletion - fossil resources, WDP: Water scarcity, PM: Respiratory inorganics - particulate matter, IR: Ionising radiation, ETP-FW: Ecotoxicity freshwater, HTP-c: Cancer human health effects, HTP-nc: Non-cancer human health effects, SQP: Land use related impacts, soil quality.							
Legend	A1: Raw Material Supply, A2: Transport, A3: Manufacturing, C1: De-Construction, C2: Waste Transport, C3: Waste Processing, C4: Disposal, D: Benefits and Loads Beyond the System Boundary.						

Biogenic Carbon Content	Unit	A1-A3
Biogenic carbon content in product	kg C / m^3 product	325
Note: 1 kg biogenic carbon is equivalent to 44/12 kg of CO_2.		

Resource Use for 1 m^3 of INDUSTRIAL ACRYLIC PANEL							
Impact Category	Unit	A1-A3	C1	C2	C3	C4	D
PERE	MJ	15122	97.8	2.51	0	3.70	-576
PERM	MJ	0	0	0	0	0	0
PERT	MJ	15122	97.8	2.51	0	3.70	-576
PENRE	MJ	4506	409	199	0	87.9	-5064
PENRM	MJ	0	0	0	0	0	0
PENRT	MJ	4506	409	199	0	87.9	-5064
SM	kg	0	0	0	0	0	0
RSF	MJ	0	0	0	0	0	0
NRSF	MJ	0	0	0	0	0	0
FW	m^3	1.87	0.156	0.041	0	0.617	-1.62
Waste & Output Flows for 1 m^3 of INDUSTRIAL ACRYLIC PANEL							
Impact Category	Unit	A1-A3	C1	C2	C3	C4	D
HWD	kg	0.054	0	0	0	0	0
NHWD	kg	10.7	0	0	0	0	0
RWD	kg	0	0	0	0	0	0
CRU	kg	0	0	0	0	0	0
MFR	kg	0	0	0	0	0	0
MER	kg	108	0	0	528	0	0
EE (Electrical)	MJ	0	0	0	0	1980	0
EE (Thermal)	MJ	0	0	0	0	0	0

PERE: Use of renewable primary energy excluding resources used as raw materials, PERM: Use of renewable primary energy resources used as raw materials, PERT: Total use of renewable primary energy, PENRE: Use of non-renewable primary energy excluding resources used as raw materials, PENRM: Use of non-renewable primary energy resources used as raw materials, PENRT: Total use of non-renewable primary energy, SM: Secondary material, RSF: Renewable secondary fuels, NRSF: Non-renewable secondary fuels, FW: Net use of fresh water, HWD: Hazardous waste disposed, NHWD: Non-hazardous waste disposed, RWD: Radioactive waste disposed, CRU: Components for reuse, MFR: Material for recycling, MER: Materials for energy recovery, EE (Electrical): Exported energy electrical, EE (Thermal): Exported energy, Thermal.

Additional Informations

For more information about Kastamonu Entegre and its products

Scan or Click!

With all technical details and 3D images, Kastamonu Entegre products are available on your mobile phone or tablet. Download IDS 3D (Interior Design Studio 3D) application and experience reality.

GET IT ON Google Play

Download on App Store

VOC Emissions

Testing Laboratory: RISE Research Institutes of Sweden AB
Test Reference: For updated test reference ID, it is recommended to contact the relevant sales executive.

Emission measurements according to SS-EN ISO 16000-9:2006 (Indoor air – Part 9: Determination of the emission of volatile organic compounds from building products and furnishing – Emission test chamber method) after 28 days regarding volatile organic compounds (VOC and VVOC/SVOC), carcinogenic substances (VOC-substances, EU Regulation No 1272/2008 Annex VI, cat 1A and 1B) formaldehyde and acetaldehyde (ISO 16000-3:2011). Evaluation according to EN 16516:2017 (EU-LCI values).

Version History :

V1.1 - 10.06.2021 - Product name changed.
V1.2 - 01.10.2022 - Company logo and Eco Platform logo updated.


KEAS

References

/GPI/ General Programme Instructions of the International EPD® System. Version 3.0

/ISO 9001/ Quality management systems – Requirements

/ISO 14001/ Enviroment Management System- Requirements

/EN 15804:2012+A2:2019/ Sustainability of construction works - Environmental Product Declarations — Core rules for the product category of construction products

/ISO 14020:2000/ Environmental labels and declarations — General principles

/ISO 14025/ ISO 14025:2006 Preview Environmental labels and declarations -- Type III environmental declarations -- Principles and procedures

/ISO 14040-44/ ISO 14040:2006-10, Environmental management - Life cycle assessment -Principles and framework (ISO 14040:2006) and Requirements and guidelines (ISO 14044:2006)

/ISO 45001/ Occupational Health & Safety Management System Certification - Requirements

/ Gervasio et al., 2018 /Model for Life Cycle Assessment of buildings LCA, JRC Technical Reports, 2018.

/ Günther et al. ,2012 /Calorific value of selected wood species and wood products, Springer.

/PCR for Construction Products and CPC 54 Construction Services/ Prepared by IVL Swedish Environmental Research Institute, Swedish Environmental Protection Agency,

SP Trä, Swedish Wood Preservation Institute, Swedisol, SCDA, Svenskt Limträ AB, SSAB, The International EPD System, 2019:14 Version 2.0, DATE 2019-12-20

/Ecoinvent/ Ecoinvent Centre, www.ecoinvent.org

/SimaPro/ SimaPro LCA Package, Pré Consultants, the Netherlands, www.pre-sustainability.com

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EPD registered through fully aligned regional programme:

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Programme Operator

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