

WATER MITIGATION FROM BASEMENT WALLS

KALMATRON® KF-D is designed as an admixture to Cement Soils containing CMS Sealers (Crumbled Material Sealant) for enhancement of soil consolidation, strength acceleration and different degrees of water mitigation from the structure, including complete soil impermeability.

■ CMS PREPARATION FOR INJECTIONS

1. Balance of 2.5 Kg of KF-D.
2. Balance of 100 Kg of ordinary Portland cement.
3. Mix for no less than 3 minutes in a standard mixer to get CMS ready.

■ APPLICATION BY INJECTION

1. Use the Water to Cement ratio of 0.6 by weight as initial data.
2. Use apparatus for injection of CMS with the highest feasibility.
3. Injection is accomplished when the compressor shows critical pressure readings and/or the CMS surfaces from the injection hole.
4. Cure the injected site by spraying water until the surface is soaked.

The injection of CMS is shown conceptually in the image below, where the axes of injection are placed as follows:

Axes along the walls on the PLANE OF CORNER distant from the surface of foundation by 0.7 m,* wherein “*” is a subject to verify underlying concrete block (see 1-1).

Axes on the PLANE OF CORNER between “Injectors” are measured by 1 (m) and 2 (m) on a corner area and along the wall, respectively.

Consumption of CMS depends on the soil's hydraulic conductivity, evaluated for sand-clay type soils by lowest and highest coefficients as “Distribution 1” and “Distribution 2,” wherein:

■ “Distribution 1” describes crumbled soil with dominating sand content with CMS distribution throughout the whole depth of the injector and the fulfillment of space between injector and wall, as shown in “CMS distribution.”

Approximate CMS consumptions per 1 linear meter along the wall are:

Cement: 12 m. tons

Kalmatron® KF-D: 300 Kg

Water: 7,2 m. tons

■ “Distribution 2” describes soil with dominating clay content with CMS distribution in the shape of Built in place Bulb Piles.

Approximate CMS consumptions per 1 linear meter along the wall are:

