

Glass Fiber Reinforcing Mesh

DESCRIPTION • *ShieldCrete* is a high-quality German-made alkali-resistant, specially woven glass fiber mesh for reinforcing masonry, base coats, and waterproofing coatings.

USES • *ShieldCrete* is typically embedded in plasters, leveling coats, or waterproofing coatings to provide structural reinforcement, crack resistance, enhanced shear strength, and continuity of surface. *ShieldCrete* is available in several grades depending on the intended use; the following is intended only as a general guideline:

- *ShieldCrete LD*: A 63 g/sq m mesh recommended for reinforcing waterproofing coatings. *ShieldCrete LD* is typically used for reinforcing water tank cold-applied internal coatings such as *FlexCrete 400* and *FlexCrete 500* epoxy polysulfide elastomeric coatings. *ShieldCrete LD* can also be embedded in acrylic waterproofing coatings such as *ProofCrete 700* and *ProofCrete 704*, flexible cementitious coatings such as *ProofCrete 709* and *ProofCrete 710* for waterproofing tanks, wet areas, swimming pools, kitchens, and bathrooms, and PU and epoxy coatings such as *ElastoCrete 5000*.
- *ShieldCrete SD*: A 105 g/sq m mesh that is ideal for reinforcing wall plastering due to its wide mesh size opening. *ShieldCrete SD* is also ideal for reinforcing the *FoamFix Base and Leveling Coat* in *ArtCrete* Wall Render Systems when applied on top of a field-mixed gray plaster, cement board, or gypsum board in order to enhance crack resistance and provide continuity of surface before application of the *ArtCrete* finish coat. *ShieldCrete SD* may also be embedded in the base coat of various topping systems such as in *BondCrete* or *TopCrete Adhesive* before application of *TopCrete* overlays and toppings, in order to enhance shear strength and reduce the chances of progression of cracks from the substrate to the overlay.
- *ShieldCrete MD*: A 145 g/sqm mesh with increased tensile strength for reinforcing the base coat of render and topping systems as described above and for reinforcing terrazzo floor systems. *ShieldCrete MD* also meets the requirements of reinforcement for Exterior Insulation and Finish Systems (EIFS).
- *ShieldCrete Joint Mesh*: A 160 g/sqm mesh with high tensile strength and wide mesh size opening. Provided in 200 mm wide rolls, *ShieldCrete Joint Mesh* is specifically made for reinforcing the joints in wall plastering systems such as at the joint line of column/beams and blockwork or the joints between plastering

boards, by embedding in the dash coat (e.g. *DashCrete Splatter Dash Coat*) or base coat (e.g. *FoamFix ST Base Coat*).

ADVANTAGES •

- ✓ Alkali resistant – will not rust.
- ✓ Superior German quality.
- ✓ High tensile strength.
- ✓ Excellent dimensional stability.
- ✓ Reduces propagation of cracks to the surface.
- ✓ Enhances shear strength.
- ✓ Provides a uniform and continuous surface.
- ✓ Easy to cut and work with.

COVERAGE • Reinforcing meshes must be overlapped a minimum of 10-15 cm at all edges. *ShieldCrete* is available in 1 x 50 m rolls (*ShieldCrete* Joint Mesh is provided in 0.2 x 50 m rolls).

LIMITATIONS • Reinforcing mesh is intended for reflective crack risk mitigation only; no claims or guarantees may be given against complete elimination of cracks from the substrate reflecting on the topping or finish coat. For the reinforcing mesh to function properly, it must be sandwiched in the embedding material; never fix the reinforcing mesh to the substrate first then apply the embedding material.

APPLICATION • For easier application, place the fiber mesh such that its inside curl is facing the inside wall or the ground. Ensure that the reinforcing mesh is continuous at all corners and overlap a minimum of 10-15 cm. Sand down any surface protrusions that might cause the reinforcing mesh to wrinkle or warp. Do not overlap the mesh over the same location where discontinuity in the substrate might occur such as the edge of a cement board.

