

# AGGLO

## INSTALLATION INSTRUCTIONS



## INSTALLATION

The information provided with this document is intended as a general guideline, and does not replace the opinion of professional installers, who can also evaluate job site conditions.

## SUBSTRATE PREPARATION

The substrate (concrete slab), according to DIN 18560 standard, must be allowed to cure for more than 28 days and have a concrete reinforcement mesh 3-4 mm in diameter 20 x 20 cm mesh embedded in the substrate. Place a polythene steam barrier on the top of the substrate, making sure the sheets are overlapping at least . 20cm (7"- 8").

## THE SCREED

The screed is a thin layer of material poured on the top of the structural concrete for self leveling purposes and to create a flat surface to install tile flooring. The screed is usually a mortar, either cement or anhydrite based.

The screed can be:

- adhering, when it adheres to a structural concrete, e.g. a reinforced concrete floor.
- disconnected, when something is placed between the structural concrete and the screed (e.g. a polythene or PVC steam barrier).
- floating, when installed on a thermal and/or sound insulation layer.
- radiant, a floating screed with pipes in the middle, where hot (85 - 105°F) or cold (60 - 65°F) air circulates.

The screed for residential buildings must show a minimum mechanical strength 20 Mpa, and the thickness (minimum 3.5 cm must be adequate to the type of flooring to be installed; the screed must be flat and sound.

In commercial and industrial buildings where high pedestrian traffic is to be expected, the minimum mechanical strength of the screed is 30 Mpa, minimum thickness 5 cm, and it is highly recommended to embed in the middle of the thickness a zinc-coated or stainless steel net 5 x 5 cm mesh with diameter of 2 mm.

Allow the screed to cure by reaching 90% of planned shrinkage which is a consequence of the water draining from the original mixture.

Double check the residual humidity of the screed prior to starting the installation of the tiles, no matter how old the screed is. When installing engineered stone tiles, we recommend residual humidity to be lower than 3% . The screed must be clean and free from any dust, dirt or grease that may compromise the adhesion between screed and glue.

Possible cracks, usually caused by excessive water/binder in the mixture, or too thin grits. must be sealed before the installation with epoxy resin based products. When installing tiles on floating or sound proofed floors, the thickness of the screed must be increased, and an arc-welded net be embedded in the middle. Usually, a 5 x 5 cm with 3 mm diameter net is enough to absorb the deformation caused by the compressibility of the insulating layer.

When the floating flooring embeds a heating/cooling system, the thickness of screed is to be increased. Once the screed has cured, it is advisable to expose it to a gradual thermal shock, until the normal usage temperature is reached. As a result of this procedure, cracks will appear on the surface that should be sealed with epoxy resin based products before starting the installation of the tiles.

In order to avoid issues due to bad mixing, we suggest the use of pre-mixed adhesives, which allow a controlled hygrometric shrinkage and consistent compressive strength.

When installing tiles on a large area, a system of expansion and control joints should be used. The cutting (2/3 of the thickness of the screed) must be carried out as soon as the solidity of the screed itself allows it.



## IMPORTANT INFORMATION FOR THE INSTALLATION OF ENGINEERED STONE TILES

Engineered stones, both marble and quartz based, in addition to marble, granite and ceramic tiles, are subject to warping and expansion due to the humidity coming from the screed and the adhesive and to temperature gradients.

Warping, detachment or cracking of the tiles can appear when tiles are not properly installed.

The evaluation of the warping caused by humidity is carried out according to a specific test that classifies the materials in three categories:

- A - Stable materials, warping < 0.3 mm
- B - Slightly instable materials, warping > 0.3 mm < 0.6 mm
- C - Instable materials, warping > 0.6 mm

All Nasco engineered stones belong to Class A, except Verde Liguria and Rosso Levanto, which belong to Class B.

Please consider that with Nasco Stone and Tile products that the linear thermal expansion coefficient increases the thinner the aggregates are. All our products show thermal expansion  $12 - 50^{-60} C^{-1}$  (e.g. a tile showing linear thermal coefficient of expansion  $24 \times 10^{-60} C^{-1}$ , whose long edge at 15°C is 600.00 mm, when heated up to 50°C will expand to 600.50 mm)

## INSTALLATION

Thin set installation is recommended indoor only.

Installation with sand and cement mortar is not recommended.

The result of a good installation depends on the correct execution of all phases of the process: substrate preparation, screed, adhesive, expansion joints, joints and quality of the tiles.

The designer must carefully write the specification, including the installation process, the materials to be used, the joints' width, the structural, expansion, perimeter joints etc. While choosing the most suitable adhesive and its application process, we suggest to follow the recommendation of the adhesive's manufacturer.

The choice of the adhesive depends on the final use of the building and the material to be installed.

We recommend the use of a notched trowel with deep enough grooves to achieve 95-100% minimum mortar contact with the back side of the tiles to be installed on floors (80% for tiles to be installed on walls). When installing large sizes, back butter each tile with a sufficient mortar layer to achieve a 100% mortar contact and void-free solid support.

When it comes to installation, Nasco Stone & Tile products can be divided into three categories:

### CLASS 1: NASCO QUARTZ

Taking into consideration the technical characteristics of the engineered stones belonging to this category, we recommend bi-component high performance flex e cement based adhesives (cementitious cohesive + latex) for the installation of tiles in areas not subject to significant mechanical and/or thermal stress.



