

## PERFECT SOLUTION FOR CEILING-WALL-ROOFING-FLOOR-DOOR

### APPLICATION:

moisture resistant exposed ceiling, surrounding-wall, roofing, floor-underlay, replacement tiles of industrial laminated wood...

### ADVANTAGE:



Firestop, moisture resistant



Anti-termite



Easy installation

# CATEGORY

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## DURAflex OVERVIEW

### DURAflex® FIBER CEMENT BOARD FACTORY

- **Number of production lines:** 2
- **Address:** Long Hau Industrial Park, HCMC; Quang Tri Industrial Park
- **Capacity:** 34,000,000 m<sup>2</sup>/year

After more than 10 years of operation and development, the factory has continuously expanded and promptly met the needs of the market in our country and other countries in the region. Always uphold Saint-Gobain Group principles on green energy, clean energy use and energy saving in production.



**DURAf<sup>flex</sup> PRODUCT SYSTEM**



The products from DURAf<sup>flex</sup>® 2X with the thickness 8mm-20mm are manufactured by proprietary technology which helps increase durability, making it TWICE AS DURABLE AS other regular boards. It has the ability to withstand moisture, harsh weather. It applies for all projects including civil works and industrial buildings, from interior to exterior.



**DURAWood<sup>®</sup>**

Providing wood-like natural material solution, but more durable than wood. Specialized products for areas with extreme weather.



**DURAf<sup>flex</sup> FIRESTOP**

Super durable fiber cement boards with fireproof - DURAf<sup>flex</sup>® FIRESTOP have outstanding fire resistance and have no smoke when exposed to fire. The perfect solution for fireproof walls or combining with fireproof cores for wooden doors getting fire resistance standard of Vietnam's Standards 06:2020.



TESTS RESULTS, PRODUCT QUALITY  
CERTIFICATIONS OF DURAflex



ISO certification

The company obtains certificates of management system for quality, environment, occupational safety and health such as ISO 9001: 2015, ISO 14001: 2015, BS OHSAS 18001: 2007.



Certificate  
ASTM C1186-Type A

Standard Test Methods for Sampling and Testing Non-Asbestos Fiber-Cement Flat Sheet (America) - type A. It meets the standard for exterior applications under severe weather conditions.



Green label certification

Prestigious certification helps the public recognize environmentally friendly products and meet certain environmental standards



Non-combustibility  
certificate fire resistant

DURAflex® is classified as a non-combustible material that meets the requirements of ISO 1182:2010 and QCVN 06:2010/BXD on fire safety for houses and buildings.



Test report meets 60 minute  
fire resistance standard  
according to QCVN 06:2020

DURAflex® is applied as a core of fireproof doors, meeting the requirements of the 60-minute fire protection time for doors according to QCVN 06:2020.



Fireproof standard test  
120 minutes report

DURAflex® FIRESTOP application for making fireproof wall core meet the requirement of fire resistance time 150 minutes for wall according to QCVN 06:2020



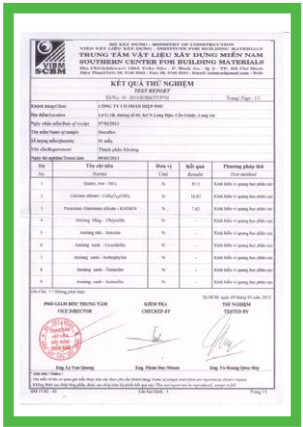
Water resistant capacity

Water resistant capacity test on the bottom surface - water on the top surface does not appear stagnant after 24 hours. According to the ASTM C1185-11 test method and meets ASTM C1186 standards



Testing fire report

Testing fire report-Contains VOC content that meet the requirements of Green Label Singapore.



Non-asbestos certificate

Test the asbestos content of the sheet according to the chemical composition analytical technique (XRF), the mineral composition analytical technique (XRD) and optical microscope.



SINGAPORE Green  
building product certificate

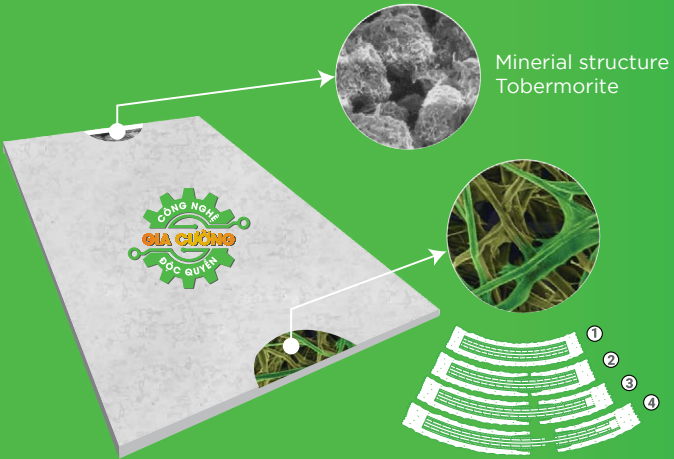
It is the one of the strictest standards issued by the council for the environment Singapore, certificate certifying that the product is made from safe raw materials, does not cause harm to the environment during the producing and using process.

# WHAT'S SPECIAL?

Applying new exclusive reinforcement technology makes the boards double strength, constructs easily. Products meet the needs of fast construction in the modern construction industry.

