



Wood Construction

Intelligent Solutions



* Increasingly, more and more architects, builders and traders are being convinced by the AGEPAN® time-saving building system. The system's energy-efficient and water vapor open products guarantee highest possible functionality. Why still use outmoded PVC jackets or oil skins when state-of-the-art "high performance membranes" are readily available?



AGEPAN® - service and design

Advantage your customers



Direct plastering of the AGEPAN® THD T+G 230 at the facade.



The time and cost saving alternative! AGEPAN® THD STD 190 as a service layer for all the electric cables and sanitary pipes.



Easy handling because of the perfect T+G.



AGEPAN® - eco and cost efficient

The time-saving building system

Nature is our inspiration

Our commitment is to enable people to live and work in an ecologically beneficial atmosphere with natural materials.

Wood based products particularly when used in timber frame housing will have a positive effect on global warming by improved energy efficiency. The AGEPAN® products as part of the AGEPAN® building system can be used as a substitute for traditional timber frame constructions as well as for brick buildings manufactured using high energy processes.

Agepan®'s thermal insulation properties reduce energy emissions from housing, thus helping to minimise individual house energy usage and reducing emissions into the atmosphere.

Innovation

Our special sound- and heat insulation as well as being moisture resistant and having fire resistant properties provide customers with a clear ecological advantage. In addition financial savings due to reduced building time will advantage your customers. Participate in our program – we are looking for partners to build a model house (highest eco-standard and energy saving potential) in North America, which will display the benefits of our AGEPAN® building products:

- AGEPAN® THD
- AGEPAN® DWD protect
- AGEPAN® TEP
- AGEPAN® UDP
- AGEPAN® OSB

Living and working, feeling at home in harmony with nature – AGEPAN® means building by design.

AGEPAN® THD T+G 230

Highlights

- * Vapor permeable and thermally insulating yet strong
- * Excellent thermal insulation keeps properties warm in the winter and the heat storage capacity ensures they are cool in the summer
- * Permits homogeneous insulation by minimising cold bridges (rafters, slabs)
- * High compression strength
- * When dry boards in thicknesses 2 3/8 and 3 5/32 can be safely walked on with rafters up to 39 3/8 apart
- * Manufactured using environmentally friendly dry process
- * Easy to cut, work and shape
- * Sound surface allows a variety of fixings to be used, from clamps to screws
- * Ideal for improving existing roofs on the exterior (for greater energy efficiency)
- * As second water-shedding layer in roofs
- * Draughtproof and water repellent



Technical Data | Delivery Programme

Properties	Test standard	
Raw density (lbs/ft³)	DIN EN 1602	14.36
Thermal resistance (R-Value) (h²ft²°F/Btu)		4.5 - 6.8 - 9.1
Rated thermal conductivity (Btu/h²ft²°F)	DIN 4108-4	0.03
Water vapor diffusion resistance factor (μ)	EN 12086	3
Rated specific heat capacity Btu/(lb°F)	DIN 4108-4	0.50
Material class	DIN 4102-1	B2: normal flammability
Safe to walk on* (dry, u ≤ 18%, w/o floating joints)		up to a = 39 3/8 in, 220 lb men load
Bonding		Bonded w/o formaldehyde with PUR resins

* In conjunction with Z-23.15-1508

Available sizes	Unit	Thickness (in)		
		1 9/16	2 3/8	3 5/32
Size (full size)	in	74 13/32 x 25 3/16 (T+G)		
Format (net, w/o tongues and grooves)	in	73 13/16 x 24 19/32 (T+G)		
Coverage per board	ft²	12.59		
Coverage per bundle	ft²	201.82	138.75	100.97
Approx. weight per ft²	lbs/ft²	1.88	2.83	3.77
Approx. weight per board	lb	23.81	35.71	47.62
Approx. weight per bundle	lb	382.5	394.41	382.5
Boards per bundle		16	11	8