## CLASS 2: NASCO MARBLE (granulometry less than 10 mm)

Taking into consideration the technical characteristics of the engineered stones belonging to this category, we recommend bi-component high performance flexible cement based adhesives (cementitious adhesive + latex) for the installation of tiles in areas not subject to significant mechanical and/or thermal stress.

## CLASS 3: NASCO MARBLE (granulometry larger than 10 mm)

Taking into consideration the technical characteristics of the engineered stones belonging to this category, we recommend high performance cement based mono-component adhesives for the installation of tiles in areas not subject to significant mechanical and/or thermal stress. When installing tiles larger than 40 x 40 cm it is better to use bi-component high performance flexible cement based adhesives (cementitious adhesive + latex).

When installing tiles in areas subject to mechanical and/or thermal stress (e.g. floors exposed to direct sunlight), we suggest the use of polyurethane based bi-component highly flexible adhesives.

## JOINTS

Nasco Stone & Tile tiles are always to be installed with joints. No butt joints allowed. The minimum recommended joint is 3 mm for tiles up to 40 x 40 cm, 4 mm for tiles 60 x 60 cm and 5 mm for tiles larger than 60 x 60 cm. To grout the joints, use polymer-modified sanded grouting mixed the polymer latex.

Remove all grout and mortar residue as soon as the grout loses its plasticity. Should you need to remove hardened grout from the tiles' surface, use wet Scotch-Brite, then clean with a sponge. If the residue is removed too early joints may be partially emptied, becoming subject to deterioration; on the other hand, if the residues removal takes place once the grout has hardened, the mechanical cleaning may lead to scratches on the tiles' surface.

## EXPANSION JOINTS

Expansion joints must be a minimum 5 mm wide and go through the screed, adhesive and tiles. Expansion joints must be placed every 5 linear meters, creating squares 25 m<sup>2</sup>. For installation in areas subject to direct sunlight, we suggest the installation of expansion joints every 3-4 linear meters.

Perimeter joints filled with flexible grouts (e.g. expanded polystyrene) must be placed along with the walls, around columns and curbs.

The structural joints planned in the concrete slabs must be carried through the covering surfaces.

Expansion joints are to be grouted with neutral silicone or polyurethane-based grout. Be careful in choosing the grout to use. Make sure it does not stain the tiles: avoid acetic-reticulated silicones.



## SYNOPTIC CHART OF THE ADHESIVES FOR INTERIOR INSTALLATION

**ATTENTION!** The content of this recommendation is based on our experience. Although we strive for thoroughness and accuracy of the information we provided this is not a warranty and we can't take any responsibilities for the exactness and applicability of this document.

The result of a good installation depends on the correct execution of all phases of the process: substrate preparation, screed, adhesive, expansion joints, joints and quality of the tiles.

The designer must carefully write the specification, including the installation process, the materials to be used, the joints' width, the structural, expansion, perimeter joints, etc. While choosing the most suitable adhesive and its application process, we suggest to follow the recommendation of the adhesive's manufacturer.

The choice of the adhesive depends on the final use of the building and the material to be installed. The information provided with this document is intended as a general guideline, and does not replace the opinion of professional installers, who can also evaluate jobsite conditions.

For more information about the installation procedure, please refer to "Installation" of Nasco Stone & Tile products.

## CLASSIFICATION OF ADHESIVES

The European classification of adhesives allows to categorize them in terms of application and adhesives's technical characteristics.

The UNI EN 12004:2012 Standard describes and determines the technical characteristics of the adhesives for flooring and wall cladding.

The Standard divides up adhesives into 3 types:

- C → cementitious adhesive
- D → dispersion adhesive
- R → reaction resin adhesive

In addition to that, every adhesive is divided up into subcategories, based on its technical characteristics. There are 2 basic and 5 optional subcategories:

- Basic subcategory 1 → normal adhesive
- Basic subcategory 2 → improved adhesive
- Optional subcategory F → fast setting adhesive
- Optional subcategory T → slip resistant adhesive
- Optional subcategory E → extended open time adhesive
- Optional subcategory S1 → deformable adhesive
- Optional subcategory S2 → highly deformable adhesive

Basic subcategories 1 and 2 can be combined with every adhesive type.

E.g.: C2 F S2 means improved cementitious (C2) fast setting (F) highly deformable (S2) adhesive.



### MINIMUM TECHNICAL REQUIREMENT FOR INDOOR INSTALLATION

SUPPORT TYPE	CLASS 1 All SM QUARTZ® products			CLASS 2 SM MARBLE® with granulometry < 10 mm			CLASS 3 SM MARBLE® with granulometry > 10 mm		
	< 0,20 m <sup>2</sup>	0,20 - 0,36 m <sup>2</sup>	> 0,36 m <sup>2</sup>	< 0,20 m <sup>2</sup>	0,20 - 0,36 m <sup>2</sup>	> 0,36 m <sup>2</sup>	< 0,20 m <sup>2</sup>	> 0,20 m <sup>2</sup>	> 0,36 m <sup>2</sup>
	Cementitious screed	C2 S1	C2 S1	C2 S2	C2 S1	C2 S1	C2 S2	C2	C2 S1
Gypsum underlayment (always use appropriate primer)	C2 S1	C2 S1	C2 S2	C2 S1	C2 S1	C2 S2	C2	C2 S1	C2 S1
Radiant heated floors	C2 S1	C2 S2	R2	C2 S1	C2 S2	C2 S2	C2 S1	C2 S1	C2 S2
Metallic surface	R2	R2	R2	R2	R2	R2	R2	R2	R2
Existing stone or ceramic floor	C2 S1	C2 S1	C2 S2	C2 S1	C2 S1	C2 S2	C2	C2 S1	C2 S1

The chart reports the classification according to the chemical composition and deformability of the adhesives only. The other characteristics (T, E and F) are to be considered based on application and temperature. Whenever possible, use fast setting adhesives (F).

