











OUR PRODUCT





HAIDA is a product of HAIDA group in China.

- Standardized modern scientific management system
- World-level advanced multifunctional automatic production line for manufacture
- The first rate automatic roll coating production line with double coating and baking in the world
- Combined with treating technique of P.P.G Kynar500 fluorocarbon resin coating from Japan and Henkel coating formation from Germany

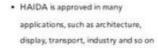
All these guarantee the best quality and higher level of HAIDA

Over 6.5 million sq.m of HAIDA can be produced annually and be popular world-wide.



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ADVANTAGE



- · Easily processing to achieve designer solutions by using simple, conventional tools
- · Environmentally friendly does not pollute
- · Available in a variety of standard sizes and colours, special colours on request
- · Lightweight, extremely rigidity and flat surface





- · Extremely resistance against weathering, acid, alkali, powder and strong solar radiation
- · Outstanding characteristic of fireproof panel approved for most building application











SCOPE OF APPLICATIONS

HAIDA used in decorating heavy curtain of the building, furnishing both, walls outside and inside of new and old buildings, decorating wallboard of tunnels, indication board, front wall and the bodies of automobiles, ships and machines and for use as industrial materials. For examples:



Circular Column



Shopfront and Signboard



Building Fascia



Exhibition and Display Stand



Door Panels and Frame



Metal Ceiling and Partition



Soffits and Beam



Window Surrous



Wall Paneling Concept



PRODUCT INFORMATION



Constitution

HAIDA brand aluminum composite panel is a new type building material presenting the tendency of the future. With fluoro-carbon resin (PVDF) roasting painting of rolling type on the front layer, its weather resistance is over 20 years without change of color.





Panel Dimensions

HAIDA One side stove-lacquered finish	Thickness	Amm	2mm, 3mm, 5mm, 6mm
	width	1220mm	1000mm 1250mm 1500mm 1550mm

Product Range

п								
1	HAIDA-Exterior	Yes	Yes	Yes	Yes	Yes	Kynar 500PVDF	HAIDA
4	HAIDA-Interior	Yes	Yes	Yes	Yes	Yes	Polyester	HAIDA
	HAIDA-Granite-Ext	Yes	Yes	Yes	Yes /	Yes	Kynar PVD F Films	HAIDA /
	HAIDA-Granite-Int	Yes	Yes	Yes	Yes	Yes	IT-Polyester	HAIDA
	HAIDA-Vengers-Ext	Yes	Yes	Yes	Y 65	Yes	Kynar PVDF Films	/HAIDA/
	RAIDA-Veneers Int	Yes	Yes	Yes	Yes	Yes	IT-Polyester	HAIDA
-	HAIDA-Arctic Ice-Ext	Yes	Yes	Yes	Yos	Yes	Kynar PVDF Films	HAIDA
	HAIDA-Arctic Ice-Int	Yes	Yes	Yes	Yes	Yes	IT-Polyester	HAIDA
	HAIDA-Chameleon-Ext	Yes	Yes	Yes	Yes	Yes	Kynar PVDF Films	HAIDA
=	HAIDA-Chameleon-Int	Yes	Yes	Yes	Yes	Yes	IT-Polyester	HAIDA



Temperature behaviour

Temperature Resistance	From -40 C to + 80 C
Temperature	2.5mm per linear meter for
Expansion	temperature difference of

Sound Insulation

The table shows the considerable sound reduction for a concrete wal covered with HAIDA

Jan m	23d8
48.00	24dB
6m m	25d8



Compared wth solid aluminium

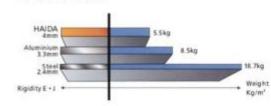
Required thickness and actual weights of panels with same rigidity

0.125 kN m²/m	1.25 cm//m	3mm	4.5 kg/m ³	2.7mm	23 kg/m ²
0.125 kN m ² /m 0.240 kN m ² /m	1.25 cm ¹ /m 1.75 cm ² /m	3mm 4mm	4.5 kg/m² 5.5 kg/m²	2.7mm 3.3mm	2.3 kg/m ⁴ 8.9 kg/m ⁴

