Installation Guidelines

1. Characteristics of STRONGSIDE FLEXI-CLAY CLADDINGS
   UNIQUE SELLING POINTS of STRONGSIDE FLEXI-CLAY CLADDING

   [ LIGHT / THIN / SOFT ]
   • THICKNESS of majority of the design series is only between 3mm to 5mm;
   • WEIGHT is only at 3-6kg / m²;
   • SOFT in texture;
   • BIG dimensional panel size available;
   • MALLEABLE yet strong anti-abrasion features
   • HIGHLY portable & saves space;
   • ELIMINATES messy use of cement at site;
   • ANTI-SEISMIC feature being light

OTHER UNIQUE AND INNOVATIVE FEATURES of STRONGSIDE CLAY STONE

   • FIRE PROOF-GRADE A - National A Graded fire proof soft clay materials (PR China).
   • STRONG PROTECTIVE QUALITIES - to Acid and Alkaline - Tested and proven by the National Building Materials Test Laboratory, China that the life time of Flex-Clay Claddings can reach above 3,500 hours, equivalent to 50 years.
   • STAIN RESISTANCE and SELF CLEANING - Nanometer glazed surface bears technology of self-cleaning. The stain resistance is at 3rd and 4th grade respectively.
   • VERSATILE COMPOSITION - Composition of base materials to form series of natural stone, wooden, ceramic tiles, surfaces tiles, metal, leather print products.
   • BREATHABLE - Breathable and water proofing. Able to deodorize air; safer and healthier environment.
   • ANTI Frost - Tested on freeze and melt 100 times, equivalent to 100 years, and found no transformation into powder, no leakage and no peel off

STATEMENT / DECLARATION

   • STRONGSIDE CLAY STONE is considered a green product and is a NEW building and finishing materials. (Green Label certification by Singapore Government authority 2015)
   • The installation method is slightly varies with the traditional buildings materials (i.e. kiln fired clay pottery board, stone, ceramic tiles).
   • Proper installation method will enable consumers to better appreciate the immense advantages and benefits from using STRONGSIDE coupled with the resultant beautiful finishing effects
   • The Installation Guidelines illustrate the step-by-step guideline in the demonstration for the installation of STRONGSIDE Clay Stone.

2. Conditions of Installation

   a) During installation until 24 hours after the completion of installation, the temperature for the base (Primary substrate) level and the working site is recommended between 5° to 40° Celsius.
   b) Do not carry out installation during a severe rain storm or heavy snow fall as the wall surface are not suitable for good installation surface bindings of the materials to the walls (external applications)
   c) Base (Primary Substrate) level of wall shall free with hole and cracks, stain, duct, oil stain and it must be cleaned.
   d) Walls must be in good structure condition. If uneven, make it perfectly flat with skim coat applications or follow local authorities

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3. Installation Tools

**WORKING TOOLS**

a) Straight trowel;
b) V-notched trowel;
c) Rubber board;
d) Stainless steel ruler;
e) Round stainless steel rod;
f) Cutter;
g) Marking Line;
h) Hand Mixer;
i) Mixer Pail;
j) Low Alkaline sealant;
k) Grouting or specific plastic bag for grouting;
l) Nail gun;
m) Brush
n) STRONGSIDE’s recommended specific quick dry adhesive;

**CLEANING TOOLS**

a) Small scraper;
b) Square sponges;
c) Roller;
d) Rubber hand glove;

4. Base level (Primary) Treatment

4.1 On Ceramic Tiles and Concrete/Metal surfaces that are

a) Structure/building that are below Three(3) storey high:-
   • STRONGSIDE Clay Stone can be laid direct onto the surfaces with specific adhesive apply to the back, during a clear & sunny day.
b) Above Three (3) storey high:-
   • To apply a minor cement layer before installing the STRONGSIDE Clay Stone with specific adhesive (Using small V-notched trowel) apply to the back.

4.2 On Wooden surfaces

a) On interior wall:-
   • Nail the wood directly on the wall by using nail gun with quick dry glue to fix all corners for perfect fit.
b) On Exterior wall or Sanitary areas:-
- Apply waterproofing before installing the STRONGSIDE Clay Stone with specific adhesive (Using small V-notched trowel ) apply to the back.

4.3 On Cement Base Board, Plaster Board Plasters:-
- STRONGSIDE Clay Stone can be laid direct onto the surfaces with specific adhesive to the back.
- It would be cleaner and faster if we use specific quick dry adhesive to the internal wall.