Attention: The above chart is intended as a guideline to choose the right adhesive. It is not binding and may differ from other manufacturers' recommendation.



## MAPEI ADHESIVES SUGGESTED FOR INDOOR INSTALLATION (EUROPEAN MARKET)

SUPPORT TYPE	CLASS 1			CLASS 2 with granulometry < 10 mm			CLASS 3 with granulometry > 10 mm			
	< 0,20 m <sup>2</sup>	0,20 - 0,36 m <sup>2</sup>	> 0,36 m <sup>2</sup>	< 0,20 m <sup>2</sup>	0,20 - 0,36 m <sup>2</sup>	> 0,36 m <sup>2</sup>	< 0,20 m <sup>2</sup>	0,20 - 0,36 m <sup>2</sup>	> 0,36 m <sup>2</sup>	
	Cementitious screed	C2 F S1 GRANIRAPID	C2 FE S2 ELASTORAPID	C2 FE S2 ELASTORAPID	C2 F S1 GRANIRAPID	C2 FE S2 ELASTORAPID	C2 FE S2 ELASTORAPID	C2F KERAQUICK	C2 F S1 GRANIRAPID	C2 F S1 GRANIRAPID
C2 E S1 KERABOND + ISOLASTIC (50%)		C2 E S2 KERABOND + ISOLASTIC	C2 E S2 KERABOND + ISOLASTIC	C2 E S1 KERABOND + ISOLASTIC (50%)	C2 E S2 KERABOND + ISOLASTIC	C2 E S2 KERABOND + ISOLASTIC	C2 E S1 KERABOND + ISOLASTIC (50%)	C2 E S1 KERABOND + ISOLASTIC (50%)	C2 E S1 KERABOND + ISOLASTIC (50%)	
Gypsum underlayment (always use Primer G)	C2 FS1 GRANIRAPID	C2 FE S2 ELASTORAPID	C2 FE S2 ELASTORAPID	C2 FS1 GRANIRAPID	C2 FE S2 ELASTORAPID	C2 FE S2 ELASTORAPID	C2F KERAQUICK	C2 FS1 GRANIRAPID	C2 FS1 GRANIRAPID	
	C2 TE S1 KERAFLEX MAXI S1	C2 E S2 KERABOND + ISOLASTIC	C2 E S2 KERABOND + ISOLASTIC	C2 E S1 KERABOND + ISOLASTIC (50%)	C2 E S2 KERABOND + ISOLASTIC	C2 E S2 KERABOND + ISOLASTIC	C2 E S1 KERABOND + ISOLASTIC (50%)	C2 E S1 KERABOND + ISOLASTIC (50%)	C2 E S1 KERABOND + ISOLASTIC (50%)	
Radiant heated floors	C2 FE S2 ELASTORAPID	C2 FE S2 ELASTORAPID	R2 KERALASTIC	C2 FE S2 ELASTORAPID	C2 FE S2 ELASTORAPID	C2 FE S2 ELASTORAPID	C2 E S1 KERABOND + ISOLASTIC (50%)	C2 FE S2 ELASTORAPID	C2 FE S2 ELASTORAPID	
	C2 E S2 KERABOND + ISOLASTIC	C2 E S2 KERABOND + ISOLASTIC		C2 E S2 KERABOND + ISOLASTIC	C2 E S2 KERABOND + ISOLASTIC	C2 E S2 KERABOND + ISOLASTIC		C2 E S2 KERABOND + ISOLASTIC	C2 FE S2 ELASTORAPID	C2 FE S2 ELASTORAPID
		R2 KERALASTIC		R2 KERALASTIC	R2 KERALASTIC	R2 KERALASTIC		R2 KERALASTIC		R2 KERALASTIC
Metallic surface	R2 KERALASTIC	R2 KERALASTIC	R2 KERALASTIC	R2 KERALASTIC	R2 KERALASTIC	R2 KERALASTIC	R2 KERALASTIC	R2 KERALASTIC	R2 KERALASTIC	
Existing stone or ceramic floor	C2 FS1 GRANIRAPID	C2 FE S2 ELASTORAPID	C2 FE S2 ELASTORAPID	C2 FS1 GRANIRAPID	C2 FE S2 ELASTORAPID	C2 FE S2 ELASTORAPID	C2F KERAQUICK	C2 FS1 GRANIRAPID	C2 FS1 GRANIRAPID	
	C2 E S1 KERABOND + ISOLASTIC (50%)	C2 E S2 KERABOND + ISOLASTIC	C2 E S2 KERABOND + ISOLASTIC	C2 E S1 KERABOND + ISOLASTIC (50%)	C2 E S2 KERABOND + ISOLASTIC	C2 E S2 KERABOND + ISOLASTIC	C2 E S1 KERABOND + ISOLASTIC (50%)	C2 E S1 KERABOND + ISOLASTIC (50%)	C2 E S1 KERABOND + ISOLASTIC (50%)	

While filling out the chart, the thixotropy of the adhesives (T) has not been considered.