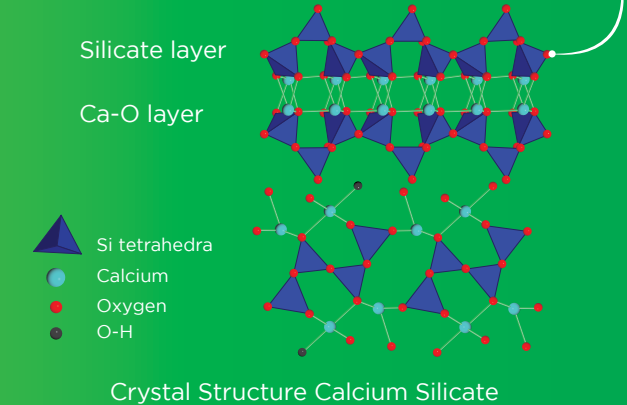
## SPECIALIZED MATERIALS

The raw materials source is applied European machinery and technology to help select standard paper fibers to increase the ductility of the boards



## SUPER FIRM

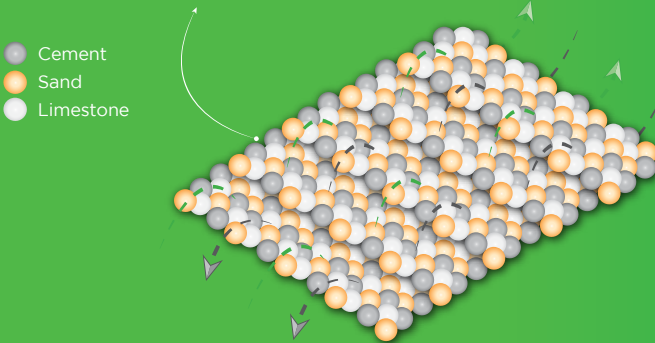
With Autoclave technology with high temperature and pressure, chemical compositions and crystalline structure are stabilized to create a solid structure composed of Calcicum Silicate minerals, mainly of Tobermorite. This crystalline structure allows the board to have a higher intensity resistance, especially fire retardancy, to create a super-durable essence of the product.



## MOISTURE RESISTANT

Sand, cement, limestone non-flammable materials are crushed ultra-fine tenfold compared to the original size to make the board have a homogeneous structure.

Good firm bond creates the diaphragm which allows the board to have high moisture and water-resistant capability, but the structure still contains a hollow slot with a two-way breathing mechanism so that it can be easily painted, super-fine with a bright white, smooth surface.



## EXTRA DURABLE

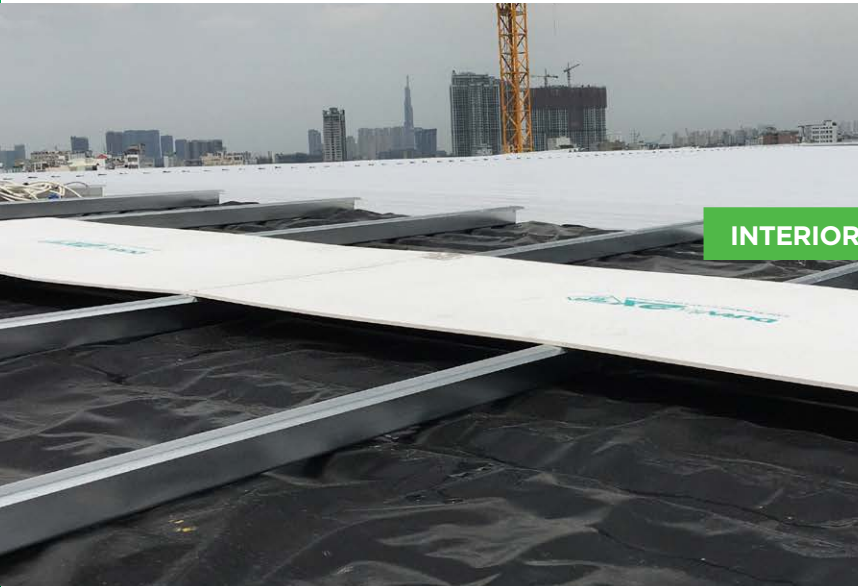
The matrix of interlocking cellulose fibers allows the board to have a durable structure even when subjected to strong forces. The board does not break suddenly but must pass many layers of protection to the core.

## HEALTH SAFETY

The DURAf<sup>flex</sup> board is completely free of asbestos - a carcinogen announced by the World Health Organization (WHO), and at the same time, the DURAf<sup>flex</sup> board is a product that meets the requirements of the Singapore green label for the content of easy organic substances, evaporation. Therefore, the product completely meets the safety requirements for health during using.



