

## Antamin AH-3T Product Description

1. **Product Name** : Antamin AH3T(Green Nonflammable Mineral Wall Plate)
2. **Product Dimension** : 1220×2420×3T(mm)
3. **Features: Conforming to** KSF 2271 Flame-Retardant/Received the best Green rating
4. **Use** : used for walls of all buildings such as toilet, entrance lobby, elevator hall, auditorium, hallway, restaurant, administration room, apartment kitchen.

## Performance of Constructions

-Government and Public Offices, Offices of Education, Schools-  
Songtan Junior High School in Pyeongtaek, Seojeongri Elementary School,  
Gangha Junior High School in Yangpyeong, Wondang Elementary School  
and other three schools in Goyang.

Guangnam Elementaey School in Gwangju, Bugok Elemetary School in  
Uiwang, Indukwon Elementary School and other three schools in Anyang  
Yuyoung Elementary School and other four schools in Yangju, Seolbong  
Junior High School in Icheon, Wolpyeong Elementary School in Ulsan,  
Yonchon Office of Education,

Kyunghee University, Yonsei University, Jincheon Office of Education,  
Geumsung Elementary School in Jinju, Seobu High School in Daegu and  
other 35 schools. Andong Elementary School and other 8 schools | Andong,  
Jinpyeong Elementary School and other 18 schools in Gumi. Pohang  
Elementary School and other 12 schools in Pohang

Other 110 construction sites such as schools, Offices of Education,  
restaurants, libraries, Fauculty Office, auditoriums, laboratories, and etc.

-Construction Companies-

Daewoo Engineering & Construction Co., Ltd., POSCO. SK Construction, Doosan Industrial Development, Hyundai E&C, Daelim Construction, Lotte E&C, Dongbu Construction, Sungwon Construction, ISU E&C, Sungwoo Construction, Hanwha E&C, Keangnam Enterprises, Namkwang E&C, Woobang Construction, Hankuk Construction, Hanil E&C, Halla E&C, Kunyoung, Dongyang E&C, Hyosung Construction, Chungkwang Construction, Shinmyung, Hanseung, Hyunjin, Chinhung, Bomi E&C, Shinsung E&C, Sejong, Shinchang, Bando E&C, Woorim, and other about 150 construction sites.

## Antamin AH-3T Specification (A-Type: When repairing the existing walls)

### Special Specification for the Non-flammable Mineral Composite Wall Plate(3T)(A-Type: When repairing kitchen wall and the existing wall)

#### 1. General Overview

As the product made by compression and molding of the Non-Flammable Mineral Composite Materials under the condition of high temperature and pressure, it is excellent in fire resistance, water-proofing, abrasion resistance, chemical resistance, light-fastness, and dimension variation rate and also the most advanced composite new material resistant to moisture, fire, and pollution.

#### 2. Flame Retardant Performance Standard

It should satisfy KS F 2271 Standard of the Korea Institute of Construction Materials.

#### 3. Environmental Characteristics

Formaldehyde emissions to be less than 0.3mg/L – It should satisfy KS F3200 Standards.

#### 4. Chemical Performance

##### 가\_ Fire Resistance

Its shape should be maintained under decomposition temperature of 900℃.

##### 나\_ Water-proofing

It should free from defects despite of dipping in the water for a long time.

##### 다\_ Abrasion resistance

Its abrasion value to be over 200 (KS M 3803)

##### 라\_ Chemical Resistance

It should have no change in acid and alkali. (KS M 3803)

##### 마\_ Dimension variation rate

to be less than 0.7% in a longitudinal direction and 1.2% in a transverse direction (KS M 3803)

##### 바\_ Light-fastness

It should be free from defects even when being exposed at the temperature of 60℃ for 48 hours. (KS M 3803)

#### 5. Applicable Legal Basis

Building Code Article 43, Decree Article 61, Evacuation, Fire Prevention Structure Rules Article 24. 피난,

Non-flammable, non-combustible materials (Flame Retardant Level 2 or above : KS F 2271) should be used for the interior finishing materials for a multi-use facility such as apartment houses, multiple homes, youth hostel, culture and assembly facilities, entertainment facilities, condos, medical facilities, and so on.

## 6. General Information for Construction

- In principle, this construction type should be applied to kitchen wall construction. However, this type can be applied to common wall construction subject to the director's approval at the construction site.

