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## BONDING TILE TO SCHLUTER® SYSTEMS' DITRA

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Our goal as a manufacturer of dry-set mortars, grouts and allied products, is to make quality products and recommendations based on industry standards that will provide long-lasting and durable installations. Our recommendations are based on a review of the substrate, tile type, allied products used, ambient conditions, environmental conditions, exposure to moisture, type of traffic the installation will be exposed to (commercial, residential), chemical exposure, etc.

After reviewing installation recommendations of Schluter® System's DITRA, we performed in-house shear bond and Robinson Floor tests with several of our ANSI A118.1 mortars. Based on the results, Custom® will not warrant the use of any of our bonding mortars meeting ANSI A118.1 for the installation of ceramic tile, porcelain tile or natural stone to this product.

Schluter's description is as follows, "DITRA is a polyethylene membrane with a grid structure of square cavities, each cut back in a dovetail configuration, and an anchoring fleece laminated to its underside." Schluter recommends the use of unmodified A118.1 mortars for bonding porcelain tile to their DITRA, which specifically goes against industry and most mortar manufacturer's recommendations to use modified mortars meeting A118.4 when installing dense, vitreous tiles. Very few adhesives or mortars, modified or unmodified, will form a good bond to polyethylene. **The key to tiles remaining attached, not bonded, to DITRA is the complete filling of the cavities with the bonding mortar.** The dovetail design allows the mortar to anchor itself into the cavities, without forming a bond. Mortar covering DITRA'S ridges between the cavities is neither anchored nor bonded. The only bond that will be achieved is between the mortar and the tile. Even with full mortar coverage over the entire DITRA surface and complete filling of the cavities, approximately 40% of the mortar is anchored in the cavities while the remaining 60% of the mortar covering the ridges is unbonded. In time and exposure to traffic and movement, loose tiles are imminent. Further, if the cavities in DITRA are not completely filled solid with mortar, point loading can possibly cause compression of the DITRA and lead to cracked tile and grout.

Custom® has always backed its products and offers the best installation recommendations whenever possible. Therefore, we will not support the use of a mortar meeting ANSI A118.1 for bonding porcelain and other vitreous tiles to DITRA. The use of MegaFlex™ Ultimate Thin-Set Mortar, MasterBlend™ Standard Thin-Set Mortar mixed with CustomFlex® Additive, RapidSetting Mortar System or FlexBond® Fortified Thin-Set Mortar for bonding tiles to Ditra are acceptable but are dependent on full mortar coverage and complete filling of the cavities.

The use of the above listed products in conjunction with DITRA is eligible only for the product warranty which is a product replacement warranty. Schluter System's DITRA is not an approved substrate and therefore does not qualify for a Custom Installation Systems Warranty even if used in conjunction with other Custom products.



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