# APPLICATION



## PRODUCT INFORMATION THICKNESS

- ✓ 4mm

✓ 4.5mm

✓ 15mm

✓ 16mm

✓ 6mm

✓ 8mm

✓ 18mm

✓ 20mm

✓ 9mm

✓ 10mm

✓ 22mm

✓ 24mm

✓ 12mm

✓ 14mm

Edge type: Square edge

PRODUCTS	DIMENSIONS (width- length-thickness)
Tấm DURAf <sup>flex</sup> 2X 4mm	1220 x 2440 x 4
Tấm DURAf <sup>flex</sup> 2X 4.5mm	1220 x 2440 x 4.5
Tấm DURAf <sup>flex</sup> 2X 6mm	1220 x 2440 x 6
Tấm DURAf <sup>flex</sup> 2X 8mm	1220 x 2440 x 8
Tấm DURAf <sup>flex</sup> 2X 9mm	1220 x 2440 x 9
Tấm DURAf <sup>flex</sup> 2X 10mm	1220 x 2440 x 10
Tấm DURAf <sup>flex</sup> 2X 12mm	1220 x 2440 x 12
Tấm DURAf <sup>flex</sup> 2X 14mm	1220 x 2440 x 14
Tấm DURAf <sup>flex</sup> 2X 15mm	1220 x 2440 x 15
Tấm DURAf <sup>flex</sup> 2X 16mm	1220 x 2440 x 16
Tấm DURAf <sup>flex</sup> 2X 18mm	1220 x 2440 x 18
Tấm DURAf <sup>flex</sup> 2X 20mm	1220 x 2440 x 20
Tấm DURAf <sup>flex</sup> 2X 22mm	1220 x 2440 x 22
Tấm DURAf <sup>flex</sup> 2X 24mm	1220 x 2440 x 24



# DURAWood® WHAT'S SPECIAL?

DURAWood® Hardboard applied modern technology in production to create beautiful wood grain like real wood but is super durable, specialized for use in outdoor areas under harsh weather conditions. Product quality is strictly controlled by the European Group, products are used in a variety of interior and exterior applications such as ceiling, wall, floor, wall wool...

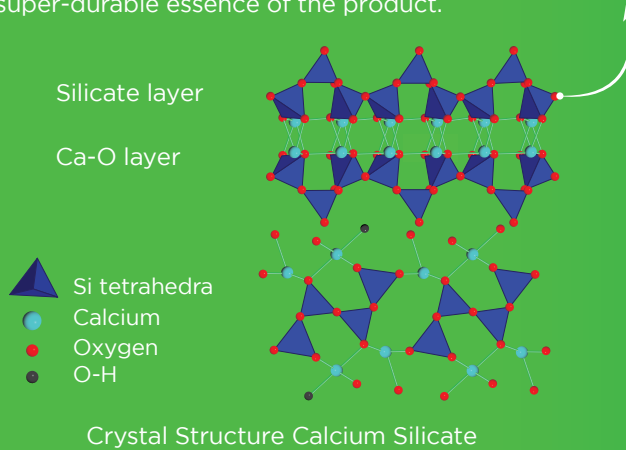
## NATURAL BEAUTY

The wood grain mold is applied special technology to withstand the impact force and high temperature during the pressing process, but still ensures the closest beauty to natural wood.



## SUPER FIRM

With Autoclave technology with high temperature and pressure ,chemical compositions and crystalline structure are stabilized to create a solid structure composed of Calcium Silicate minerals ,mainly of Tobermorite. This crystalline structure allows the board to have a higher intensity resistance, especially fire retardancy, to create a super-durable essence of the product.



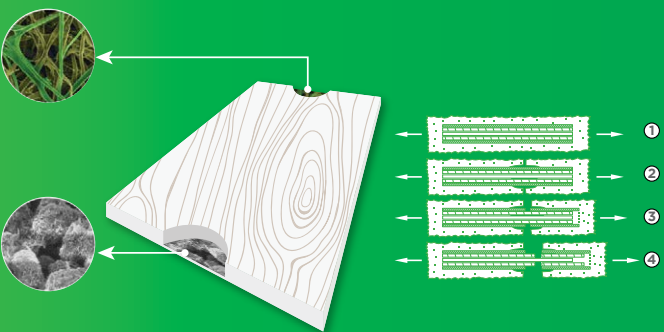
## HEALTH SAFETY

The DURAWood® board is completely free of asbestos - a carcinogen announced by the World Health Organization (WHO), and at the same time, the DURAWood® board is a product that meets the requirements of the Singapore green label for the content of easy organic substances, evaporation. Therefore, the product completely meets the safety requirements for health during using.



## DURABLE

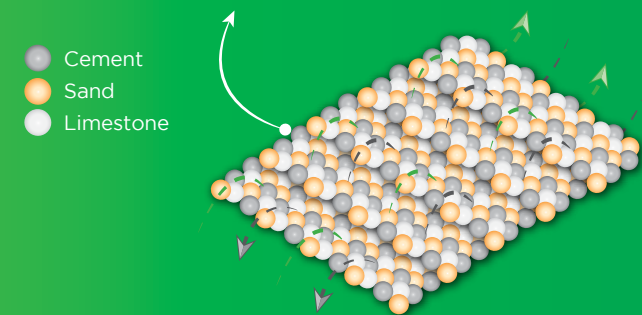
The interlocking matrix of interwoven Cellulose paper fibers helps the sheet to have a strong and flexible structure even when subjected to strong forces. The board does not break suddenly, but has to pass many layers of protection all the way to the innermost core layer.