**A\_ Firstly remove foreign substances such as dust, greasy dirt and moisture on the ground face thoroughly and then clean up the ground so that an adhesive can be easily attached.**

**B\_ Put on safety goggles and dusk mask to protect eyes and respiratory system from dust generated when cutting through the Eco- friendly Non-Flammable Panels (Antamin High-top 3.0T) with an electric power saw.**

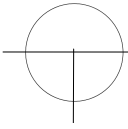
**C\_ Make vertical and horizontal lines accurately on the ground face of the Eco-friendly Non-flammable panel (Antamin High-top 3.0T) with ink according to Shop-drawing given and apply an adhesive (Hot-melt and KCC Transparent Non Acetic Acid Silicone) evenly at interval of @200\*200**

on the backside of the panel. And then you should press it with the proper pressure quickly before the Hot-melt becomes hard. Use power saw when cutting through panel during construction. Connection parts between the panels should be finished by using H-type or corner-type moldings and edges of the panels should be finished by using C-type molding. Especially make sure that all the moldings should be fixed with tacker pins(F15) at intervals of @200.

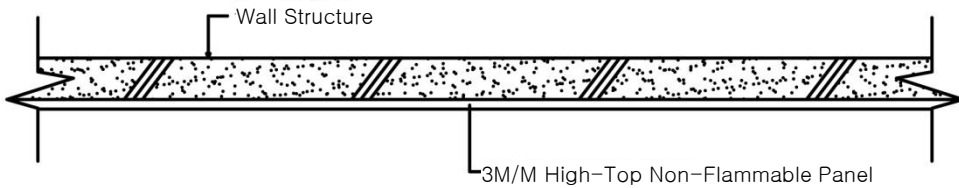
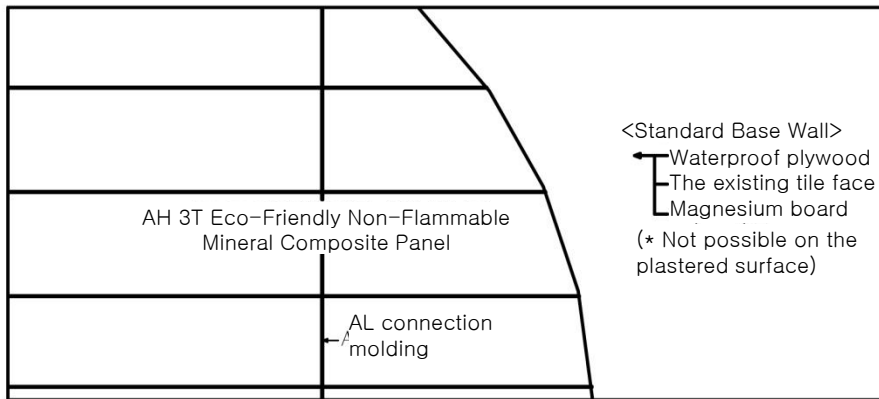
**D\_ Since adhesive failure can occur in low-temperature, it is strongly recommended to stop construction when the indoor temperature is below 5°C. If you have to carry out construction, make sure to maintain the room standard temperature higher 15~25°C until the adhesive is completely cured and hardened.**

**E\_ The Eco-Friendly Non-Flammable Panel (Antamin High-Top 3.0T) should be horizontally loaded on the flat floor such as pallet at 20cm or more above the ground and be stored in plastic packaging or other similar packaging to avoid excessive exposure to moisture. Be careful not to damage the surface and corner of the panels when transporting them.**

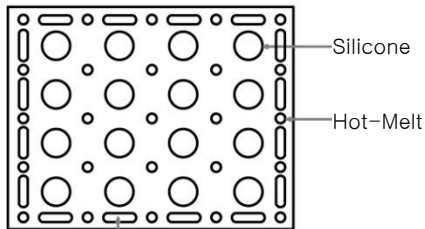
# AH3T Eco-Friendly Non-Flammable Mineral Composite Panel (A-TYPE : When repairing normal wall)



## A-Type (When Repairing Normal Wall)



## Installation Plan for the High-Top Non-Flammable Panel(3.0T)



To be coated within the 10m/m from the edge

Location of adhesive

■ Installation cost for the Antamin High-Top Non-Flammable Panel(3T) (per M2) : **A-Type (when repairing the existing wall)**