AGEPAN® THD STD 190

Highlights

- * Efficient service layer to save time and money
- * Vapor permeable and thermally insulating yet strong
- * Excellent thermal insulation keeps properties warm in the winter and the heat storage capacity ensures they are cool in the summer
- * High compression strength due to dense surface layer
- * Easy to cut, work and shape
- * Manufactured using environmentally friendly dry process
- * Effective noise reduction due to absorbent fibre structure
- * Water repellent



Technical Data | Delivery Programme

Properties	Test standard	
Raw density (lbs/ft³)	DIN EN 1602	11.9
Thermal resistance (R-Value) (h²ft²°F/Btu)		4.8 - 7.2 - 9.7
Rated thermal conductivity (Btu/h²ft²°F)	DIN 4108-4*	0.03
Water vapor diffusion resistance factor (μ)		3
Rated specific heat capacity Btu/(lb°F)		0.5
Material class	DIN 4102-1	B2: normal flammability
Bonding		Bonded w/o formaldehyde with PUR resins

* In conjunction with Z-23.15-1508

Available sizes	Unit	Thickness (in)		
		1 9/16	2 3/8	3 5/32
Size	in	104 11/32 x 23 5/8		
Coverage per board	ft²	17.11		
Coverage per bundle	ft²	546.81	375.66	273.40
Approx. weight per ft²	lbs/ft²	1.56	2.33	3.11
Approx. weight per board	lb	26.68	39.9	53.35
Approx. weight per bundle	lb	1,022.94	1,049.62	1,022.94
Boards per bundle		32	22	16
Size	in	51 31/32 x 23 5/8		
Coverage per board	ft²	8.51		
Coverage per bundle	ft²	272.33	187.29	136.70
Approx. weight per ft²	lbs/ft²	1.56	2.33	3.11
Approx. weight per board	lb	13.23	19.84	26.46
Approx. weight per bundle	lb	509.49	522.94	509.49
Boards per bundle		32	22	16



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WOOD CONSTRUCTION | AGEPAN® DWD PROTECT

WOOD CONSTRUCTION | AGEPAN® DWD PROTECT

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AGEPAN® DWD pro»tect

Highlights

- * Optimized, easy-to-use tongue-and-groove edges
- * As second water-shedding layer in roofs
- * Safe for walking on when dry up to a mean load of 220 lb (without floating joints) if rafters are spaced 39 3/8 in or less apart
- * Approved by the German building authorities (Approval Z-9.1-382)
- * Highly favourable building biology
- * Water-vapor-permeable and wind-sealing

The AGEPAN® DWD used as a structural board in the roof

The AGEPAN® DWD used as a structural board in the wall

Technical Data | Delivery Programme

Properties	Standard	
Raw density (lbs/ft ³)	DIN EN 323	33.71 - 36.83
Thermal resistance (R-Value) (h ² ft ² °F/Btu)		1.0
Steam diffusion resistance factor μ	DIN 52 615	≈ 11
Diffusion-equivalent air layer thickness s_d (m)		0.18
Material class	DIN 4102 T 1	B2: normal flammability
Recommended spacing of supports (in)		19 11/16, 24 19/32, 32 25/32, 39 3/8
Bonding		Formaldehyde-free with PUR resins
Moisture content	EN 322	9 ± 4 %
24-hour swell after soaking in water	EN 317	≤ 8,5 %
Thickness tolerance (in)		± 1/32
Length/width tolerance (in)		± 1/8

* In conjunction with Z-23.15-1508

Permissible Stresses According to Approval Z-9.1-382	Use of AGEPAN® DWD protect within the scope of	
	Wood-based product class 20	Wood-based product class 100
	5/8 (in)	5/8 (in)
Curvature (σ_{Bxz} parallel to the sheet)	362.60	181.30
Tensile force (σ_{zx} parallel to the sheet)	246.56	123.28
Compression (σ_{Dx} parallel to the sheet)	304.58	152.29
Shear (τ_{xy} at right angles to the sheet)	145.04	72.52

Permissible Modulus of Elasticity and Shear According to Approval Z-9.1-382	Use of AGEPAN® DWD protect within the scope of	
	Wood-based product class 20	Wood-based product class 100
	5/8 (in)	5/8 (in)
Curvature (σ_{Bxz} parallel to the sheet)	246,564	123,282
Tensile force (σ_{zx} parallel to the sheet)	246,564	123,282
Compression (σ_{Dx} parallel to the sheet)	246,564	123,282
Shear (τ_{xy} at right angles to the sheet)	116,030	58,015