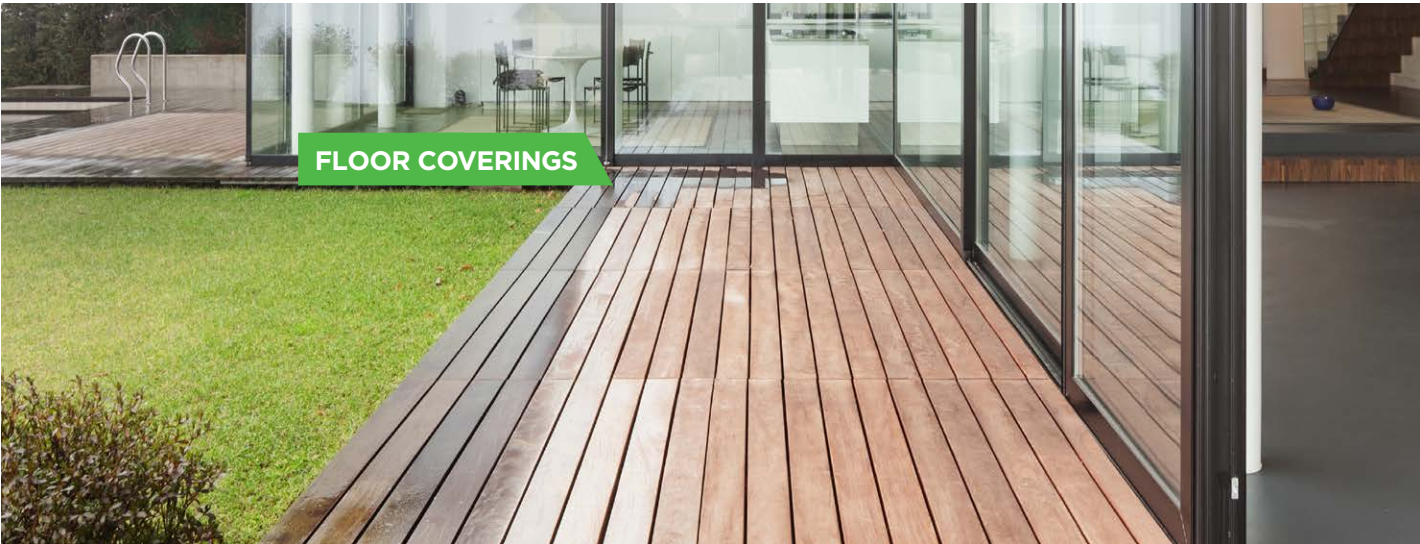
## EXCELLENT MOISTURE RESISTANCE

Sand, cement, limestone non-flammable materials are crushed ultra-fine tenfold compared to the original size to make the board have a homogeneous structure.

Good firm bond creates the diaphragm which allows the board to have high moisture and water-resistant capability, but the structure still contains a hollow slot with a two-way breathing mechanism so that it can be easily painted, super-fine with a bright white, smooth surface.



# APPLICATION



## PRODUCT INFORMATION THICKNESS

- 8mm
- 10mm
- 12mm
- 16mm
- 18mm
- 20mm

edge type: square edge

PRODUCTS	DIMENSIONS (mm) (width- length-thickness)
Tấm DURAWood® 8mm	1220 x 2440 x 8
Tấm DURAWood® 10mm	1220 x 2440 x 10
Tấm DURAWood® 12mm	1220 x 2440 x 12
Tấm DURAWood® 16mm	1220 x 2440 x 16
Tấm DURAWood® 18mm	1220 x 2440 x 18
Tấm DURAWood® 20mm	1220 x 2440 x 20

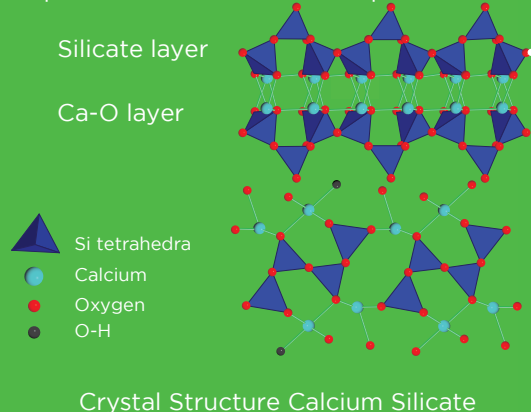


**WHAT'S SPECIAL?**

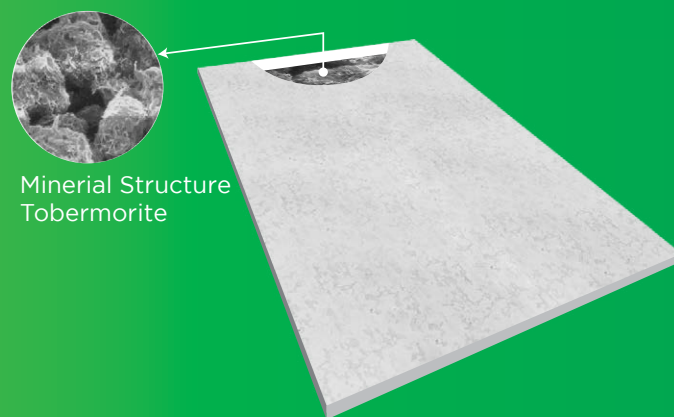
Fire resistant durable fiber cement board- **DUR**aflex FIRESTOP has outstanding fire resistance and especially does not generate smoke when exposed to fire. The perfect solution for fireproof doors, meeting the requirements of fireproofing time for doors according to Vietnam's Standards 06:2020