Name	Standard	Unit	Q'ty	Unit price	Amount	remarks
Antamin High-Top Non-Flammable Panel	3T	M2	1.05			
Adhesive (Hot-Melt)		Kg	0.29			
Adhesive (Silicone)		Kg	0.27			
Installation of Antamin Antibacterial Non-Flammable Panel	architectural woodworker	person	0.09			
Installation of Antamin Antibacterial Non-Flammable Panel	normal worker	person	0.05			
Molding		M	3.15			
Tacker Pin (For molding Fixing)	ST 38	pack	0.01			
Molding Installation	architectural woodworker	person	0.01			
tool rent cost	3% of width		1			
<b>Wall</b>						
				<b>total</b>		
				<b>Labor Cost</b>		
				<b>Material cost</b>		

**Refer to the price list for the unit price.**

## Antamin AH-3T 시방서[B-Type: Wood Banding Method (Used for new building · extension building)]

### Special Specification for the Non-flammable Mineral Composite Wall Panel(3T)(B-Type: Wood Banding Method (used for new building and extension building))

#### 1. General Overview

As the product made by compression and molding of the Non-Flammable Mineral Composite Materials under high temperature and pressure, it is excellent in fire resistance, water-proofing, abrasion resistance, chemical resistance, light-fastness, and dimension variation rate and also the most advanced composite new material resistant to moisture, fire, and pollution.

#### 2. Flame Retardant Performance Standards

It should satisfy KS F 2271 Standard of the Korea Institute of Construction Materials.

#### 3. Environmental Characteristics

Formaldehyde emissions to be less than 0.3mg/L – It should satisfy KS F 3200 Standards.

#### 4. Chemical Performance

##### 가\_ Fire Resistance

Its shape should be maintained at the decomposition temperature of 900°C.

##### 나\_ Water-proofing

It should be free from defects despite of dipping in the water for a long time.

##### 다\_ Abrasion resistance

Its abrasion value to be over 200 (KS M 3803)

##### 라\_ Chemical Resistance

It should have no change in acid and alkali. (KS M 3803)

##### 마\_ Dimension variation rate

to be less than 0.7% in a longitudinal direction and 1.2% in a transverse direction (KS M 3803)

##### 바\_ Light-fastness

It should be free from defects even when being exposed at the temperature of 60°C for 48 hours. (KS M 3803)

#### 5. Applicable Legal Basis

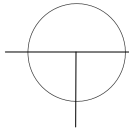
##### Building Code Article 43, Decree Article 61, Evacuation, Fire Prevention Structure Rules Article 24.

Non-flammable, non-combustible materials (Flame Retardant Level 2 or above : KS F 2271) should be used for the interior finishing materials for a multi-use facility such as apartment houses, multiple homes, youth hostel, culture and assembly facilities, entertainment facilities, condos, medical facilities, and so on.

