



LATICRETE and Resin Agglomerate Stone Tile TDS 178

Agglomerate is a term used to describe a man-made stone or tile product that usually consists of stone pieces and/or aggregates held together in a synthetic binder such as a polyester resin or epoxy resin. Most agglomerate tile will have the same characteristics as the type of stone used in the matrix, and are frequently classified as granite, quartz or marble. In some cases, the type of binder may have a profound effect on the behavior and performance of the agglomerate product. Polyester resins have a high thermal coefficient of expansion and may present problems concerning significant differential movement when installed in exterior installations (e.g. building facades).

There are thousands of different agglomerate products on the market, and each of these tile types has its own physical characteristics dependent on the type of stone chips or aggregates (e.g. color and inherent physical properties of the stone), type of binder, the dimensional stability of the aggregate, and the percentage of each material used. The most widely used agglomerate tiles typically consist of stone pieces mixed into a 4 – 8% polyester resin binder. As the production technology and capabilities of agglomerate tile increases, so do the size, thickness and composition of agglomerate tile. Agglomerate tile can be found in many sizes and are now approaching 36" x 36" (900 x 900mm) in facial dimension and 1/8" (3mm) or greater in thickness. Agglomerate slabs are also being produced which are 3' x 6' (900 x 1800mm) or greater. It is important to note that the facial dimensions and thickness of the agglomerate tile have a direct bearing on the dimensional stability of the agglomerate tile. Some agglomerate tile manufacturers issue a table or chart listing which of their products are suitable for use using normal setting materials, which ones require rapid setting materials, and which of their tile products requires 100% solids epoxy setting materials. See below for information on which LATICRETE products are acceptable for each type of installation.

It is important to check with the agglomerate tile manufacturer to verify suitability and acceptability of each agglomerate tile for its intended purpose. For instance, certain agglomerate tiles may not be suitable on an exterior application due to moisture sensitivity, instability of some resin and stone pieces to extreme temperature changes, are not ultraviolet light (UV) resistant, or are not freeze/thaw stable. It is also a good idea to check with the agglomerate tile manufacturer for their recommendations on setting materials. The manufacturer of the agglomerate tile may also have requirements on the moisture vapor emission rate (MVER) of the mortar bed or concrete prior to installation of their tile and may even prohibit the installation of their product using traditional sand and cement methods. It is always a good idea and highly recommended to conduct a test area in the actual conditions, and with the specified installation materials, to determine acceptability of all materials and conditions.

Always follow the dimensional stability testing requirements / Criteria outlined in the testing protocol according to EN-14617-12 testing:

Class A Stones (Vertical displacement that is less than 0.3mm) – Require normal setting latex thin set mortar (e.g. 254 Platinum, 257 TITANIUM™, MULTIMAX LITE, or, 4-XLT)

Class B Stones (Vertical displacement that is between 0.3mm and 0.6mm) – Require rapid setting latex thin set mortars (e.g. 254R Platinum Rapid, or 4-XLT Rapid)

Class C Stones (Vertical displacement is greater than 0.6mm) – Require 100% solids epoxy adhesive (e.g. LATAPOXY 300 Epoxy Adhesive or LATAPOXY BIOGREEN 300)

If a stone is not classified by the supplier/manufacturer as fitting into one of the above classifications, we recommend proper testing to properly classify a given stone / agglomerate.

Installation of Agglomerate Tile Using LATICRETE Products

Based on information received from the agglomerate tile manufacturer, the following LATICRETE installation materials may be used to install agglomerate tile;

Agglomerate tile which can be installed using normal setting materials –

Mortar Bed Method

1. 3701 Fortified Mortar, 3701 Lite Mortar or 3701 Lite Mortar R over a slurry bond coat of 254 Platinum (if bonded), or cleavage membrane (if non-bonded);
2. HYDRO BAN[®] XP, HYDRO BAN or 9235 Waterproofing Membrane (if waterproofing and/or crack suppression is specified);
3. Install agglomerate tile with 254 Platinum or 4-XLT[†];
4. Grout using SPECTRALOCK[®] PRO Premium Grout*; SPECTRALOCK PRO Premium Translucent Grout; SPECTRALOCK PRO Grout; SPECTRALOCK 1; PERMACOLOR[®] Select^; PERMACOLOR Grout; or, PERMACOLOR Select NS.
5. For movement joints in non-traffic applications, use LATASIL[™].