## WEBER ADHESIVES SUGGESTED FOR INDOOR INSTALLATION

SUPPORT TYPE	CLASS 1 products			CLASS 2 with granulometry < 10 mm			CLASS 3 with granulometry > 10 mm		
	< 0,20 m <sup>2</sup>	0,20 - 0,36 m <sup>2</sup>	> 0,36 m <sup>2</sup>	< 0,20 m <sup>2</sup>	0,20 - 0,36 m <sup>2</sup>	> 0,36 m <sup>2</sup>	< 0,20 m <sup>2</sup>	0,20 - 0,36 m <sup>2</sup>	> 0,36 m <sup>2</sup>
Cementitious screed	C2TES1 weber.col pro HP	C2TES1 weber.col pro HP	C2TES1 weber.col pro HP	C2TES1 weber.col pro HP	C2TES1 weber.col pro HP	C2TES1 weber.col pro HP	C2TES1 weber.col pro HP	C2TES1 weber.col pro HP	C2TES1 weber.col pro HP
	C2 FT weber.col pro marmo/weber.col pro rapid	C2 FTS1 weber.col pro marmo/weber.col pro rapid +weberL50	C2 FTS1 weber.col pro marmo/weber.col pro rapid +weberL50	C2 FT weber.col pro marmo/weber.col pro rapid	C2 FTS1 weber.col pro marmo/weber.col pro rapid +weberL50	C2 FTS1 weber.col pro marmo/weber.col pro rapid +weberL50	C2 FT weber.col pro marmo/weber.col pro rapid	C2 FTS1 weber.col pro marmo/weber.col pro rapid +weberL50	C2 FTS1 weber.col pro marmo/weber.col pro rapid +weberL50
Gypsum underlayment (always use weber.prim PF15)	C2TES1 weber.col pro HP	C2TES1 weber.col pro HP	C2TES1 weber.col pro HP	C2TES1 weber.col pro HP	C2TES1 weber.col pro HP	C2TES1 weber.col pro HP	C2TES1 weber.col pro HP	C2TES1 weber.col pro HP	C2TES1 weber.col pro HP
	C2 FT weber.col pro marmo/weber.col pro rapid	C2 FTS1 weber.col pro marmo/weber.col pro rapid +weberL50	C2 FTS1 weber.col pro marmo/weber.col pro rapid +weberL50	C2 FT weber.col pro marmo/weber.col pro rapid	C2 FTS1 weber.col pro marmo/weber.col pro rapid +weberL50	C2 FTS1 weber.col pro marmo/weber.col pro rapid +weberL50	C2 FT weber.col pro marmo/weber.col pro rapid	C2 FTS1 weber.col pro marmo/weber.col pro rapid +weberL50	C2 FTS1 weber.col pro marmo/weber.col pro rapid +weberL50
Radiant heated floors	C2TES1 weber.col pro HP	C2 TES2 weber.col pro HP+weber L50	C2 TES2 weber.col pro HP+weber L50	C2TES1 weber.col pro HP	C2 TES2 weber.col pro HP+weber L50	C2 TES2 weber.col pro HP+weber L50	C2TES1 weber.col pro HP	C2 TES2 weber.col pro HP+weber L50	C2 TES2 weber.col pro HP+weber L50
	C2 FT weber.col pro marmo/weber.col pro rapid	C2 FTS1 weber.col pro marmo/weber.col pro rapid +weberL50	C2 FTS1 weber.col pro marmo/weber.col pro rapid +weberL50	C2 FTS1 weber.col pro marmo/weber.col pro rapid +weberL50	C2 FTS1 weber.col pro marmo/weber.col pro rapid +weberL50	C2 FTS1 weber.col pro marmo/weber.col pro rapid +weberL50	C2 FTS1 weber.col pro marmo/weber.col pro rapid +weberL50	C2 FTS1 weber.col pro marmo/weber.col pro rapid +weberL50	C2 FTS1 weber.col pro marmo/weber.col pro rapid +weberL50
			R2 weber.col fix CR				R2 weber.col fix CR		R2 weber.col fix CR
Metallic surface	R2 weber.col fix CR	R2 weber.col fix CR	R2 weber.col fix CR	R2 weber.col fix CR	R2 weber.col fix CR	R2 weber.col fix CR	R2 weber.col fix CR	R2 weber.col fix CR	R2 weber.col fix CR
Existing stone or ceramic floor	C2TES1 weber.col pro HP	C2 TES2 weber.col pro HP+weber L50	C2 TES2 weber.col pro HP+weber L50	C2TES1 weber.col pro HP	C2 TES2 weber.col pro HP+weber L50	C2 TES2 weber.col pro HP+weber L50	C2TES1 weber.col pro HP	C2 TES2 weber.col pro HP+weber L50	C2 TES2 weber.col pro HP+weber L50
	C2 FTS1 weber.col pro marmo/weber.col pro rapid +weberL50	C2 FTS1 weber.col pro marmo/weber.col pro rapid +weberL50	C2 FTS1 weber.col pro marmo/weber.col pro rapid +weberL50	C2 FTS1 weber.col pro marmo/weber.col pro rapid +weberL50	C2 FTS1 weber.col pro marmo/weber.col pro rapid +weberL50	C2 FTS1 weber.col pro marmo/weber.col pro rapid +weberL50	C2 FTS1 weber.col pro marmo/weber.col pro rapid +weberL50	C2 FTS1 weber.col pro marmo/weber.col pro rapid +weberL50	C2 FTS1 weber.col pro marmo/weber.col pro rapid +weberL50
			R2 weber.col fix CR				R2 weber.col fix CR		R2 weber.col fix CR

Verde Liguria and Rosso Levanto are to be installed with fast setting adhesive weber.col pro rapid (add weber L50 if necessary) or weber.col fix CR. When installing on surfaces subject to significant temperature range, use weber.col fix CR.