## 6. General Information for Construction

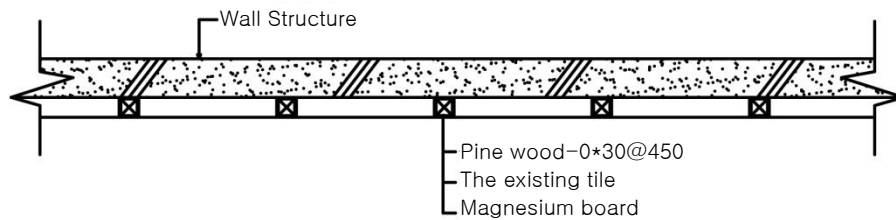
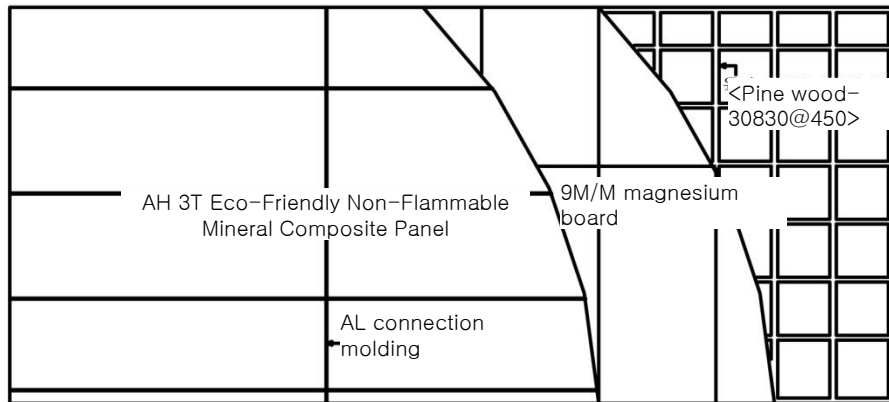
- A\_** Put on safety goggles and dusk mask to protect eyes and respiratory system from dust generated when cutting through the Eco-Friendly Non-Flammable Panel (Antamin High-Top 3.0T) and Magnesium Board (900\*1800\*9T) with a power saw.
- B\_** Well-dried Douglas fir(30x30 standard) should be used for base wall-work and be placed at interval of @450\*450.
- C\_** Make base surface flat by attaching one fold of magnesium board(9mm) on the Douglas fir and fix them together with tacker pin.
- D\_** It is recommended to use cut-knife or power saw so that it can have smooth edges when cutting Magnesium board. Attach and smooth the joints so securely and closely that any gaps can not be made. And also the angle of the wall corners should be maintained so neatly and accurately as not to interfere with construction to be made in accordance with the angle indicated on the drawings when attaching the Eco-Friendly Non-Flammable Panel (Antamin High-Top3.0T) afterward.
- E\_** Remove foreign substances such as dust, greasy dirt, and etc. on the ground face and then clean up the ground so that an adhesive can be easily attached.
- F\_** Make vertical and horizontal lines accurately on the ground face of the Eco-Friendly Non-Flammable Panel (Antamin High-Top 3.0T) with ink in accordance with the Shop-drawing given and apply an adhesive (Hot-Melt and KCC Transparent Non Acetic Acid Silicone) evenly at interval of @200\*200 on the backside of the panel. And then you should press it with the proper pressure quickly before the Hot-Melt becomes hard.  
The panels attached in accordance with ink lines given should be inserted into the groove of the exclusive AL Molding
- G\_** It is recommended to use power saw and grinder when cutting through panel during construction. Connection parts between the panels should be finished by using H-type or corner-type moldings and edges of the panels should be finished by using C-type molding. Especially make sure that all the moldings should be fixed with tacker pin at interval of @200.
- H\_** Since adhesive failure can occur in low-temperature, it is strongly recommended to stop construction when the indoor temperature is below 5°C. If you have to carry out construction, make sure to maintain the room standard temperature higher 15~25°C until the adhesive is completely cured and hardened.
- I\_** The Eco-Friendly Non-Flammable Panel (Antamin High-Top3.0T) and the Magnesium Board should be horizontally loaded on the flat floor such as pallet at 20cm or more above the ground and be stored in plastic packaging or other similar packaging to avoid excessive exposure to moisture. Be careful not to damage surface and corner of the panels when transporting them.



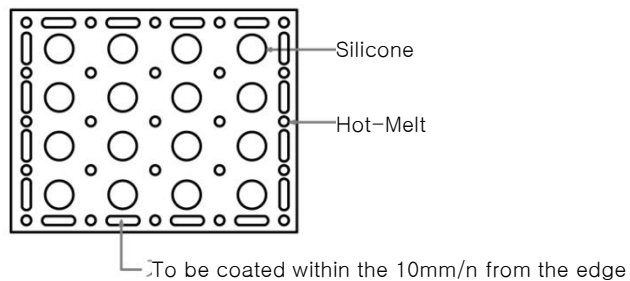


## AH3T/4T Eco-Friendly Non-Flammable Mineral Composite Panel (B-TYPE : Wood Banding Method (for the new.extension building))

### B-Type 목재띠장공법 (신.증축시)



### Installation Plan for the High-Top Non-Flammable Panel(3.0T)



Location of adhesive

■ Antamin High-Top Non-Flammable Panel(3T) Installation Cost (per M2) :  
**B-Type Wood Banding Method (used for the new • extension building)**