Thin Bed Method

1. HYDRO BAN[®] XP, HYDRO BAN or 9235 Waterproofing Membrane (if waterproofing and/or crack suppression is specified);
2. Install agglomerate tile with 254 Platinum or 4-XLT[†];
3. Grout using SPECTRALOCK[®] PRO Premium Grout*; SPECTRALOCK PRO Premium Translucent Grout; SPECTRALOCK PRO Grout; SPECTRALOCK 1; PERMACOLOR[®] Select^; PERMACOLOR Grout; or, PERMACOLOR Select NS;
4. For movement joints in non-traffic applications, use LATASIL[™].

Agglomerate tile which must be installed using rapid setting materials –

Mortar Bed Method

1. 3701 Fortified Mortar, 3701 Lite Mortar or 3701 Lite Mortar R over a slurry bond coat of 254 Platinum (if bonded), or cleavage membrane (if non-bonded);
2. HYDRO BAN XP, HYDRO BAN or 9235 Waterproofing Membrane (if waterproofing and/or crack suppression is specified);
3. Install agglomerate tile with 254R Platinum Rapid or 4-XLT Rapid[†];
4. Grout using SPECTRALOCK[®] PRO Premium Grout*; SPECTRALOCK PRO Premium Translucent Grout; SPECTRALOCK PRO Grout; SPECTRALOCK 1; PERMACOLOR[®] Select^; PERMACOLOR Grout; or, PERMACOLOR Select NS;
5. For movement joints in non-traffic applications, use LATASIL[™].

Thin Bed Method

1. HYDRO BAN XP, HYDRO BAN or 9235 Waterproofing Membrane (if waterproofing and/or crack suppression is specified);
2. Install agglomerate tile with 254R Platinum Rapid or 4 XLT[†];
3. Grout using SPECTRALOCK[®] PRO Premium Grout*; SPECTRALOCK PRO Premium Translucent Grout; SPECTRALOCK PRO Grout; SPECTRALOCK 1; PERMACOLOR[®] Select^; PERMACOLOR Grout; or, PERMACOLOR Select NS;
4. For movement joints in non-traffic applications, use LATASIL[™].

Agglomerate tile which must be installed using 100% solids epoxy setting materials –

Mortar Bed Method

1. 3701 Fortified Mortar, 3701 Lite Mortar or 3701 Lite Mortar R over a slurry bond coat of 254 Platinum (if bonded), or cleavage membrane (if non-bonded);
2. HYDRO BAN XP, HYDRO BAN or 9235 Waterproofing Membrane (if waterproofing and/or crack suppression is specified);
3. Install agglomerate tile with LATAPOXY 300 Adhesive or LATAPOXY BIOGREEN 300;
4. Grout using SPECTRALOCK[®] PRO Premium Grout*; SPECTRALOCK PRO Premium Translucent Grout; SPECTRALOCK PRO Grout; SPECTRALOCK 1; PERMACOLOR[®] Select^; PERMACOLOR Grout; or, PERMACOLOR Select NS;
5. For movement joints in non-traffic applications, use LATASIL[™].

Thin Bed Method

1. HYDRO BAN XP, HYDRO BAN or 9235 Waterproofing Membrane (if waterproofing and/or crack suppression is specified);
2. Install agglomerate tile with LATAPOXY 300 Adhesive or LATAPOXY BIOGREEN 300;
3. Grout using SPECTRALOCK[®] PRO Premium Grout*; SPECTRALOCK PRO Premium Translucent Grout; SPECTRALOCK PRO Grout; SPECTRALOCK 1; PERMACOLOR[®] Select^; PERMACOLOR Grout; or, PERMACOLOR Select NS;
4. For movement joints in non-traffic applications, use LATASIL[™].

† Use white adhesive mortars for installing white or light-colored agglomerate tile.

In any and all cases, proper substrate preparation and attention to detail is paramount to a long lasting and problem free installation. Attention to details will minimize lippage, reduce moisture related concerns, eliminate problems caused by poor choice of setting materials, verify the suitability and acceptability of the installation system by conducting a test area, and provide peace of mind for the architect, general contractor, tile contractor, and building owner.

For more information on LATICRETE products please visit <https://laticrete.com>.

* United States Patent No.; 6,881,768 (and other Patents)

^ United States Patent No.; 6,784,229 (and other Patents)

Technical Data Sheets are subject to change without notice. For latest revision, check our website at www.laticrete.com
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