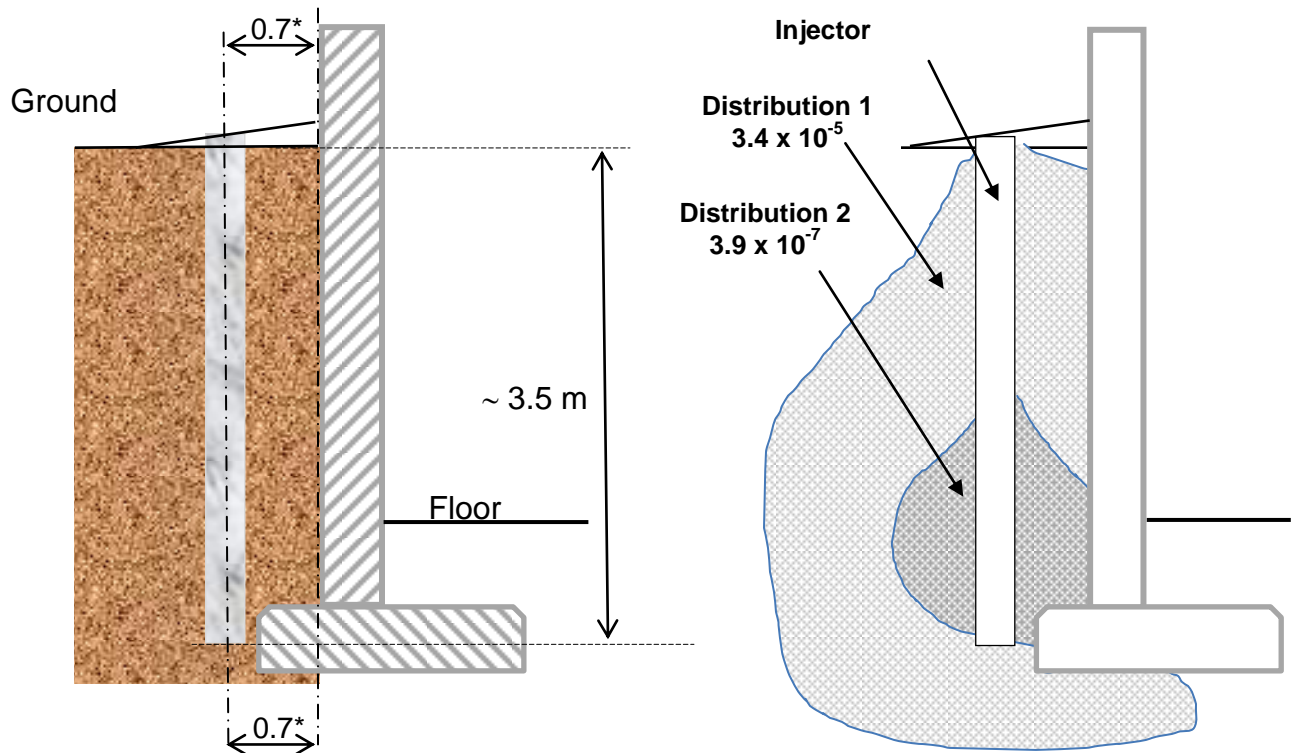
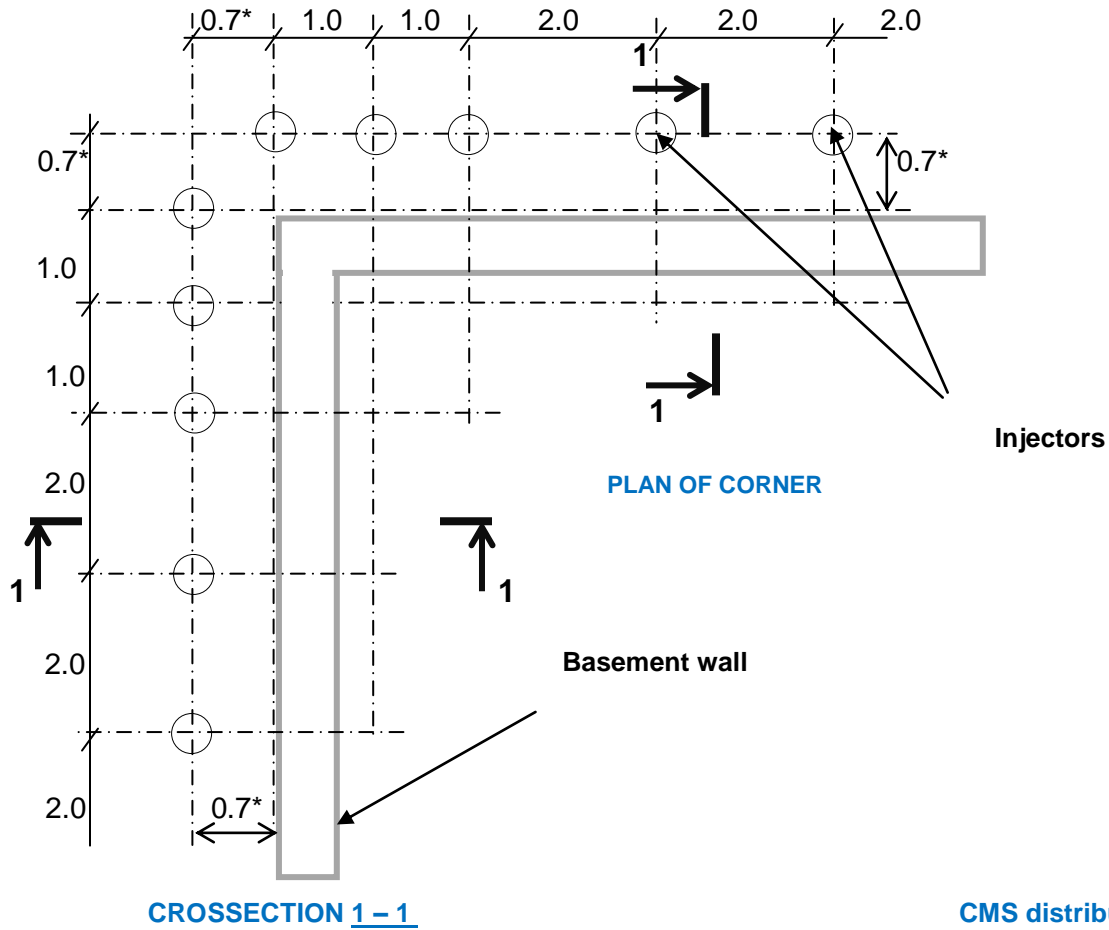
Cement: 5 m. tons

Kalmatron® KF-D: 125 Kg

Water: 3 m. tons

All voids and cracks will be filled with CMS in both cases. It is important to provide evaluation of the soil throughout the whole depth of targeted injection, and verify hydrogeological blueprints for the existence of underground drainage systems, water supply canals, sewage wells and rivers, so that their volumes can be included in the list of products consumption.

WATER MITIGATION FROM THE WALLS OF THE BASEMENT



Note: all drawings are rationed approximately and do not scaled to the measurement of 1 meter.