



SELECTION – PRINCIPLES key considerations

Selection priorities

The key factors that influence correct product selection are:

1. Background /base

- What is the substrate onto which tiles are to be fixed?
- Is it flat – or does it need levelling/smoothing?

2. Location

- Is it indoors or outdoors?
- Is it a domestic installation – or a public/communal place?
- Will it be a dry place, or intermittently wet – or regularly wet?

3 Service conditions

- What is the tiled area to be used for?
- Is there a power shower – or total immersion?
- Will it be subject to movement/vibration and/or heavy trafficking? See page 13 for **flexibility guide**.
- Are there any special service requirements applicable (EXAMPLES: extra hygiene/ sterile conditions/protection from bacteria/chemical resistance)?

4. Tile type and size

- Are tiles porous – or fully-glazed/vitrified?
- Are they light-colored/ translucent or natural stone?
- Is the tile material vulnerable to staining by grouting?
- Are the tiles subject to water-staining?
- Are they large format tiles?
- What is the tile weight per m²? (Is the substrate able to carry that weight?) See page 12 for **wall tiling weight limits**.

Note: Adhesive may take longer to set fully on some substrates

tips

avoiding stains to preserve appearance

1. If the chosen tiles are vulnerable to water staining, select a fast-setting adhesive
2. For light-colored/translucent tiles or natural stone, select a rapid drying white adhesive
- 3 To avoid unsightly stains on certain tile materials, use **ARDEX Protective Sealer** to provide temporary protection during grouting

瓷磚膠黏劑選用標準 主要考量

選用依據

在選用適當的瓷磚膠黏劑時,主要依據有

1.起始基層/黏貼基面

- 磚要貼在什麼樣的基面上?
- 基面吸水或不吸水,光滑或粗造?
- 基面平整嗎?需不需要額外整平動作?

2. 使用位置

- 室內用還是室外用?
- 一般家用裝潢還是商業區域或是公共區域?
- 乾區,間歇濕區還是長期潮濕區域?

3. 使用狀況

- 貼磚區域的後續用途是?
- 淋浴區或是永久浸入水中?
- 得承受建物正常變位/震動或高交通量?
- 有無其它特殊需求,譬如說高衛生標準,避免霉菌具滋生,有抗酸鹼抗腐蝕需求等

4. 磚尺寸大小及種類

- 多孔隙,高吸水率磚或低吸水率全釉或玻化磚?
- 淺色/半透明磚或是天然石材?
- 磚質是否容易在填縫時遭受汙染?
- 磚面是否會留有由底而上的濕斑水痕?
- 大尺寸?大型薄板?細長比特殊?
- 磚單位重?起始基層能否承載吊掛?

小技巧:

避免各式汙染保持美觀

1. 倘若所選擇的磚容易有濕斑現象應選用F等級快乾型膠黏劑,濕氣敏感天然石材最佳選擇則為ARDEX RapiDry系統
2. 倘若所選擇的是透光性強或半透明石材應選擇白色膠黏劑甚至是快乾型白色膠黏劑
3. 某些帶紋理或多孔隙磚面應在填縫作業前先以保護浸封劑作暫時表面保護

SELECTION – PRINCIPLES product classifications

ARDEX adhesives and grouts meet or exceed European standards according to classifications that define the type and properties of each product:

Adhesives

Under **BS EN 12004: 2007+A1:2012**

TYPE

C= Cementitious

D= Dispersion (ready-to-use)

R= Reaction resin (e.g. Epoxy)

CHARACTERISTICS

F= Fast-setting

T= Reduced slip

E= Extended open time

Also, under **BS EN 12002:2008**

S1= Deformable

S2= Highly deformable

Grouts

Under **BS EN 13888:2009**

CG= Cementitious grout

RG= Reaction resin grout

W= reduced water absorption

A= high abrasion resistance

In any adhesive or grout classification above:

1= Normal characteristics

2= Improved/additional characteristics

Cementitious Screeds/ Compounds

Under **BS EN 13813:2002**

TYPE

CT= Cementitious screed

CHARACTERISTICS

C= Compressive strength

F= Flexural strength

In the above classifications the compressive and flexural strength number is the recorded measurement of N/mm² after 28 days.

Example : CT- C25 - F7 whereby compressive strength is 25N/mm² and flexural strength is 7N/mm² after 28 days.

Tile types

Always check that the correct adhesive and grout are selected to suit the material of the tiles to be fixed.

Porcelain tiles are now an increasingly popular choice.

As they absorb a negligible amount of moisture, to achieve adhesion strength and drying times, specially formulated products for fixing and grouting are required.