**FIRESTOP AND INSULATION**

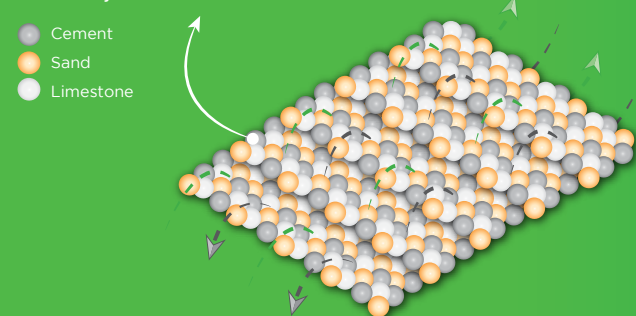
With Autoclave technology with high temperature and pressure, chemical compositions and crystalline structure are stabilized to create a solid structure composed of Calcium Silicate minerals, mainly of Tobermorite. This crystalline structure allows the board to have a higher intensity resistance, especially fire retardancy, to create a super-durable essence of the product.

**SUPER FIRM**

With Flow-on technology to create plates with high material homogeneity and Autoclave technology to autoclave high temperature and high pressure to create stable and rigid intervals (Tobermorite, xonotlite, wollastonite,...) higher bearing strength, creating super durable properties of the product.

**LOW SHRINKAGE**

Board use materials that are stable in volume even when working at normal or high temperature. Raw materials are finely ground and tightly arranged, so they are less affected by humidity and temperature conditions. As a result, the sheet shrinkage is very low after construction and installation, making it easy to handle joints.

**HEALTH SAFETY**

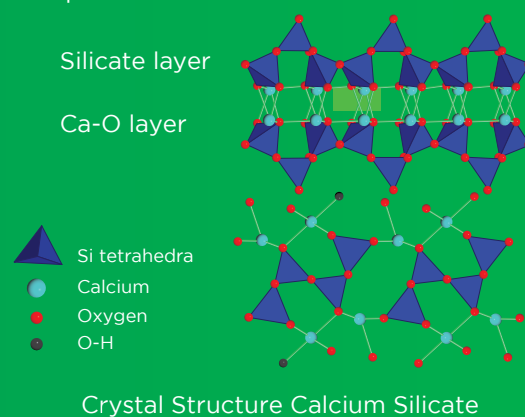
When working even under normal conditions or in a fire, there is no smoke, odor, etc. Thanks to the selected materials, which are inorganic, non-flammable, and non-reactive even at high temperatures (this is what is required). working conditions in the fire)

**WHAT'S SPECIAL?**

Fire resistant durable fiber cement board- **DUR**aflex FIRESTOP has outstanding fire resistance and especially does not generate smoke when exposed to fire. The perfect solution for fireproof doors, meeting the requirements of fireproofing time for doors according to Vietnam's Standards 06:2020

**FIRESTOP AND INSULATION**

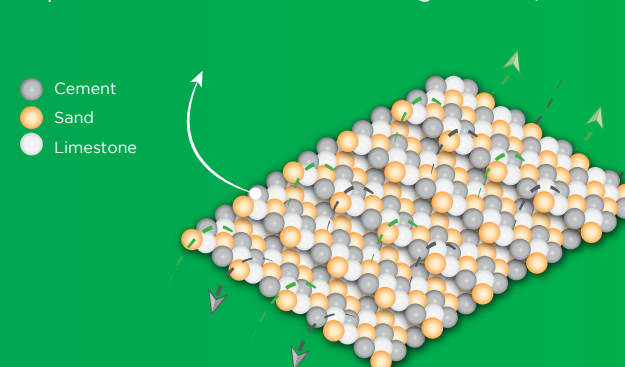
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**MOISTURE RESISTANT**

Sand, cement, lime, non-combustible ingredients are super-finely ground dozens of times compared to the original size to help the sheet have a uniform structure. Closely linked to create a ceiling film that makes the sheet highly moisture- and water-resistant, but the structure still contains voids with a 2-way breathing mechanism so it can be painted, decorated easily, and super beautiful with the surface light shield, smooth

**HEALTH SAFETY**

The sheet completely does not contain asbestos - a carcinogen announced by the World Health Organization WHO. In addition, when working even in normal conditions or in a fire, there is no smoke, hood, etc. Thanks to the selected materials, which are inorganic, non-flammable, and non-reactive even at high temperatures. high (working condition in fire) even at high temperature (working condition in fire)





# APPLICATION

## FIRESTOP WALLS



## FIRESTOP RATED DOORS



## SPECIFICATIONS THICKNESS

- ☒ 6mm
- ☒ 8mm
- ☒ 10mm

Edge type: square edge

PRODUCTS	DIMENSIONS (width- length-thickness)
Tấm <b>DURAflex</b> FIRESTOP FIRE RATED DOOR 6mm	1220 x 2440 x 6
Tấm <b>DURAflex</b> FIRESTOP FIRE RATED DOOR 8mm	1220 x 2440 x 8
Tấm <b>DURAflex</b> FIRESTOP FIRE RATED DOOR 10mm	1220 x 2440 x 10