Comparison Chart between HAIDA, Solid Aluminium and steel

Weight	4mm: 5.48 kg/m*	3mm: 8.0 kg/m*	1.5mm: 11.47 kg/m ²
Flatness	Very Flat	Uneven	Uneven
Heat Insulation	Best	Poor	Poor
Sound Insulation	25db	15db	15db
Echo Response	Low	Medium	High
Paint consistency	Bost	Inconsistent	Inconsistent
Paint Microns	Even	Uneven	Uneven
Weather Proof	Good	Good	Good
Fire Proof	Good	Good	Good
Fabrication	Easy	Difficult	Very Tough
Delivery	Quick	Slow	Slow
Total Cost	Economical	Medium Cost	Expensive
Maintenance	Easy	Easy	Easy
Installation	Quick	Slow	Very Slow

Comparison of thickness and weight on equivalent rigidity





ROUTING AND FOLDING TECHNIQUE

HAIDA is easily formed into the desired shape. The reversed side is first routed and panel folded. Routing is performed using one of the three tools shown



The common router with approriate "bit"...



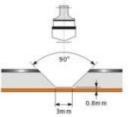
A disk cutter with disk appropriate for the angle.



Atypical bench saw etc.



Bending by cold



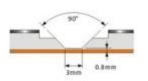
Groove 90" (V-shape) for foldings up to 90"

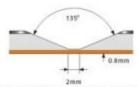


Not suitable for HAIDA Rectangular groove for foldings up to 150" depend on the panel thickness.









Groove 135° (V-shape) for foldings up to 135°











PROCESSING METHOD



Normal aluminum product processing machinery and wood product processing machinery can be used for processing of HAIDA panel without special device.

HAIDA parel is very easy to process.

All cutting, milling, planning, slotting, side-folding and curving can be easily fulfilled by simple tools used for

processing timber and metal. It can be

curve, reserved curve, corner and sharp

shaped into various shapes, such as

curve, according to requirements of building design. It is incomparable for



Countersunk rivet can realize easy joint from one direction



Welding

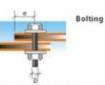
Riveling

Sample conditions of gas protected welding: Welding temperature.230-240℃ Pressure of air compressor: 0.3-04kg/cm² Pressing pressure: 1.0-1.5kg Welding speed: 1000m/min



Cutting

It can be easily processed with wood product processing saw and plate saw. It recommended to use hard alloy blade



Considering from deformation limit, formule = 2D is the best calculation way of aperture D and distance(e) from hole center to plate end.



Dending

When plate folder is used to finish the HAIDA panel, dies shall be placed on with appropriate radius. And the required parameters of Haida panel is showed as below:

Thickness of Heida panel (mm)	Vertical	Cross
3	65	55
4	75	55
6	90	80



Shearing

Gantry shearing machine is most effective for processing of large quantity HAIDA panel, and burrs are possibly happened at the cutting place. Appropriate gap and inclination are showed as below.

Thickness of HAIDA panel (mm) Gapt	inclination
3	0.04	1
4	0.04	1 30
6	0.2	2 30



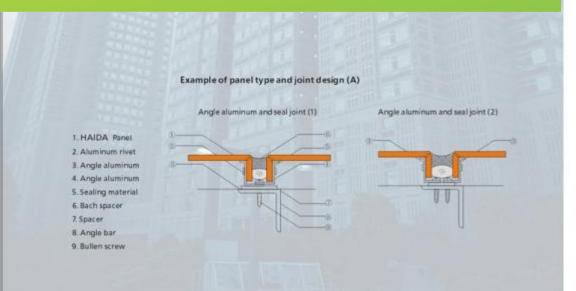
Glueing

Excellent cohesion can be achieved even when using special adhesives or elastomeric polyurethane of one component.



SCHEME OF INSTALLATION





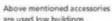
Example of panel type and joint design (B)

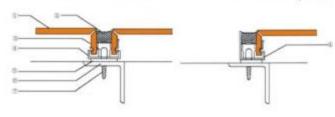
Accessories and seal joint (1)

Accessories and seal joint (2)



- 2. Sealing material
- 3. Plastic lining bar
- 4. Accessories
- 5. Spacer
- 6. Angle bar
- 7. Bullen screw



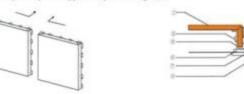


are used low buildings.