ARDEX products suitable for use with porcelain tiles are identifiable via the **Porcelbond Plus** mark

瓷磚膠黏劑選用標準-產品分級

亞德士所研發生產的膠黏劑及填縫劑皆按歐盟規範進行分級分類

瓷磚膠黏劑 種類

按歐盟 EN12004-2012 分類為

C= 水泥基

D= 分散型乳膠基(即用型)

R= 樹脂反應型(如環氧雙組分)

特性

F= 快速固化

T= 抗滑移

E= 延長開放時間(表乾結膜)

另針對變形量/柔性曲折性程度

S1= 具一般變形程度

S2= 具高變形程度

瓷磚填縫劑 種類

按歐盟 EN13888-2009 分類為

CG= 水泥基填縫劑

RG= 樹脂反應型填縫劑

W= 低吸水性

A= 高耐磨耗型

歐盟規範中無論瓷磚膠黏劑或填縫劑在分類字母後會區分為

1= 普通型

2= 增強型

譬如 C1TES1

代表水泥基 C、普通型 1、抗滑移 T、延長開放時間 E 並具一般變形程度 S1 的瓷磚膠黏劑

而 CG1WA

則代表所使用的填縫劑為

水泥基填縫劑 CG、普通型 1、低吸水性 W 及

高耐磨耗性 A 填縫劑

水泥砂漿墊層 種類

按 BS EN13813-2002

CT= 水泥砂漿墊層

物性

C= 抗壓強度

F= 抗彎曲強度

砂漿抗壓及抗彎曲強度表示方式以 28 天強度單位為 N/mm² (Mpa)

譬如某砂漿強度標示為 CT-C25-F7

則代表其為水泥砂漿 28 天後抗壓強度為

25Mpa-而其抗彎曲強度為 7Mpa

磚種類

不同磚類型會需要不同等級的瓷磚膠黏劑及填縫劑進行搭配以求最穩當安裝效果

現今較為普遍的 Porcelain 瓷磚與一般 Ceramic

瓷磚最大差異在於其密度較高,具較低吸水性

<0.5% ASTM C373,耐用程度也較佳

黏貼安裝時其低吸水性及低孔隙磚背原因應選

用等級較高的瓷磚膠黏劑,如 C2 規格

SELECTION – FACTORS AND GUIDANCE

Wall tiling weights

When tiling walls, it is vital to ensure that:

1. The combined weight of tiles PLUS adhesive and grout is compatible with the tiling background
2. The tiling background/substrate is rigid and stable
3. The correct adhesive is selected

The table below gives general guidance on maximum recommended weights for tiling some common types of building board.

Typical weight equivalents

20kg/m² – ceramic tiles up to 8mm thick (max.) or natural stone tiles up to 7mm thick (max.)

32kg/m² – ceramic tiles up to 12.5mm thick (max.) or natural stone tiles up to 10mm thick (max.)

Remember to allow 2-4kg/m² for adhesive *in addition to* the declared tile weight per m².

Typical wall substrates: Maximum tiling weight guide

Wall substrates	Maximum weight [†] of tiling per m ² (inclusive of adhesive & grout)
Gypsum plaster	20kg/m ²
Gypsum plasterboard direct (i.e. without a plaster skim)	32kg/m ²
Plywood (WBP)	Up to 30kg/m ²
Lightweight tile-backing boards*	Up to 60kg/m ² dependent upon type/thickness of board
Glass reinforced cement sheets*	Up to 50kg/m ² dependent upon type/thickness of board
Gypsum fibre boards*	Approx. 35- 40kg/m ²

* RECOMMENDATION: Seek further advice/guidance from the manufacturers for weight of tiling for their boards and the correct installation of these boards

瓷磚膠黏劑選用標準-變數及準則 牆磚重量

牆磚黏貼前必須確認以下:

1. 起始基層足以承受瓷磚+瓷磚膠+填縫劑總重
2. 無論是何種基面皆應為堅固穩當,無變形疑慮
3. 選用正確適合的瓷磚膠黏劑

下表提供各式基面最大貼磚掛重上限
一般參考數字

8mm厚度瓷磚或7mm石材每m²約達20kg重
12.5mm厚度瓷磚或10mm石材每m²約達32kg重
別忘了每m²的膠黏材會有約4kg額外重量

牆面基層種類	允許掛重 每m ² 含膠黏劑及填縫劑
石膏批土	20kg/m ²
石膏板乾牆系統	32kg/m ²
木板(WBP)	30kg/m ²
輕質墊板	60kg/m ² 上限 視種類規格厚度等因素
纖維補強水泥板	50kg/m ² 上限 視厚度規格
石膏纖維板	約 35-40kg/m ²

*乾牆板材種類規格繁多,施工固定方式亦日新月異,應再黏貼前諮詢原系統提供商其最大掛重上限