Name	Standard	Unit	Q'ty	U/ Price	Amount	remarks
Pine Wood	30*30*@450		2.969			
Nail		Kg	0.03			
Banding Installation	Architectural wood worker	person	0.033			
Magnesium Board	9T*900*1800	M2	1.05			
Tacker Pin	F 30	pack	0.17			
Installation of magnesium board	Architectural wood worker	person	0.09			
Installation of magnesium board	normal worker	person	0.01			
Antamin Antibacterial Non-Flammable Panel	3.0T	M2	1.05			
Adhesive (Hot-melt)		Kg	0.29			
Adhesive (silicone)		Kg	0.27			
Installation of Antamin Antibacterial Non-Flammable Panel	Architectural wood worker	person	0.21			
Installation of Antamin Antibacterial Non-Flammable Panel	Normal worker	person	0.17			
molding		M	3.15			
Tacker Pin (for molding fixing)	ST 38	pack	0.01			
		person	0.01			
<b>Wall</b>			1			

**Refer to the price list for the unit price.**

**Total**

**Labor Cost**

**Material Cost**

## Antamin AH-3T Specification [C-Type: Metal STUD Method (used for new · extension building)]

### Special Specification for the Non-flammable Mineral Composite Wall Panel(3T)(C-Type: Metal Stud Method (used for new/ extension building))

#### 1.General Overview

As the product made by compression and molding of the Non-Flammable Mineral Composite Materials under the condition of high temperature and pressure, it is excellent in fire resistance, water-proofing, abrasion resistance, chemical resistance, light-fastness, and dimension variation rate and also the most advanced composite material resistant to moisture, fire, and pollution.

#### 2.Flame Retardant Performance Standards

It should satisfy KS F 2271 Standard of the Korea Institute of Construction Materials.

#### 3.Environmental Characteristics

Formaldehyde emissions to be less than 0.3mg/L – It should satisfy KS F3200 Standards.

#### 4.Chemical Performance

##### 가\_ Fire Resistance

Its shape should be maintained at the decomposition temperature of 900℃.

##### 나\_ Water-proofing

It should be free from defects despite of dipping in the water for a long time.

##### 다\_ Abrasion resistance

Its abrasion value to be over 200 (KS M 3803)

##### 라\_ Chemical Resistance

It should have no change in acid and alkali. (KS M 3803)

##### 마\_ Dimension variation rate

to be less than 0.7% in a longitudinal direction and 1.2% in a transverse direction (KS M 3803)

##### 바\_ Light-fastness

It should be free from defects even when being exposed at the temperature of 60℃ for 48 hours. (KS M 3803)

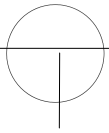
#### 5.Applicable Legal Basis

Building Code Article 43, Decree Article 61, Evacuation, Fire Prevention Structure Rules Article 24.

Non-flammable, non-combustible materials (Flame Retardant Level 2 or above : KS F 2271) should be used interior finishing materials for a multi-use facility such as apartment houses, multiple homes, youth hostel, culture and assembly facilities, entertainment facilities, condos, medical facilities, and so on.

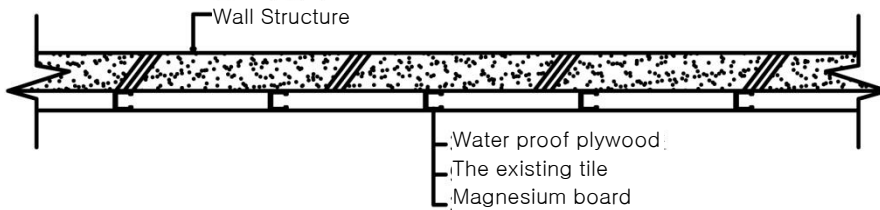
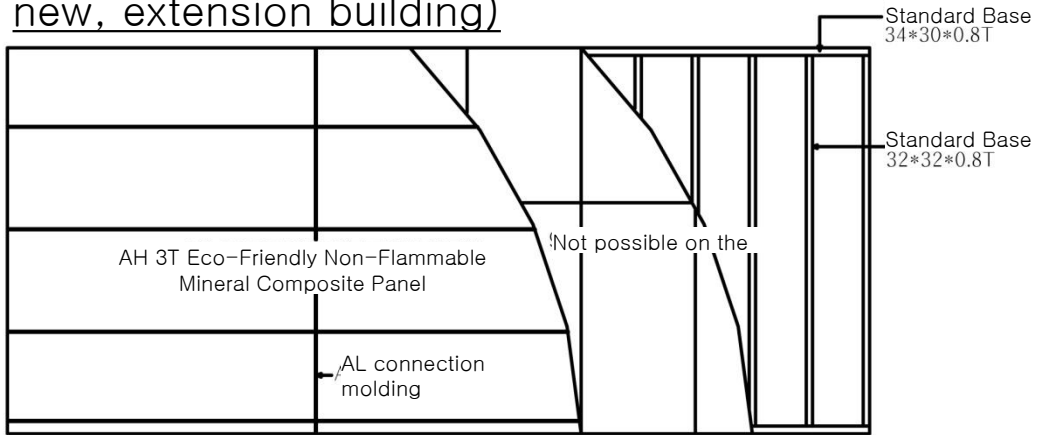
## 6. General Information for Construction