Example of panel type and joint design (C)



- 2. Aluminum river
- 3. Angle aluminum
- 4. Sealing material
- 5. Bach spacer 6. Spacer
- 7. Angle bar
- 8. Bullen screw

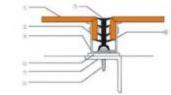


Example of panel type and joint design

1. HAIDA Panel

- 2. Aluminum rivet
- 3. Angle aluminum
- 4. Angle aluminum
- 5. Gasket
- 6. Spacer
- 7. Angle bar
- 8. Bullen screw

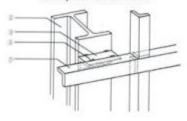




Example of keel structure

1. HAIDA Panel

- 2. Bearing strut
- 3. Angle support
- 4. Welding
- 5. Angle bar

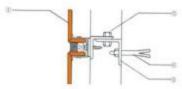




Example of keel structure

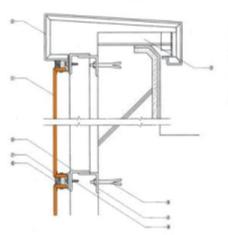
- 1. HAIDA Panel
- 2. Bearing strut (wall)
- 3. Angle support
- 4. Angle aluminum
- 5. Tapping screw
- 6. Embedded part



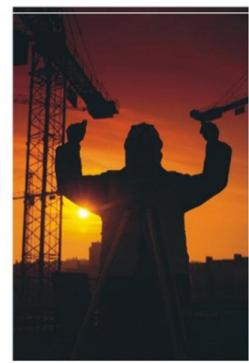


SCHEME OF INSTALLATION

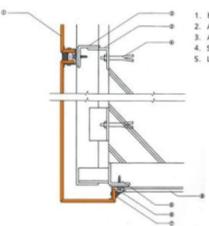
Installation example of building top



- 1. HAIDA Panel
- 2. Building top
- 3. Angle support
- 4. Angle support 5. Angle bar
- 6. Sealing material
- 7. Lining material
- 8. Bullen screw
- 9. Built-in anchoring or expanding bolt



Installation example of foundation



Installation example of window frame

1. HAIDA Panel

3. Angle support

5. Sealing material

6. Lining material

7. External window frame

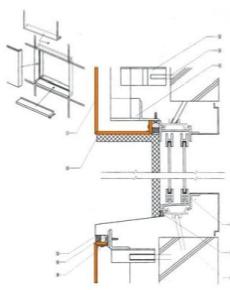
4. Angle bar

2. Built-in anchoring or expanding bolt

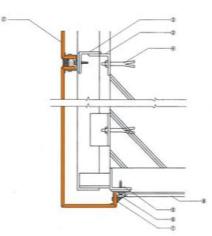
- 1. HAIDA Panel
- 2. Angle bar
- 3. Angle support
- 4. Sealing material
- S. Lining material

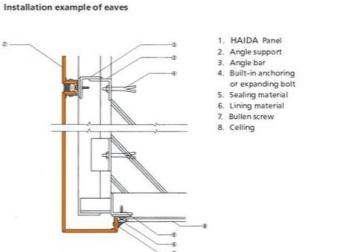


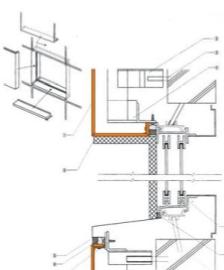
Installation example of repaired building window frames



- 1. HAIDA Panel
- 2. Built-in anchoring or expanding bolt
- 3. Angle support
- 4. Angle bar
- 5. Sealing material
- 6. Lining material
- 7. Damper
- 8. Bullen screw
- 9. Window frame
- 10. The former bearing wall

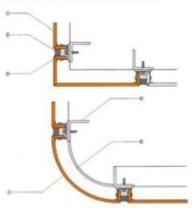






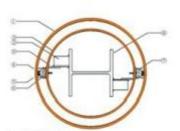
SCHEME OF INSTALLATION

Installation example external corner



- 1. HAIDA Panel
- 2. Sealing material
- 3. Lining material
- 4. Angle bar
- 5. Steel plate strip

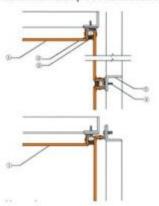
Example of column covering



- 1. HAIDA Panel
- 2. Angle support
- 3. Steel plate strip 4. Sealing material
- 5. Plastic lining bar
- 6. Accessories
- 7. Bullen screw
- 8. Bearing strut

Above mentioned accessories are used for low buildings.