# REFERENCE PROJECTS



**FPT HIGH SCHOOL DA NANG**  
is a high school with quality facilities and learning environment on an area of 9.1ha, using product sheet of **DURAflex®**



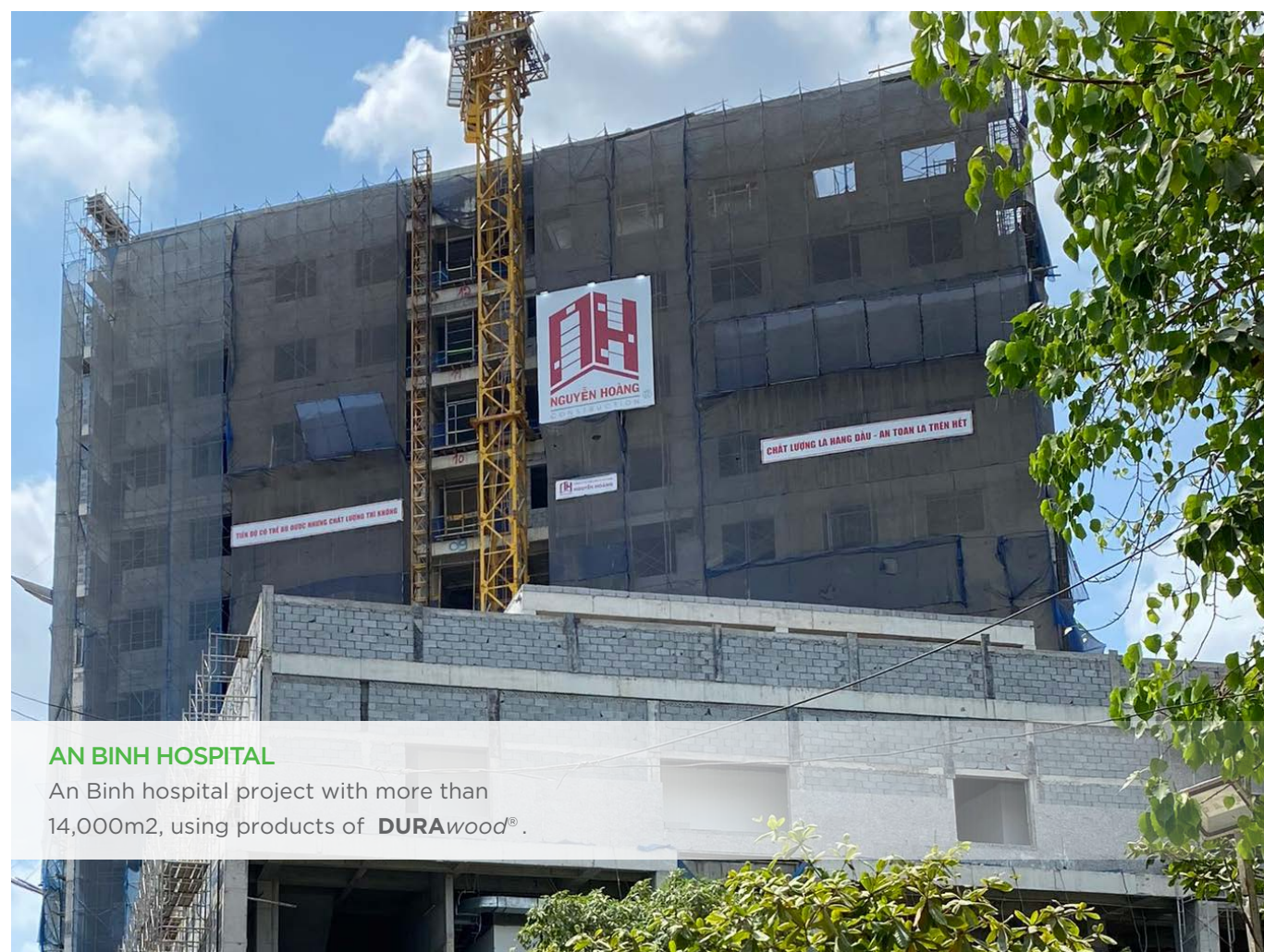
**KIZUHA FACTORY**  
The factory system varies sizes with a variety of areas from 300m2 factory to 80,000m2 factory. industrial factory model in kizuha is designed synchronously with diverse loads, the project uses sheet of **DURAflex®** FIRESTOP





### TAIPEI UNIVERSITY

The only Taiwan school in Ho Chi Minh City, the project uses sheet products of **DURAflex®** board.



### AN BINH HOSPITAL

An Binh hospital project with more than 14,000m<sup>2</sup>, using products of **DURAwOOD®**.

## HOW TO INSTALL DURAflex® 2X FOR PARTITIONS

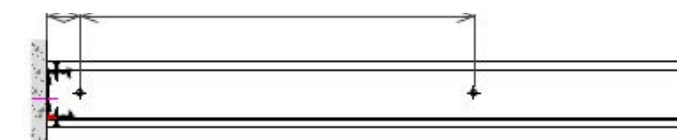
### Step 1: positioning work

- Using the laser machine, locate the wall on the floor and ceiling
- Using a string to turn on the ink to mark the construction position of the lying bar.