- A\_** Put on safety goggles and dust mask to protect eyes and respiratory system from dust generated when cutting through the Eco-Friendly Non-Flammable Panel (Antamin High-Top 3.0T) and the Magnesium Board (900\*1800\*9T) with power saw.
- B\_** Firstly fix runner(34\*30\*0.8mm) to ceiling and floor of structure wall to be constructed and then fasten metal studs(32\*32\*08mm) vertically mounted on the runner at interval of 405mm and finally adjust vertical, horizontal hold by fixing it with concrete tacker nails.
- C\_** Put one fold of magnesium board(9mm) on the metal studs to make it smooth. Since the magnesium board is stronger by 6 times than the gypsum board and has an excellent water-proofing, it can do a role as the effective interior material.
- D\_** And then remove foreign substances such as dust, greasy dirt, moisture, and etc on the ground face thoroughly and clean up the ground so that an adhesive can be easily applied.
- E\_** Make vertical and horizontal lines accurately on the ground face (Magnesium Board) of the Eco-Friendly Non-Flammable Panel (Antamin High-Top 3.0T) with ink in accordance with the Shop-drawing. And then cut the panel according to the design given.
- F\_** It is recommended to use power saw and grinder when cutting through panel during construction. Connection parts between the panels should be finished by using H-type or corner-type moldings and edges of the panels should be finished by using C-type molding. Especially make sure that all the moldings should be fixed with tacker pin at interval of @200.
- G\_** Apply the Silicone and Hot-Melt Adhesive evenly on the backside of each panel cut through the appropriate coating method in accordance with the location specified, and quickly press them along the ink lines before the Hot-Melt becomes hard. And then the panels attached in accordance with ink lines given should be inserted into the groove of the exclusive AL molding.
- H\_** The KCC Transparent Non Acetic Acid Silicone, and Hot-Melt is recommended as adhesive. Before coating, be careful not to pollute the base surface with water or other diluting materials causing property degradation.
- I\_** After attaching the Eco-Friendly Non-Flammable Panel (Antamin High-Top 3.0T) and AL Moldings and taking off the panel protective film, Inner part should be finished with AL molding or corking treatment.
- J\_** Since adhesive failure can occur in low-temperature, it is strongly recommended to stop construction when the room temperature is below 5°C. However, if you have to carry out the construction, make sure to maintain the room standard temperature higher 15~25°C until the adhesive is completely cured and hardened.
- K\_** The Eco-Friendly Non-Flammable Panel (Antamin High-Top 3.0T) should be horizontally loaded on the flat floor such as pallet at 20cm or more above the ground and be stored in plastic packaging or other similar packaging to avoid excessive exposure to moisture. Be careful not to damage surface and corner of the panels when transporting them.

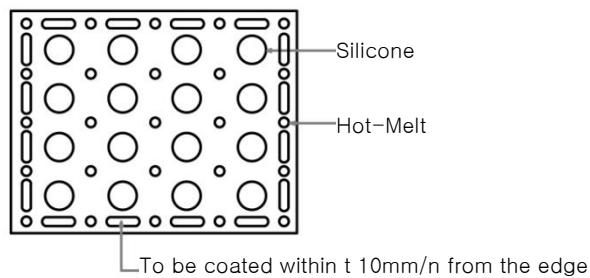


# AH3T/4T Eco-Friendly Non-Flammable Mineral Composite Panel복합 (C-TYPE Metal Stud Method ( used for new,extension building))

