

Siena Fracture Shield & Dragon Skin installation over EGP or OSB (interior only)

In tile and stone installations where exterior grade plywood (EGP) and oriented strand board (OSB) subfloors are used as an interior underlayment, all TCNA requirements for deflection must be met, such as: L/360 for tile and L/720 for stone. If directly bonding tile or stone to OSB is required, Siena Fracture Shield or Siena Dagon Skin must be installed prior to the installation of the tile or stone. These products will aid with the moisture sensitivity of OSB and provide a bonding surface for Siena modified mortars. OSB and EGP expand and contract at different rates, therefore the anti-fracture membranes Fracture Shield or Dragon Skin will prevent most movement up to 1/8" in the OSB or the EGP from transferring to the tile or stone system.

Requirements

Exterior grade plywood (EGP) and oriented strand board (OSB) substrates must be structurally sound, clean and free of debris, dirt, dust, wax, grease, oils, paint, sealers, adhesive residues and anything that would hinder proper bond. Live load and dead load must not exceed L/360 for Tile and L/720 for Stone. The subfloor, framing, and additional flooring systems must comply with the IBC & IRC for both commercial and residential building codes. Maximum spacing for floor joist must not exceed 19/2" on center. Subfloors must meet a minimum thickness of 23/32" tongue and groove (T&G), OSB or EGP with proper 1/8" space between sheets. Tongue and groove plywood sheets tightly butted together, and/or gaps filled with patching compounds, or thinset will not allow for proper expansion and contraction of plywood sheets, and may result in a bonding failure. It is recommended (when height allows) that an additional layer of sheathing be installed for added strength.

Movement or expansion joints in the tile system should follow TCNA guidelines EJ171 and include perimeter joints EJ171 I-16. Application of Siena Fracture Shield and Dragon Skin must be installed at proper thickness (30 mils wet) and follow the most current manufactures' data sheets and technical bulletins. The most current and updated information will be available on the Siena website SienaProducts.com

Limitations

Unapproved substrates include but are not limited to: asphalt sheeting, Masonite, cement asbestos board, metal, glass, plastic, hardwood flooring, pressure treated and fire treated plywood, as well as interior grade plywood. Gypsum based underlayments must meet TCNA requirement of 2,000 psi. Porcelain tiles and ceramic tiles are not limited in size as long as the TCNA requirements for deflection are met. Not recommended for dimensional stones unless there is double layer of sheathing and TCNA requirements for deflection of L/720 are met.

Reference Documents

TCNA, Interior Wood Subfloors – TCNA current handbook