

Processing guidelines

KeraLine system

Prefabricated ceramic lining elements with stoneware tiles to DIN EN121 for the renovation of accessible sewers and sewer constructions.

Set up

Basic material: Tiles: length=242 mm, width=116 or 75 mm, thickness=13 mm, weight/tile = ca. 650/400g

KeraLine-System: Split-tiles to EN 121, jointed to form large elements. Tiles are connected at their faces by an epoxy-resin.
Joint width: 8-12 mm.

KeraLine-elements are used as a surface protection of sewers in both new constructions and renovation projects.

The elements are prefabricated in the factory based on local conditions and geometries. The optimum length of the element is 995 mm. The widths of the elements are adjusted to the locally prevailing conditions and are determined by the installing contractor.

Sewer rehabilitation

The surface must be prepared for the installation of KeraLine to the consultant's tender requirements. KeraSwiss recommends the surface preparation by highest water pressure (approx. 2800 bar) to a surface roughness of 5 mm.

New sewer construction

The cement film must be completely removed.

Optimal bonding

For the optimal bonding of the KeraLine elements to the construction to be lined, the underside of the ceramic tiles is dove-tail shaped. Together with the chosen installation mortar, e.g. Sika, Hermes Bauchemie, PCI, Mapei or other equally suitable products, a full face bonding to the subsurface is achieved. Average bonding strength values should be around 1,5 N/mm². The processing recommendations of the individual supplier of the mortar are to be followed at all times. One has to consider, that the bonding can only be as good as the subsurface for the installation of the elements and must be properly roughened and cleaned.

Installation

- water soaking of the elements
- in a first step, a layer of the installation mortar is placed on the underside of the soaked elements
- the dove-tail shaped recesses must be filled avoiding trapped air
- the freshly layered elements are pressed into the layer of fresh mortar placed on the bottom or the sides of the sewer and adjusted to the required position (buttering-floating-system). Over-head installation is possible.
- the gap between installed elements are freed of all mortar to the depth of the tile's thickness. After all necessary adjustments the gap between elements should be approx. 8 - 12 mm.
- after the setting of the mortar, the secondary joints are closed with acid resistant pointing material, preferable from the same source as the installation mortar.
- curvatures can be obtained by simply cutting the elements with a disc cutter (diamond disc for cutting stone, ceramic etc.)
- after 24 hours, depending on the material used, the finished sewer section can go into operation
- under all circumstances the guidelines of the material suppliers and the consultant must be observed.