Available sizes	Format (in)	Thickness (in) 5/8
AGEPAN® DWD protect, tongue-and-groove on 4 sides	98 7/16 x 39 3/8	•
AGEPAN® DWD protect, tongue-and-groove on 4 sides	98 7/16 x 24 19/32	•
AGEPAN® DWD protect, straight-edged	110 1/4 x 49 3/32	•

Heidrich, Warnemünde

AGEPAN® UDP

Highlights

- * As second water-shedding layer in roofs
- * Easy to use and handle
- * Low risk of damaging tongue and groove profiles during use
- * Highly favourable building biology
- * No unpleasant odours caused by bitumen
- * Easy to install thanks to tongue and groove edges and low weight
- * Stackable without problem
- * Noise reducing
- * Robust
- * Draughtproof

Technical Data | Delivery Programme

Available sizes	Test standard	
Thickness tolerance (in)	EN 823	± 1/32
Raw density (lbs/ft ³)	EN 1602	16.86
Raw density tolerance (lbs/ft ³)	EN 1602	± 1.87
Thermal resistance (R-Value) (h ² ft ² F/Btu)	EN 13171	2.3 – 2.6 – 3.4
Water vapor diffusion resistance factor (μ)	EN 12086	5
Rated specific heat capacity (Btu/lb°F)	DIN 4108-4	0.5
Material class	DIN 4102-4	B2: normal flammability
Bonding	Bonded w/o formaldehyde with PUR resins	
Tear and tensile strength perpendicular to boards (lbf/in ²)	EN 1607	2.9
Compression strength group	EN 826	P 300

* In conjunction with Z-23.15-1508

Available sizes	Unit	Thickness (in)		
		7/8	31/32	1 1/4
Size (full size)	in	99 3/16 x 24 (T+G)		
Format (net, w/o tongues and grooves)	in	98 7/16 x 23 7/32 (T+G)		
Net coverage per board	ft ²	15.88		
Net coverage per bundle	ft ²	444.55	396.87	317.54
Approx. weight per ft ²	lbs/ft ²	1.22	1.38	1.77
Approx. weight per board	lb	19.73	22.40	28.68
Approx. weight per bundle	lb	552.48	559.97	573.64
Boards per bundle		28	25	20

AGEPAN® TEP

Highlights

- * Saves materials and time: no additional load bearing boards required
- * Thermally insulating and sound reducing
- * Compression resistant and vapor permeable
- * Can be walked on immediately after laying
- * Floating parquet and laminate can be laid directly over the boards
- * Easy to cut and shape (e.g. for recesses)
- * Easy to compensate for slight unevenness

Technical Data | Delivery Programme

Available sizes	Test standard	
Raw density (lbs/ft ³)	DIN EN 1602	11.86
Thermal resistance (R-Value) (h ² ft ² F/Btu)		4.8 - 7.2 - 9.7
Rated thermal conductivity (Btu/h ² ft ² F)	DIN 4108-4*	0.03
Water vapor diffusion resistance factor (μ)	EN 12086	5
Rated specific heat capacity Btu/(lb°F)		0.5
Material class	DIN 4102-1	B2: normal flammability
Bonding	Bonded w/o formaldehyde with PUR resins	
Stress at 10 % compression (lbf/in ²)	21.76	
Heat resistance (short-term) (°F)	max. 482	

* In conjunction with Z-23.15-1508

Available sizes	Unit	Thickness (in)		
		1 9/16	2 3/8	3 5/32
Size	in	104 11/32 x 23 5/8		
Coverage per board	ft ²	17.11		
Coverage per bundle	ft ²	546.81	375.66	273.40
Approx. weight per ft ²	lbs/ft ²	1.56	2.33	3.11
Approx. weight per board	lb	26.68	39.9	53.35
Approx. weight per bundle	lb	1,022.94	1,049.62	1,022.94
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Coverage per bundle	ft ²	272.33	187.29	136.70
Approx. weight per ft ²	lbs/ft ²	1.56	2.33	3.11
Approx. weight per board	lb	13.23	19.84	26.46
Approx. weight per bundle	lb	509.49	522.94	509.49
Boards per bundle		32	22	16