### KEDIL ADHESIVES SUGGESTED FOR INDOOR INSTALLATION

SUPPORT TYPE	CLASS 1 products			CLASS 2 with granulometry < 10 mm			CLASS 3 with granulometry > 10 mm		
	< 0,20 m <sup>2</sup>	0,20 - 0,36 m <sup>2</sup>	> 0,36 m <sup>2</sup>	< 0,20 m <sup>2</sup>	0,20 - 0,36 m <sup>2</sup>	> 0,36 m <sup>2</sup>	< 0,20 m <sup>2</sup>	> 0,20 m <sup>2</sup>	> 0,36 m <sup>2</sup>
Cementitious screed	C2 FT S2 SUPER 24	C2 FT S2 SUPER 24	C2 FT S2 SUPER 24	C2 FT S2 SUPER 24	C2 FT S2 SUPER 24	C2 FT S2 SUPER 24	C2 FT KEDILSTONE	C2 FT KEDILSTONE	C2 FT S2 SUPER 24
	C2 TE S2 KEDY S2 MONO	C2 TE S2 KEDY S2 MONO	C2 TE S2 KEDY S2 MONO	C2 TE S2 KEDY S2 MONO	C2 TE S2 KEDY S2 MONO	C2 TE S2 KEDY S2 MONO	C2 FT FAST	C2 FT FAST	C2 TE S2 KEDY S2 MONO
Gypsum underlayment (always use APREX G primer)	C2 FT S2 SUPER 24	C2 FT S2 SUPER 24	C2 FT S2 SUPER 24	C2 FT S2 SUPER 24	C2 FT S2 SUPER 24	C2 FT S2 SUPER 24	C2 FT KEDILSTONE	C2 FT KEDILSTONE	C2 FT S2 SUPER 24
	C2 TE S2 KEDY S2 MONO	C2 TE S2 KEDY S2 MONO	C2 TE S2 KEDY S2 MONO	C2 TE S2 KEDY S2 MONO	C2 TE S2 KEDY S2 MONO	C2 TE S2 KEDY S2 MONO	C2 FT FAST	C2 FT FAST	C2 TE S2 KEDY S2 MONO
Radiant heated floors	C2 FT S2 SUPER 24	C2 FT S2 SUPER 24	R2 ADHESION	C2 FT S2 SUPER 24	C2 FT S2 SUPER 24	C2 FT S2 SUPER 24	C2 FT S2 SUPER 24	C2 FT S2 SUPER 24	C2 FT S2 SUPER 24
	C2 TE S2 KEDY S2 MONO	C2 TE S2 KEDY S2 MONO		C2 TE S2 KEDY S2 MONO	C2 TE S2 KEDY S2 MONO	C2 TE S2 KEDY S2 MONO	C2 TE S2 KEDY S2 MONO	C2 TE S2 KEDY S2 MONO	C2 TE S2 KEDY S2 MONO
							C2 TE S2 KEDY S2 MONO		
	R2 ADHESION	R2 ADHESION	R2 ADHESION	R2 ADHESION	R2 ADHESION	R2 ADHESION	R2 ADHESION	R2 ADHESION	R2 ADHESION
Existing stone or ceramic floor	C2 FT S2 SUPER 24	C2 FT S2 SUPER 24	C2 FT S2 SUPER 24	C2 FT S2 SUPER 24	C2 FT S2 SUPER 24	C2 FT S2 SUPER 24	C2 FT KEDILSTONE	C2 FT S2 SUPER 24	C2 FT S2 SUPER 24
	C2 TE S2 KEDY S2 MONO	C2 TE S2 KEDY S2 MONO	C2 TE S2 KEDY S2 MONO	C2 TE S2 KEDY S2 MONO	C2 TE S2 KEDY S2 MONO	C2 TE S2 KEDY S2 MONO	C2 FT FAST	C2 TE S2 KEDY S2 MONO	C2 TE S2 KEDY S2 MONO

Verde Liguria and Rosso Levanto are to be installed with fast setting adhesive SUPER 24 (or ADHESION).

When installing on surfaces subject to significant temperature range, use ADHESION.