4.4 On Painted surfaces
- Must thoroughly scrap off all base level that was powdered transformed, peel off or with air-pockets and redo a primary base prior to any installation of STRONGSIDE Clay Stone.
- Once cleaned, STRONGSIDE Clay Stone can be laid onto the surfaces with specific adhesive to the back.

5. Requirement of Adhesive Application & Installation

5.1 Apply 1-2mm thickness of the recommended specific adhesive onto the STRONGSIDE Clay Stone (reverse panel) base (Primary) level by using straight trowel.

Use V-notched trowel to comb by touching it on the primary layer wall, whereby to provide a standard grooves thickness and the convex shall be reasonable at 1-2mm.

Lay STRONGSIDE Clay Stone onto the ready surface, press and roll gently a rubber board from the middle to all four sides. This has to be done entirely onto all surfaces of the STRONGSIDE Clay Stone to ensure that the adhesive is evenly spread and apply thoroughly over 90%

Lining rod can be used for the systematic and best effect of seam allowances during the works, if designed required.

To apply only an appropriate amount of adhesive at each time, to ensure all STRONGSIDE Clay Stone can be laid accordingly before the adhesive is becoming dried. Do not use water in any dry surfaces of adhesive because it may weaken the properties of the adhesive.

Hand touching all STRONGSIDE Clay Stone remains at the corner angles, it is recommended to allow 3cm away from the corners when laying STRONGSIDE Clay Stone for all inner and outer angles.

5.2 Use both hands to press and roll (Hand Roller) at cross edge lines to remove the air between STRONGSIDE Clay Stone and substrate and to ensure that even spread of adhesive towards the edges. Proper back filling and good rolling technique will result in a solid and even surface.

Do not keep pressing and hitting like the method of installing ceramic tiles, else it will create the uneven surfaces that may affect the visual appearance of the finishes. STRONGSIDE is a user friendly product.

6. Allowances and Seal of Seam

6.1 Seam allowances
- Seam allowances shall subject to the design requirement; To ensure tidy finishes, scrape off any extra adhesive that were leaked into the seam during the laying. All seams must be fully filed. Work can be faster and cleaner by using Sealant gun.
6.2 Seam Trimming
- Use Stainless-Steel Rod that bears similar size with seam to do the seam / grout trimming. The grouts bear with smooth and perfect filing groove.

6.3 Minor Seam Joint (Butt-Joint)
- On STRONGSIDE Clay Stone series, seams on interior wall may allow 0.5 - 1mm minor seam in order to achieve its best performance on the solid and 3D effect.

6.4 Other seams Trimmings method
- By Using adhesive glue performs better seal and visual effects
- By Using metal rod performs elegance visual effect.

7. Installation to Window Sill, Inner and Outer Angles

7.1 Outer Angle
- Apply edge to edge joint towards a same direction. Apply adhesive appropriately at the joint angle.
- Do not wet rub all adhesive that was leaked out to avoid dirtier on the area.
- Scrape it off only after it was dried by using cutting knife. Touch up the joint by using sand paper or grinding machine to provide a perfect joint.

7.2 Inner Angle
- Use right or left (One sided) overlapping, provided the joint edge is at vis-a-vis even.

7.3 Window Sills
- Apply the same method as Outer Angle

8. Maintenance and Cleaning
All adhesive, sealant, grouting for ceramic tiles, stones are comprises the mixtures of macromolecule glue powder or liquid in accordance to their respective specification. Hence, it would not be an easy way to clean if it stick on the surfaces.

8.1 Do not use dirtied hand(s) to touch the surface area of STRONGSIDE Clay Stone to avoid unnecessary cleaning time.

8.2 In the event that any adhesive that runs onto STRONGSIDE Clay Stone surface, do not use wet rubbing; must use scrapper to scrape it off when it’s dry. Otherwise, it will become dirtier-the excess adhesive spreading out thinner.

8.3 Apply the MCM glaze coating to achieve the best and perfect effect of the Flexi-Clay Claddings upon completion. Brush it from the top to bottom of the wall, followed by dry cloth or sponge rubbing to avoid any uneven or remaining coat on the surfaces. Replace rubbing clothes or sponges frequently to avoid unnecessary and second time dirty incident.
8.4 Periodic or scheduled maintenance is recommended to upkeep the surface. The frequency will depend on the site environment. Otherwise generally, it is recommended for periodic maintenance as to 3 to 6 months depending on residential or industrial area to be carried out.