## C-Type Metal Stud Method (used for new, extension building)



## Installation Plan for High-Top Non-Flammable panel(3.0T)



Position of adhesive

■ Antamin High-Top Non-Flammable Panel (3T) Installation Cost ( perM2) :  
**C-Type METAL STUD METHOD (used for new • extension building)**

name	standard	unit	Q'ty	U/Price	amount	remarks
C-Stud	32*32*0.8	M	2.52			
C-Runner	34*30*0.8	M	0.72			
Anchor Bolt	NK-27	개	1.24			
Screw	3.5*32	개	40			
Magnesium Board	9T*900*1800	M2	1.05			
Adhesive (silicone)		Kg	0.27			
tackerpin	ST 38	pack	0.08			
Installation of magnesium board	architectural wood worker	person	0.09			
Installation of magnesium board	normal worker	person	0.01			
Antamin Antibacterial Non-Flammable Panel	3.0T	M2	1.05			
adhesive (Hot-Melt)		Kg	0.29			
adhesive (silicone)		Kg	0.27			
Installation of Antamin Antibacterial Non-Flammable Panel	architectural wood worker	person	0.21			
-ditto-	normal worker	person	0.17			
molding		M	3.15			
tacker pin (for molding fixing)	ST 38	pack	0.01			
molding installation	architectural wood worker	person	0.01			
tool rent cost	3% of width		1			

**Refer to the price list for unit price**

**wall**

**total**  
**labor cost**  
**Material cost**

## Antamin AH-3T Specification <sup>ㄱ</sup>(D-Type: when repairing water-proof plywood on the existing wall)

### Special Specification for the Non-flammable Mineral Composite Wall Panel(3T)(D-Type: When repairing water-proof plywood on the existing wall)

#### 1.General Overview

As the product made by compression and molding of non-flammable mineral composite materials under high temperature and pressure, it is excellent in fire resistance, water-proofing, abrasion resistance, chemical resistance, light-fastness, and dimension variation and also the most advanced composite material resistant to moisture, fire, and pollution.

#### 2.Flame Retardant Performance Standards

It should satisfy KS F 2271 Standard of the Korea Institute of Construction Materials.

#### 3.Environmental Characteristics

Formaldehyde emissions to be less than 0.3mg/L – It should satisfy KS F3200 Standards.

#### 4.Chemical Performance

##### 가\_ Fire Resistance

Its shape should be maintained at the decomposition temperature of 900℃.

##### 나\_ Water-proofing

It should be free from defects despite of dipping in the water for a long time.

##### 다\_ Abrasion resistance

Its abrasion value to be over 200 (KS M 3803)

##### 라\_ Chemical Resistance

It should have no change in acid and alkali. (KS M 3803)

##### 마\_ Dimension variation

To be less than 0.7% in a longitudinal direction and 1.2% in a transverse direction (KS M 3803)

##### 바\_ Light-fastness

It should be free from defects even when being exposed under 60℃ for 48 hours. (KS M 3803)

#### 5.Applicable Legal Basis

**Building Code Article 43, Decree Article 61, Evacuation, Fire Prevention Structure Rules Article 24.**

Non-flammable, non-combustible materials (Flame Retardant Level 2 or above : KS F 2271) should be used interior finishing materials for a multi-use facility such as apartment houses, multiple homes, youth hostel, culture and assembly facilities, entertainment facilities, condos, medical facilities, and so on.

## 6. General Information for Construction

**A\_** When constructing finishing materials on tile surface, make sure that tile surface should fit well each other in vertical and horizontal direction and also tile attachment should be in good condition. When constructing on the new wall, it is recommended to attach the water-proof plywood(12T) on the wall with vertical and horizontal hold with tacker snails and adhesives after having a rough plastering work.

**B\_** Firstly remove foreign substances such as dust, greasy dirt and etc. on the ground face thoroughly and then clean up the ground so that an adhesive can be easily applied.

**C\_** Put on safety goggles and dust mask to protect eyes and respiratory system from dust generated when cutting through the Eco-Friendly Non-Flammable Panel (Antamin High-Top 3.0T) with power saw.

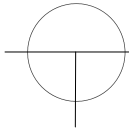
**D\_** Make vertical and horizontal lines accurately on the ground face of the Eco-Friendly Non-Flammable Panel (Antamin High-Top 3.0T) with ink in accordance with the Shop-drawing given and apply an adhesive (Hot-Melt and Silicone) evenly at interval of @200\*200 on the backside of the panel. And then you should press it with the proper pressure quickly before the Hot-Melt becomes hard.

It is recommended to use power saw when cutting through panel during construction and connection parts between the panels should be finished by using H-type or corner-type moldings and edges of the panels should be finished by using □-type molding. Especially make sure that all the moldings should be fixed with tacker pin(F15) at interval of @200.