## ARDEX ADHESIVES SUGGESTED FOR INDOOR INSTALLATION

SUPPORT TYPE	CLASS 1 products			CLASS 2 with granulometry < 10 mm			CLASS 3 with granulometry > 10 mm		
	< 0,20 m <sup>2</sup>	0,20 - 0,36 m <sup>2</sup>	> 0,36 m <sup>2</sup>	< 0,20 m <sup>2</sup>	0,20 - 0,36 m <sup>2</sup>	> 0,36 m <sup>2</sup>	< 0,20 m <sup>2</sup>	> 0,20 m <sup>2</sup>	> 0,36 m <sup>2</sup>
Cementitious screed	C2 FT(T)E(E) S1 ARDEX X 77™ or ARDEX N 23™ C2 FTE S1	C2 FT(T)E(E) S1 ARDEX X 77™ or ARDEX N 23™ C2 FTE S1	C2 FT(T)E S2 ARDEX X 77™ E 90™ Mortar Admix or ARDEX N 23™ E 90™ Mortar Admix C2 FTE S2	C2 FT(T)E(E) S1 ARDEX X 77™ or ARDEX N 23™ C2 FTE S1	C2 FT(T)E(E) S1 ARDEX X 77™ or ARDEX N 23™ C2 FTE S1	C2 FT(T)E S2 ARDEX X 77™ E 90™ Mortar Admix or ARDEX N 23™ E 90™ Mortar Admix C2 FTE S2	C2 FT(T)E(E) S1 ARDEX X 77™ or ARDEX N 23™ C2 FTE S1	C2 FT(T)E(E) S1 ARDEX X 77™ or ARDEX N 23™ C2 FTE S1	C2 FT(T)E(E) S1 ARDEX X 77™ or ARDEX N 23™ C2 FTE S1
Gypsum underlayment (always use appropriate primer)	C2 FT(T)E(E) S1 ARDEX X 77™ or ARDEX N 23™ C2 FTE S1	C2 FT(T)E(E) S1 ARDEX X 77™ or ARDEX N 23™ C2 FTE S1	C2 FT(T)E S2 ARDEX X 77™ E 90™ Mortar Admix or ARDEX N 23™ E 90™ Mortar Admix C2 FTE S2	C2 FT(T)E(E) S1 ARDEX X 77™ or ARDEX N 23™ C2 FTE S1	C2 FT(T)E(E) S1 ARDEX X 77™ or ARDEX N 23™ C2 FTE S1	C2 FT(T)E S2 ARDEX X 77™ E 90™ Mortar Admix or ARDEX N 23™ E 90™ Mortar Admix C2 FTE S2	C2 FT(T)E(E) S1 ARDEX X 77™ or ARDEX N 23™ C2 FTE S1	C2 FT(T)E(E) S1 ARDEX X 77™ or ARDEX N 23™ C2 FTE S1	C2 FT(T)E(E) S1 ARDEX X 77™ or ARDEX N 23™ C2 FTE S1
Radiant heated floors	C2 FT(T)E(E) S1 ARDEX X 77™ or ARDEX N 23™ C2 FTE S1	C2 FT(T)E S2 ARDEX X 77™ E 90™ Mortar Admix or ARDEX N 23™ E 90™ Mortar Admix C2 FTE S2	R2 T ARDEX WA™	C2 FT(T)E(E) S1 ARDEX X 77™ or ARDEX N 23™ C2 FTE S1	C2 FT(T)E S2 ARDEX X 77™ E 90™ Mortar Admix or ARDEX N 23™ E 90™ Mortar Admix C2 FTE S2	C2 FT(T)E S2 ARDEX X 77™ E 90™ Mortar Admix or ARDEX N 23™ E 90™ Mortar Admix C2 FTE S2	C2 FT(T)E(E) S1 ARDEX X 77™ or ARDEX N 23™ C2 FTE S1	C2 FT(T)E(E) S1 ARDEX X 77™ or ARDEX N 23™ C2 FTE S1	C2 FT(T)E S2 ARDEX X 77™ E 90™ Mortar Admix or ARDEX N 23™ E 90™ Mortar Admix C2 FTE S2
Metallic surface	R2 T ARDEX WA™	R2 T ARDEX WA™	R2 T ARDEX WA™	R2 T ARDEX WA™	R2 T ARDEX WA™	R2 T ARDEX WA™	R2 T ARDEX WA™	R2 T ARDEX WA™	R2 T ARDEX WA™
Existing stone or ceramic floor	C2 FT(T)E(E) S1 ARDEX X 77™ or ARDEX N 23™ C2 FTE S1	C2 FT(T)E(E) S1 ARDEX X 77™ or ARDEX N 23™ C2 FTE S1	C2 FT(T)E S2 ARDEX X 77™ E 90™ Mortar Admix or ARDEX N 23™ E 90™ Mortar Admix C2 FTE S2	C2 FT(T)E(E) S1 ARDEX X 77™ or ARDEX N 23™ C2 FTE S1	C2 FT(T)E(E) S1 ARDEX X 77™ or ARDEX N 23™ C2 FTE S1	C2 FT(T)E S2 ARDEX X 77™ E 90™ Mortar Admix or ARDEX N 23™ E 90™ Mortar Admix C2 FTE S2	C2 FT(T)E(E) S1 ARDEX X 77™ or ARDEX N 23™ C2 FTE S1	C2 FT(T)E(E) S1 ARDEX X 77™ or ARDEX N 23™ C2 FTE S1	C2 FT(T)E(E) S1 ARDEX X 77™ or ARDEX N 23™ C2 FTE S1

The chart reports the classification according to the chemical composition and deformability of the adhesives only. The other characteristics (T, E and F) are to be considered based on application and temperature. Whenever possible, use fast setting adhesives (F).

Verde Liguria and Rosso Levante must always be installed with fast setting adhesives class C2 F S1/S2 or R2.

When installing on surfaces, that are subject to significant range of temperature, always use adhesives class R2 (ARDEX WA™).