### Step 2: install Vinh Tuong frame

- Installing the VT V-Wall U track on the floor and ceiling according to the pre-marked positions. Link by 6mm steel socket or other suitable link with a maximum distance of 600mm
- Fixing the standing frame to the position where the frame is located at a distance of 610mm(\*) with a 13mm umbrella screw.

(\*) 406mm if installed in a humid area with tile or stone paste

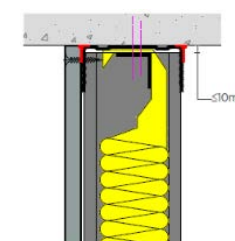


- Pumping the hilti CP 606 glue along the entire frameframeframe limb on both sides before mounting the plate



### Step 3: Install DURAflex® 2X

- The plate is attached to the frame structure vertically. Attach the plate to the frame using screws of the appropriate length
- The screw firing distance is 300mm and around the opening position is 200mm. Distance from edge of plate to screw firing position: not less than 12mm
- Fix the stone cotton on the partition **DURAflex®** 2X



- Bonding the plate to the remaining baffle face. The construction method is similar to the first wall surface, arrange fiber cement boards so that the joints stand on two staggered sides.
- Using joint treatment DURAfiller® powder and Hilti CP606 glue or equivalent to seal the gap between the slab and the floor on both sides of the partition.

### Step 4: Treat plate joints DURAflex® 2X and cover screws.

- Covering the platen screw head with DURAfiller®
- Treating Normal joint (2-3mm) with VT mesh tape and DURAfiller®
- Every 4m along the length and height of the baffle, treating the open joint (4-5mm) with a silicone-based sealant



### Step 5: Finish the wall DURAflex® 2X

Finish the surface of the partition with water-based paint or wallpaper, decorative bricks



# CONSTRUCTION INSTRUCTIONS SHEET

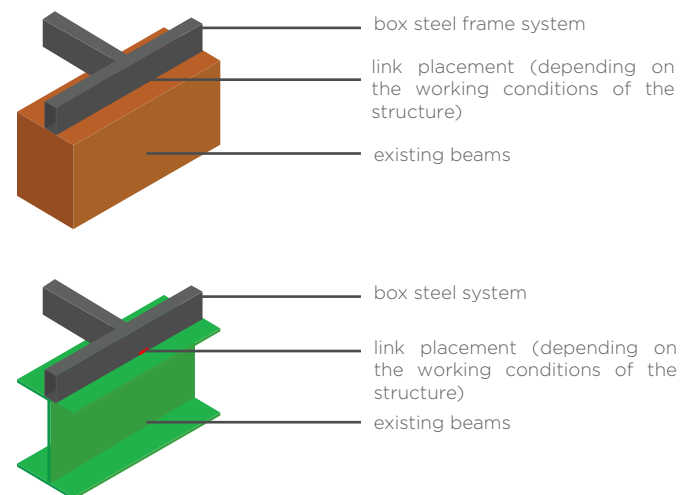
## DURAflex® 2X FOR FLOOR COVERINGS

### Step 1: Preparatory work

- Determine the location, size and elevation of the floor
- Use the wire to turn on the ink to mark the construction position of the box steel frame

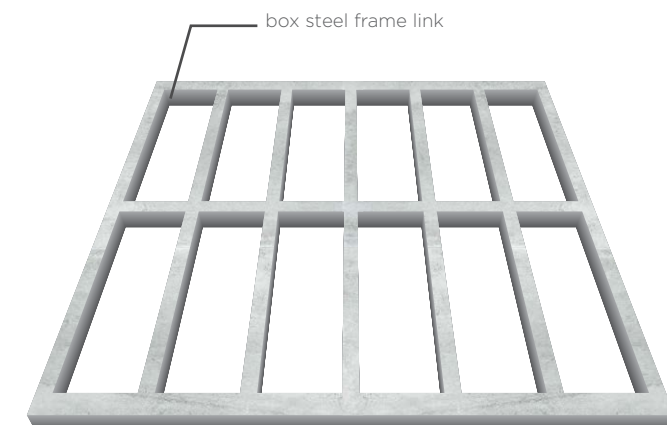
### Step 2: Processing box steel and installing box steel system on load-bearing structure (Beams, columns)

- Cut the box steel into lengths suitable for the given frame aperture (Example: 406,610,1220...)
- Install box steel frames on load-bearing structures (Beams, columns) with suitable connections (For example: welded joints, steel plates V...)



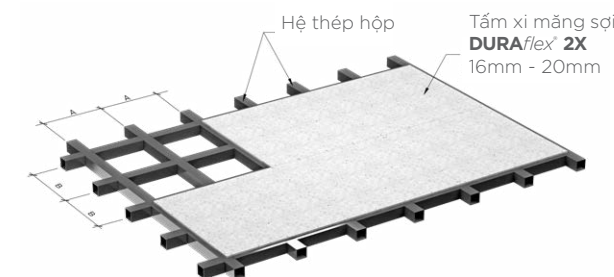
### Step 3: Install box steel system

- The box steel bars are constructed and installed into a square, or rectangular system (Dimensions: 406x406, 406x1220, 610x610... depending on the working conditions of the floor) by welding or other suitable connections