**E\_** Since adhesive failure can occur when constructing in low-temperature, it is strongly recommended to stop construction when the room temperature is below 5°C. However, if you have to carry out the construction, make sure to maintain the room standard temperature higher 15~25°C until the adhesive is completely cured and hardened.

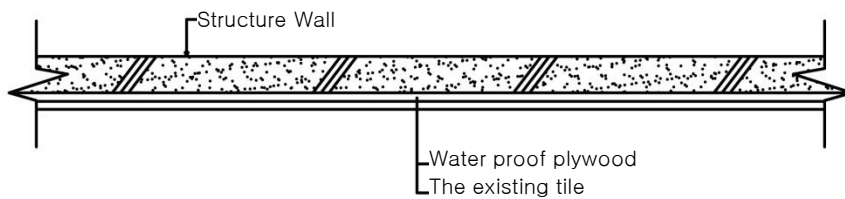
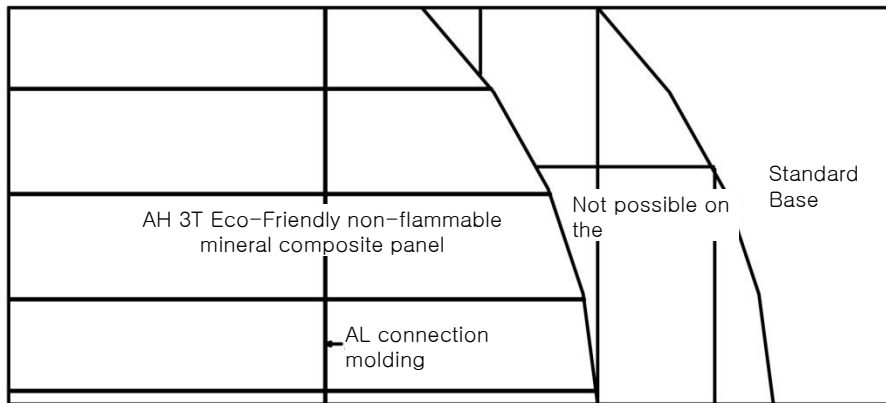
**F\_** The Eco-Friendly Non-Flammable Panel (Antamin High-Top 3.0T) should be horizontally loaded on the flat floor such as pallet at 20cm or more above the ground and be stored in plastic packaging or other similar packaging to avoid excessive exposure to moisture. Be careful not to damage surface and corner of the panels when transporting them.



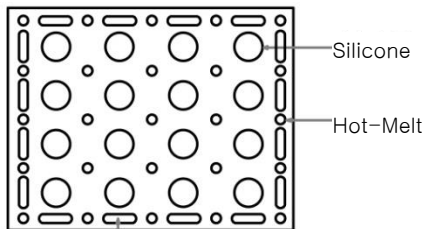


# AH3T/4T Eco-Friendly Non-Flammable Mineral Composite Panel (D-TYPE : when repairing the existing wall)

## D-Type (When Repairing the existing Wall)



## Installation Plan for High-Top Non-Flammable Panel(3.0T)



To be coated within the 10mm/n from the edge

Position of adhesive

■ Antamin High-Top Non-Flammable Panel (3T) Installation Cost (per M2) :  
**D-Type when repairing water-proof plywood on the existing wall.**

name	standard	unit	q'ty	u/price	amount	remarks
water-proof plywood	12T*1220*2440	M2	1.05			<p style="text-align: center;"><b>Refer to the price list for unit price.</b></p>
adhesive (silicone)		Kg	0.27			
tacker pin	ST38	pack	0.08			
Water-proof plywood installation	architectural wood worker	person	0.09			
-ditto-	normal worker	person	0.01			
High-Top Non-Flammable Panel	3.0T	M2	1.05			
adhesive (Hot-Melt)		KG	0.29			
adhesive (silicone)		KG	0.27			
Installation of High-Top Non- Flammable Panel	Architectural wood worker	person	0.21			
-ditto-	Normal worker	person	0.17			
molding		M	3.15			
tacker pin( for molding fixing)	ST38	pack	0.01			
molding installation	architectural wood worker	person	0.01			
tool rent cost	3% of width		1.00			

**wall**

**total**  
**labor cost**  
**material cost**