## LATICRETE ADHESIVES SUGGESTED FOR INDOOR INSTALLATION (EUROPEAN MARKET)

SUPPORT TYPE	CLASS 1 products			CLASS 2 with granulometry < 10mm			CLASS 3 with granulometry > 10mm		
	< 0.20 m <sup>2</sup>	0.20 – 0.36m <sup>2</sup>	> 0.36 m <sup>2</sup>	< 0.20 m <sup>2</sup>	0.20 – 0.36m <sup>2</sup>	> 0.36 m <sup>2</sup>	< 0.20 m <sup>2</sup>	0.20 – 0.36m <sup>2</sup>	> 0.36 m <sup>2</sup>
Cementitious Screed	C2(T)E S1 LATICRETE 335 SUPERIOR S	C2(T)E S1 LATICRETE 335 SUPERIOR S	C2(T)E S2 LATICRETE 4 XLT	C2(T)E S1 LATICRETE 335 SUPERIOR S	C2(T)E S1 LATICRETE 335 SUPERIOR S	C2(T)E S2 LATICRETE 4 XLT	C2(T)E S1 LATICRETE 335 SUPERIOR S	C2(T)E S1 LATICRETE 335 SUPERIOR S	C2(T)E S1 LATICRETE 335 SUPERIOR S
	C2 F S1 LATICRETE 211 + LATICRETE 4237 RAPID		C2 (T)F S2 LATICRETE 4 XLT RAPID	C2 F S1 LATICRETE 211 + LATICRETE 4237 RAPID		C2F(T) S2 LATICRETE 4 XLT RAPID	C2 F S1 LATICRETE 211 + LATICRETE 4237 RAPID		
			C2 (T)F S2 ULTIMATE S			C2 F(T) S2 ULTIMATE S			
Gypsum Underlayment ( <b>USE PRIMER P before</b> )	C2(T)E S1 LATICRETE 335 SUPERIOR S	C2(T)E S1 LATICRETE 335 SUPERIOR S	C2(T)E S2 LATICRETE 4 XLT	C2(T)E S1 LATICRETE 335 SUPERIOR S	C2(T)E S1 LATICRETE 335 SUPERIOR S	C2(T)E S2 LATICRETE 4 XLT	C2(T)E S1 LATICRETE 335 SUPERIOR S	C2(T)E S1 LATICRETE 335 SUPERIOR S	C2(T)E S1 LATICRETE 335 SUPERIOR S
Radiant heated floor	C2(T)E S1 LATICRETE 335 SUPERIOR S	C2 (T) F S2 LATICRETE 4XLT RAPID	R2 LATALASTIK	C2 F S1 LATICRETE 211 + LATICRETE 4237 RAPID	C2 (T) F S2 LATICRETE 4XLT RAPID	C2(T)E S2 LATICRETE 4 XLT	C2 F S1 LATICRETE 211 + LATICRETE 4237 RAPID	C2 F S1 LATICRETE 211 + LATICRETE 4237 RAPID	C2 (T) F S2 LATICRETE 4XLT RAPID
			R2 LATAPOXY 300	C2(T)E S1 LATICRETE 335 SUPERIOR S		C2(T)E S2 LATICRETE 4 XLT RAPID	C2(T)E S1 LATICRETE 335 SUPERIOR S		
Metallic Surface	R2 LATALASTIK	R2 LATALASTIK	R2 LATALASTIK	R2 LATALASTIK	R2 LATALASTIK	R2 LATALASTIK	R2 LATALASTIK	R2 LATALASTIK	R2 LATALASTIK
	R2 LATAPOXY 300	R2 LATAPOXY 300	R2 LATAPOXY 300	R2 LATAPOXY 300	R2 LATAPOXY 300	R2 LATAPOXY 300	R2 LATAPOXY 300	R2 LATAPOXY 300	R2 LATAPOXY 300
Existing Stone or Ceramic Floor	C2(T)E S1 LATICRETE 335 SUPERIOR S	C2(T)E S1 LATICRETE 335 SUPERIOR S	C2 (T) F S2 LATICRETE 4XLT RAPID	C2(T)E S1 LATICRETE 335 SUPERIOR S	C2(T)E S1 LATICRETE 335 SUPERIOR S	C2 (T) F S2 LATICRETE 4XLT RAPID	C2F S1 LATICRETE 254 PLATINUM RAPID	C2 F S1 LATICRETE 211 + LATICRETE 4237 RAPID	C2 F S1 LATICRETE 211 + LATICRETE 4237 RAPID
	C2 F S1 LATICRETE 211 + LATICRETE 4237 RAPID	C2 F S1 LATICRETE 211 + LATICRETE 4237 RAPID		C2 F S1 LATICRETE 211 + LATICRETE 4237 RAPID	C2 F S1 LATICRETE 211 + LATICRETE 4237 RAPID		C2 F S1 LATICRETE 211 + LATICRETE 4237 RAPID	C2 F S1 LATICRETE 211 + LATICRETE 4237 RAPID	C2(T)E S1 LATICRETE 335 SUPERIOR S

The chart reports the classification according to the chemical composition and deformability of the adhesives only. The other characteristics (T,E and F) are to be considered based on application and temperature. Whenever possible, use fast setting adhesives (F).

Verde Liguria and Rosso Levanto must be installed with fast setting adhesives class C2FS1 / S2 or R2.