Installation example of installation corner



- 1. HAIDA Panel
- 2. Sealing material
- 3. Lining material
- 4. Angle bar
- 5. Bullen screw

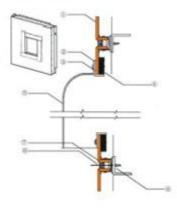






Installation example of equipment and opening

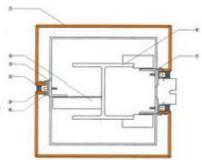
- 1. HAIDA Panel
- 2. Sealing around
- 3. Tape
- 4. Veneer
- 5. Weathertight covering material
- 6. Sealing material
- 7. Lining material
- 8. Bullen screw



Example of strut covering

- 1. HAIDA Panel
- 2. Angle support
- 3. Angle bar
- Sealing material
- 5. Plastic lining bar
- 6. Accessories
- 7. Bullen screw
- 8. Bearing strut

Above mentioned accessories are used for low buildings





CERTIFICATIONS





Advice



Protective film

It is recommended to install the panels in the same direction and please remove this protective film within six months.



Dimensional tolerances

Thickness mill finish resp. Stove lacquered 0.2mm andodised -0.4/0.2mm Width -0/+4mm

Length 1000-4000mm -0/+6mm

4001-8000mm -0/+10mm

Due to the production process, a displacement of the cover sheets of max. 2mm to one side may occur along the longer sides of the panels if not specially trimmed.

Cleaning and Maintenance

Cleaning with a piece of soft cloth by mild detergent or water. Strong acid, alkali or solvent is prohibited so as not to impair the surface. Please use high -pressure sprayers when cleaning heavy curtain wall.

Storage

Protect pallets during storage against rain, penetration of moisture, condensation. Pile pallets in stacks one on top of the other (do not place the panels in upright position), stacks must not comprise more than 6 pallets of indentical size. Avoid storage for a period of more than 6 months.

Recycling

HAIDA is fully recyclable, i.e. both the core material and the aluminium cover sheets can be remelted and used for the production of new material.





TEST REPORT

Test report of State Test Center of Building Materials

Items	Standard index of quality product	Result	Conclusion
Appearance	Clean surfact without swell, flaws, scratch and abenration	Pass	Qualified
	Length: ±3mm	0mm + 2mm	
	Width: ±2mm	0mm - + 2mm	
	Thickness: 0.2mm	0mm	
Deviation of dimension	Deviation of diagonal: ©5mm	Senes	Qualified
	Out of straight at sides: < 1mm/m	0.2mm/m	
	Warp: ≤5mm	1mm/m	
Thickness of coating	≥25 km	29 x (av30)	Qualified
Deviation of luster	<10	2.1(av 28.0)	Qualified
Hardness of pencil	3/H8	3H	Qualified
Toughness of coating	K2T	21	Qualified
Adhesive	Not less than Grade 1	Squartigual method of Grade II, Grade 1-marking method of solling line	Qualified
impactstrength	50kg.cm Without paint off and crack	Pass	Qualified
Boiling water resistance	Boiling for 2h without change Unchanged	Unchanged	Qualified
Acid resistance	Immerse surface with 5% HC 10w/w) for 48h without change the hanged	Unchanged	Qualified
Alkali resistance	In ourse surface with 5% NaCrk 1(mins) for Alth without change Unchanged	Unchanged	Qualified
Oil resistance	Immerse surface with JO# angine oil for 4th without change change	Unchanged	Qualified
Solventresistance	Clean 100 lines with butanone without change	Bottom unrevealed	Qualified
Cleaning resistance	≥ 10000 times without change	Unchanged	Qualified
Abrasion resistance	≥SL/≠m	5.33L/ /- m	Qualified
Contamination resistance	<15%	7.8%	Qualified
Density of surface	Specified value: ±0.5kg/m²	5.32kg/m²	Qualified
Bend strength	≥ 100MPa	121MPa	Qualified
Flexuous modulus of elasticity	≥2.0 ×10°MPa	3.12×10 MPa	Qualified
Through resistance	9.0kN	9.94kN	Qualified
Cutting strength	≥28.0MPa	32.0MPa	Qualified
180° peel strength	≥ 7.0 N/mm	11.2M/mm	Qualified
Resistance to change of temperature	-40 ℃ -80 ℃, 20 cycles without changes	Unchanged	Qualified
Heat deformation temperature	>95℃	12010	Qualified
Coefficient of heat expansion	≤4.00×10°U	1.98×10°C	Qualified
Salt haze resistance aberration	Not less than Grade 2	Grade 1	Qualified
Artinficial resistance aberration	63.0	1.24	Qualified
Aging resistance out of light	Not less than Grade ≥	Grade 1	Qualified
2000h other aging characteristic	Grade 0	Grade0	Qualified