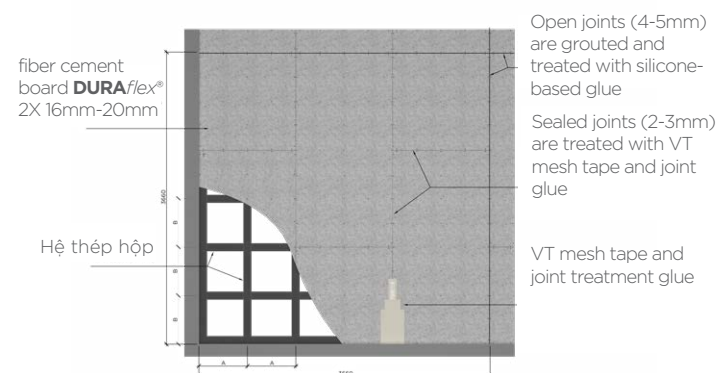
### Step 4: Install DURAflex® 2X

- Connect the board to the frame with a 26mm/35mm screw DURAVIS, the screw connection distance at the center of the board is 300mm, at the edge position is 12mm, at the corner position is 50mm.
- At the corner position, cut the sheet to the right size for the house with a specialized cutter. Then install the plate to the frame in the same way as for the original plate.



### Step 5: Processing plate joints

- Ordinary joints: Within the floor length of 3.66m, join the panels to a joint with a gap of 2-3mm, treated with VT Mesh Tape and glue to treat joints DURAFILLER®
- Open joint: In the floor length > 3.66m, there should be an open joint about 4-5mm, treated with silicone based glue or PU.



### Step 6: Finish the floor

- Finish the floor according to the designed structure
- Note: For wet areas, waterproof treatment is recommended before finishing*

# HOW TO INSTAL DURAWOOD®

## FOR EXTERIOR WALL SYSTEM

### Step 1: Positioning work

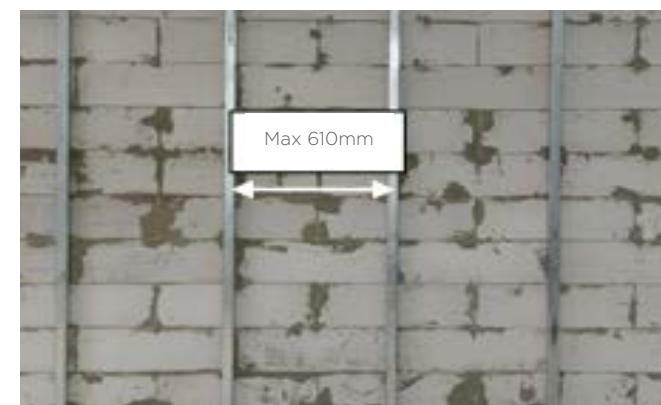
- Mark the mounting position of the box steel bar at the floor and ceiling
- Use an ink cartridge or a laser ruler to mark the position of the bar on the floor and ceiling.

### Step 2: Install the slats

- Linking aperture is 50mm from the top of the box steel bar, the next positions are separated by a maximum of 600mm
- Fix the steel frame to the floor, ceiling with the appropriate connection

### Step 3: Install the stand

- Using a laser machine to locate the vertical bar, the vertical aperture is 610mm.
  - Fix the stand bar to the rest bar with the appropriate link.
- Note: Box steel size: ≥1.5mm thickness, ≥40mm . wide raft*



### Step 4: Install the board

- Use Vit DURAVIS 35mm to fix the plate to the skeleton. The screw distance from the short edge is 12mm, the distance from the long edge is 30mm. Screw firing position according to frame aperture (max. 610mm)



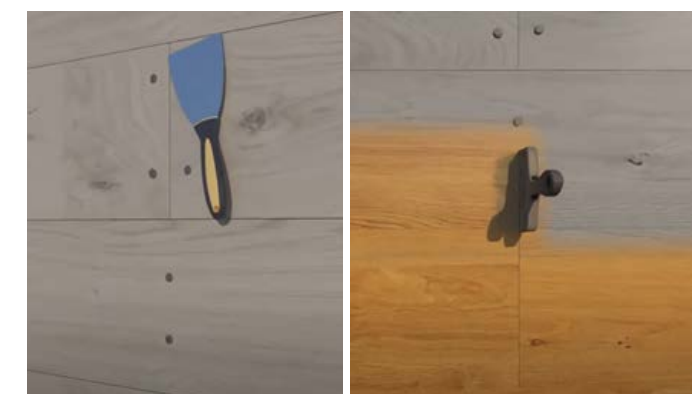
### Wall types:

1. Straight panel type- Square side panels (Figure 1)
2. Fish fin cladding type: Square side plate (Figure 2)
3. Fish fin cladding type: Modern slotted plate (Figure 3)
4. Type of yin and yang mortise: Shallow mortise or deep mortise (Figure 4)



### Step 5: Screw head treatment and finishing

- Treat the screw head with exterior putty. Time to complete filling of screw heads is not more than 3 days after screwing.
- Use suitable paint to finish the wall paneling DURAWOOD®







**Saint-Gobain Vietnam**

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Ngoc Khanh Ward, Ba Dinh District, Hanoi

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Contents can be changed without prior notice. for more information, please visit our website:  
[www.duraflex.com.vn/](http://www.duraflex.com.vn/) [saint-gobain.com](http://saint-gobain.com)

**HOTLINE**



**18001218**