When installed on surfaces, that are subject to significant range of temperature, always use adhesive class R2.

**Attention :** The above chart is intended as a guideline to choose the right adhesive. Its is not binding and may differ from other manufacturers.



LATICRETE ADHESIVES SUGGESTED FOR INDOOR INSTALLATION (USA/UAE MARKET)									
SUPPORT TYPE	CLASS 1 products			CLASS 2 with granulometry < 10mm			CLASS 3 with granulometry > 10mm		
	< 0.20 m <sup>2</sup>	0.20 – 0.36m <sup>2</sup>	> 0.36 m <sup>2</sup>	< 0.20 m <sup>2</sup>	0.20 – 0.36m <sup>2</sup>	> 0.36 m <sup>2</sup>	< 0.20 m <sup>2</sup>	0.20 – 0.36m <sup>2</sup>	> 0.36 m <sup>2</sup>
Cementitious Screed	C2F S1 LATICRETE 254 PLATINUM RAPID	C2 F S1 LATICRETE 211 + LATICRETE 4237 RAPID	C2 (T)F S2 LATICRETE 4 XLT RAPID	C2F S1 LATICRETE 254 PLATINUM RAPID	C2 F S1 LATICRETE 211 + LATICRETE 4237 RAPID	C2 (T)F S2 LATICRETE 4 XLT RAPID	C2F S1 LATICRETE 254 PLATINUM RAPID	C2 F S1 LATICRETE 211 + LATICRETE 4237 RAPID	C2 F S1 LATICRETE 211 + LATICRETE 4237 RAPID
	C2 F S1 LATICRETE 211 + LATICRETE 4237 RAPID		C2 (T)F S2 ULTIMATE S	C2 F S1 LATICRETE 211 + LATICRETE 4237 RAPID		C2 (T)F S2 ULTIMATE S	C2 F S1 LATICRETE 211 + LATICRETE 4237 RAPID		
Gypsum Underlayment ( <b>USE PRIMER P before</b> )	C2F S1 LATICRETE 254 PLATINUM RAPID	C2 F S1 LATICRETE 211 + LATICRETE 4237 RAPID	C2 (T)F S2 LATICRETE 4 XLT RAPID	C2F S1 LATICRETE 254 PLATINUM RAPID	C2 F S1 LATICRETE 211 + LATICRETE 4237 RAPID	C2 (T)F S2 LATICRETE 4 XLT RAPID	C2F S1 LATICRETE 254 PLATINUM RAPID	C2 F S1 LATICRETE 211 + LATICRETE 4237 RAPID	C2 F S1 LATICRETE 211 + LATICRETE 4237 RAPID
	C2 F S1 LATICRETE 211 + LATICRETE 4237 RAPID		C2 (T)F S2 ULTIMATE S	C2 F S1 LATICRETE 211 + LATICRETE 4237 RAPID		C2 (T)F S2 ULTIMATE S	C2 F S1 LATICRETE 211 + LATICRETE 4237 RAPID		
Radiant heated floor	C2 F S1 LATICRETE 211 + LATICRETE 4237 RAPID	C2 (T)F S2 LATICRETE 4 XLT RAPID	R2 LATAPOXY 300	C2 F S1 LATICRETE 211 + LATICRETE 4237 RAPID	C2 (T)F S2 LATICRETE 4 XLT RAPID	C2 (T)F S2 LATICRETE 4 XLT RAPID	C2 F S1 LATICRETE 211 + LATICRETE 4237 RAPID	C2 F S1 LATICRETE 211 + LATICRETE 4237 RAPID	C2 (T)F S2 LATICRETE 4 XLT RAPID
		C2 (T)F S2 ULTIMATE S			C2 (T)F S2 ULTIMATE S	C2 (T)F S2 ULTIMATE S			C2 (T)F S2 ULTIMATE S
Metallic Surface	R2 LATALASTIC	R2 LATALASTIC	R2 LATALASTIC	R2 LATALASTIC	R2 LATALASTIC	R2 LATALASTIC	R2 LATALASTIC	R2 LATALASTIC	R2 LATALASTIC
	R2 LATAPOXY 300	R2 LATAPOXY 300	R2 LATAPOXY 300	R2 LATAPOXY 300	R2 LATAPOXY 300	R2 LATAPOXY 300	R2 LATAPOXY 300	R2 LATAPOXY 300	R2 LATAPOXY 300
Existing Stone or Ceramic Floor	C2F S1 LATICRETE 254 PLATINUM RAPID	C2 F S1 LATICRETE 211 + LATICRETE 4237 RAPID	C2 (T)F S2 LATICRETE 4 XLT RAPID	C2F S1 LATICRETE 254 PLATINUM RAPID	C2 F S1 LATICRETE 211 + LATICRETE 4237 RAPID	C2 (T)F S2 LATICRETE 4 XLT RAPID	C2F S1 LATICRETE 254 PLATINUM RAPID	C2 F S1 LATICRETE 211 + LATICRETE 4237 RAPID	C2 F S1 LATICRETE 211 + LATICRETE 4237 RAPID
	C2 F S1 LATICRETE 211 + LATICRETE 4237 RAPID		C2 (T)F S2 ULTIMATE S	C2 F S1 LATICRETE 211 + LATICRETE 4237 RAPID		C2 (T)F S2 ULTIMATE S	C2 F S1 LATICRETE 211 + LATICRETE 4237 RAPID		

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