Reinforcing Gray Plaster: For best results, position *ShieldCrete* so that it is in the outer one-third to one-fourth of the thickness of the gray plaster layer.

Reinforcing Wall Base Coat: When applying *ArtCrete* renders or other colored stuccos over field-mixed gray plaster, it is highly recommended to first apply a layer of *FoamFix ST* reinforced with *ShieldCrete SD* or *MD* in order to reduce the chances of crack propagation from the low-quality field-mixed plaster to the finish coat. In addition, reinforcement of the *FoamFix* base is necessary for stucco installation over cement boards or other discontinuous substrates. Ensure that the substrate is structurally sound and rigid. Apply the *FoamFix* base coat to the surface in a thin coat. Fully embed the reinforcing fabric in the wet base coat by troweling over the mesh from the center to the

edges in order to eliminate any wrinkles. The base coat thickness must be sufficient to just fully embed the mesh – do not thicken. Immediately follow with a second thin coat of *FoamFix* in order to just fully cover the mesh.

Reinforcing Floor Primers: When *TopCrete* overlays such as *TopCrete 220* are to be applied to a concrete substrate of questionable quality, it is highly recommended to reinforce the *BondCrete* primer coat with *ShieldCrete SD* or *MD* in order to reduce the chances of hairline cracks propagating to the overlay’s surface. In addition, use of *ShieldCrete SD* or *MD* to reinforce the *BondCrete* primer is highly recommended when applying on already installed tiles. Embed the fiberglass mesh into the first layer of *BondCrete* while wet and trowel or back roll from center to edges in order to eliminate any wrinkles.

Reinforcing Waterproofing Coatings: After applying the first coat of the waterproofing material with a roll or brush, immediately embed the *ShieldCrete LD* fiberglass mesh into the wet coating and back roll to insure full submersion. After the first coat has dried sufficiently, apply a second coat of the waterproofing material as necessary to achieve the desired thickness and buildup.

Reinforcing Joints at Discontinuous Substrate: For reducing the chances of cracking at the joints of beams/columns and blockwork, *ShieldCrete Joint Mesh* may be embedded in the dash or keying coat of the wall plastering system. Apply a thin coat of the base or keying coat at the joint line to a width of 25 cm, then place the fiber glass mesh such that its inside curl is facing the wall. Use a trowel to firmly embed the mesh inside the first coat, then follow up immediately with the remainder of the base or keying coat to its full thickness.

RECOMMENDATIONS & TIPS ●

- Overlap adjacent sheets of the mesh by a minimum of 10-15 cm.
- When *ShieldCrete* mesh is embedded in a base coat for later application of a thin finish coat or stucco, make sure that the mesh is adequately embedded in and covered by the base coat in order to avoid ghosting of the mesh through to the finish coat.
- Always apply the first coat of material before placement of the mesh; pre-installation of the mesh on the substrate prior to application of the coating or base coat could result in dry spots between the mesh and the substrate.
- Do not overlap the mesh over the same location where a crack or joint exists in the substrate.

PHYSICAL PROPERTIES ●

Description	Wt. (g/m ²)	Mesh Size (mm)	Width of Roll (cm)	Length of Roll (m)	Tensile Strength - DIN ISO 13934-1 (N/5 cm)		Elongation (%)	
					Warp	Weft	Warp	Weft
<i>ShieldCrete LD Mesh</i>	63	2.9 x 2.3	100	50	>450	>700	n/a	n/a
<i>ShieldCrete SD Mesh</i>	105	7.1 x 7.4	100	50	1250	1450	2.9	3.5
<i>ShieldCrete MD Mesh</i>	145	4.6 x 4.2	100	50	1950	1755	3.4	3.5
<i>ShieldCrete Joint Mesh</i>	160	6.0 x 6.0	20	50	2000	2400	3.5	3.5

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