



Very  
High  
Durability  
Reinforced  
Concretes



Certified Quality System since FEBRUARY 1993

## *From Project to Jobsite*

# CEMEX M-1000 and CEMEX 1000 RT

## SHRINKAGE COMPENSATING ADDITIVES FOR THE OPTIMALISATION OF THE VOLUMETRIC STABILITY OF CONCRETE

**Description** CEMEX M1000 and CEMEX 1000 RT are powder products based on inorganic treated salts, special clinkers, and synthetic polymers, which give the studied effect of reduction or elimination of the shrinkage of concrete and mortars, and with additional benefit, the reduction in water/cement ratio. These characteristics make it possible to produce a special concrete or mortar with exceptional mechanical and physical properties, especially in combination with the super-plasticizer TECNOS®. CEMEX M-1000 is characterized by its expansive capacity during the first 48 hours. CEMEX 1000 RT has a more gradual expansive capacity which takes place between the 1° and 7° day of curing.

**Advantages** The concrete or mortar, when prepared according good practice with suitable sand and aggregates, can reach very high mechanical resistance after curing, has very high density, impermeable to water, very low or zero porosity and has excellent volumetric stability. The natural shrinkage of concrete will be reduced or eliminated by the introduction of the anti-shrinkage additive which will create an expansion during the initial curing of the concrete. This optimal result can be obtained only by accurate selection and proportion of the components of the concrete.

**Fields of use** In all situations where a concrete is desired with reduced or “zero shrinkage”: hydraulic installations, reinforced concrete, pre-compressed concrete, prefabrication, repair and strengthening concretes.

**Method of use** Mix the cement in the concrete mill, CEMEX M-1000 or CEMEX 1000 RT and the aggregates. Add the water and the super-plasticizer until the desired consistency and water/cement ratio is obtained. Cast the concrete within 20 minutes. It is advisable to add TECNOS® 95, about 1 lt per 100 Kg cement in order to obtain the maximum benefit of the CEMEX M-1000 modification in function of the reduction in water/cement ratio.

**Remark** Our Technical Department is at the disposition of our customers to assist in determination the right choice of cement, aggregates, particularly suited for a special application. General rule is to use a Portland 42,5 cement, not less than 300 kg/m<sup>3</sup>, and to use quartz sand. Also lime-quartz fillers, river deposit or well washed alluvial sand can be used when the mineralogical characteristics are suited as aggregate for concrete, if compacted, have low porosity, and high mechanical resistance.

The expansion of CEMEX M-1000 is completed during the first 48 hours, keep therefore the concrete wet during this period or avoid the evaporation by using protection. The expansion of CEMEX 1000-RT takes places the first 7 days, and it is advisable to keep therefore the concrete wet during this period or avoid the evaporation by using protection. As indication: with a dosage of 10% related to the cement (350kg), it is possible to obtain an expansion after 24 hours of 600µ/m minimum, to 1200 µ/m maximum, depending on the working conditions. For all applications where precise knowledge of the dimensional variations of the applied concrete is required (precision anchorages, structural repairs, etc.), we recommend the use of our products, ready to use and specially formulated to obtain the specific characteristics and required quality.

We do not recommend the use of other additives in general. In the case of special needs please contact our Technical Service.

Keep the bags tightly closed in order to avoid the deterioration of the product. The product is moisture sensitive.



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**Storage** Information according to 2003/53/CE:

3 months in original packaging, unopened, perfectly preserved in a dry and protected area at temperatures between +5°C and +35°C. The bags shall remain protected/covered by polythene sheet in the packaging of the pallet.

**Packaging** 20 kg bag

**Dosage** 12-45 kg/100 per m<sup>3</sup> concrete (or 6 to 13 kg for 100 kg cement), depending on the desired rate of shrinkage compensation, and in function of the percentage of reinforcement steel for reinforced concrete, or the total amount of cement.

**Safety remarks** Consult the Material Safety Datasheet or read carefully the safety instructions on the packaging.

The above data are based on our actual and most experienced practical and laboratory knowledge and the results are collected from application of the product in different situations. Tecnochem Italiana does not assume any responsibility regarding inadequate or negative performance as a result of improper use of the product or for defects deriving from factors or elements other than the quality of the product including improper storage. The technical characteristics and performance mentioned in this datasheet are updated periodically. The revision dates and number of revision of the datasheets are listed in the table below. Eventual variations are traceable on our website [www.tecnochem.it](http://www.tecnochem.it) where the most updated datasheets can be retrieved.

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