Test report of Safety of State Quality Supervision & Inspection Center of Fireproof Building Materials

Fireproof Panel

Test method	Techniclindex	Result	Conclusion
GB/T8625-88	≥0	410	Qualified
G8/T8625-88	≥150	486	Qualified
GB/T8625-88	≤200	116	Qualified
GB/T8626-88	< 150	15	Qualified
GB/T8627-88	€75	34	Qualified
	G8/T8625-88 G8/T8625-88 G8/T8625-88 G8/T8625-88 G8/T8627-88	GB/T8625-88 0 GB/T8625-88 150 GB/T8625-88 200 GB/T8625-88 150 GB/T8627-88 75	GB/T8625-88 30 410 GB/T8625-88 3150 485 GB/T8625-88 <200 116 GB/T8626-88 <150 15

Conclusion of test: Test proved that all indices of the material meet the standard requirements of regulation on uninflammable materials. Its judged in accordance with GB8624-1997 that the inflammability of this material has reached standard of GB8624, Grade 1.



Test report of State Test Center of Building Materials

Inside wall:

Items	Standard index of quality product	Result	Conclusion
Appearance	Clean surfact without swell, flaws, scratch and aberration	Pass	Qualified
	Length: ±3mm	0mm-+1mm	
	Width: ±2mm	0mm-+1mm	
	Thickness: 0.2mm	0mm-+0.14mm	
Deviation of dimension	Deviation of diagonal <5 mm	0mm	Qualified
	Out of straight at sides: < 1mm/m	0.2mm/m	
	Warp: ≪5mm	1 mm/m	
Thickness of coating	216 a m	17 × (av18)	Qualified
Deviation of luster	€10	2.6(av 20)	Qualified
Hardness of pencil	216	2H	Qualified
Toughness of coating	<3T	1T	Qualified
Adhesive	Not less than Grade 1	Squartg of national disability limits to making method of colling little	Qualified
Impact strength	50kg.cm Without paint off and crack	Pass	Qualified
Bolling water resistance	Boiling for 2h without change Unchanged	Unchanged	Qualified
Acid resistance	Immerse surface with 2's HC You're) for 24h without change	Unchanged	Qualified
Alkali resistance	In merse surface with 2% NaOH1(m/m) for 24h without change	Unchanged	Qualified
Oil resistance	Immense surface with 20# engine oil for 24h without change change	Unchanged	Qualified
Solvent resistance	Clean 100 lines with dimenthy 1 benzenne without change	Bottom unrevealed	Qualified
Cleaning resistance	≥ 10000 times without change	Unchanged	Qualified
Abrasion resistance Density of surface	Specified value: ±0.5kg/m ²	3.63kg/m ²	Qualified
Bend strength	≥60MPa	79.6MPa	Qualified
Flexuous modulus of elasticity	≥1.5×10 ⁵ MFa	2.16×10 ³ MPa	Qualified
Through resistance	≥ SOkN	0.25kN	Qualified
Outting strength	≥20.0M Ps	25.7MPa	Qualified
180" peel strength	≥5.0N/mm	6.2N/mm	Qualified
Resistance to change of temperature	-40℃ - 80℃, 20 cycles without changes	Unchanged	Qualified
Heat deformation temperature	≥95℃	116°C	Qualified
Coefficient of heat expansion	≪4.00 ×10°C°	2.47×10°C°	Qualified

Test report of Physical Characteristics of State Test Center of Building Materials Fireproof panel

Firegroof panel

items	Standard index	Test volue	Individual judgment
Density of surface	Rating:±0.5kg/m²	6.8kg/m ⁴	Qualified
impact strength	Without paint off and crack	Without paint off and crack	Qualified
Bend strength	≥ 100MPa	≥ 104MP#	Qualified
Flexuous modulus of elasticity	≥2.00×10′MPa	3.04×10MPa	Qualified
Through resistance	29.0kN	9.5kN	Qualified
Cutting strength	≥28.0MPa	29.6	Qualified
180° peel strength	≥70N/mm	Z1N/mm	Qualified
Resistance to change of temperature	-40 ℃ - 80 ℃, 20cycles without change	Unchange	Qualified
Boiling water resistance	Unchanged	Unchanged	Qualified
Coefficient of heat expansion	≤4.00℃×10°×°	29.3×10*×*	Qualified
Heat deformation temperature	≥105 ℃	112°C	Qualified
The test result meets the index require	ement of quality product of GB/T17748-1	999	