AGEPAN® OSB PS 2-04

Highlights

- * High bending strength, extremely stable and moisture-resistant
- * Officially approved
- * Quality continually monitored
- * Lightweight and easy to use
- * Made with about 95 % wood, unobjectionable from the standpoint of building biology
- * Attractive with natural wood look
- * First-class mechanical properties and easy to use
- * Can be nailed, stapled, sawn and screwed just like solid wood
- * Nails and screws hold firmly, also near edges
- * Scrap can be burned for heat (in compliance with Pollution Control Act) or disposed of without problem
- * TECO certified thicknesses: 3/8", 7/16", 23/32"



Technical Data | Delivery Programme

Properties	Main axis	Minor axis
Density	36.9 lbs/ft³	
Moisture	4.2 %	
Stiffness	202,406	347,260
Strength	2,143	2,706

Available Sizes	Size (ft)	Thickness (in)
		23/32
Facing board - T+G 2, Contiface	4 x 8	•



AGEPAN® Applications

AGEPAN® THD T+G 230	
Applications:	Wall and roof constructions
Properties:	Vapor permeable, water shedding, wind sealing, thermally insulating, sound reducing
Functions:	As second water shedding layer, as substrate for plaster

AGEPAN® THD STD 190	
Applications:	Wall and roof constructions
Properties:	Vapor permeable, internal thermally insulating
Functions:	Insulation, service layer

AGEPAN® DWD protect	
Applications:	Wall and roof constructions
Properties:	Vapor permeable, water shedding, wind sealing, outer panelling as additional load bearing element, structural board for external use
Functions:	As second water shedding layer

AGEPAN® UDP	
Applications:	Wall and roof constructions
Properties:	Vapor permeable, water shedding, wind sealing, thermally insulating
Functions:	As second water shedding layer

AGEPAN® TEP	
Applications:	Floor constructions
Properties:	Vapor permeable, thermally insulating, sound reducing
Functions:	Universal board for floors

AGEPAN® OSB PS 2-04	
Applications:	Wall, roof and floor constructions
Properties:	Extremely stiff board, shape retentive, moisture resistant
Functions:	As a load bearing panel material, vapour barrier and air sealing layer



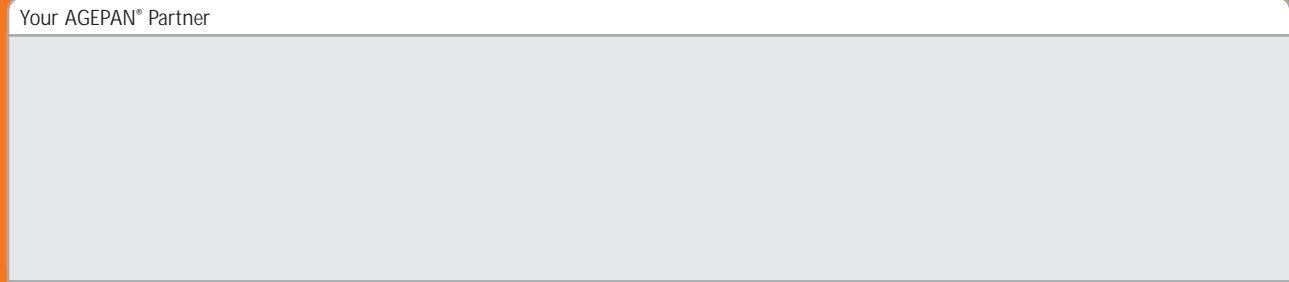


Technical Advice On-Side

For all issues that can only be dealt by a one-on-one meeting, we also offer problem-orientated consulting, on request on-site. Our wood construction specialists will help you with practical expertise in every aspect of

AGEPAN® system solutions: from planning to optimum use. We make a point of always supporting you directly and comprehensively.

Your AGEPAN® Partner



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