

## KALMATRON® KC APPLICATION INSTRUCTION Based on the USA Patent 5,728,208

Kalmatron® KC designed as a cement type-upgrading admixture of the Portland cements to enhance completeness of hydration. Accelerates concrete early strength, increases density, liquid and vapor impermeability with stable non-shrinkage performance.

### ■ APPLICATION OF KC

1. Industrial blending of KC with Ordinary Portland Cement (OPC ) provided by 1: 100 ratio respectively, where dosage for testimonial mixes is adjusted in accordance with probability of KC distribution into the smaller batches .
2. The lower grade or cement quality, the higher KC performance.

### ■ APPLICATION OF KC CEMENT

1. Compatible with any concrete, mortar, and shotcrete mix designs.
2. For the best results, use Water to Cement ratio reduced by 15% from the standard one.
3. Curing of structure is not required.

### ■ APPLICATION OF KC ON CEMENT PLANT

KC is applicable during of final stage of cement production, i.e. into the cooled cement powder.

**Do not kiln KC.**

### ■ LABORATORY TEST ESSENTIALS

1. Prepare mix of KC and OPC by 0.75 Kg (1.65 LB) and 42.73 Kg (94 LB sack) resulting in a batch of 43.48 Kg.
2. Provide mixing by the regular mixer in 4 minutes or by high-speed blender in 35 seconds.
3. Take sampling scoops from 15 cm (6") depth of the center of the batch.
4. Trial samples **should not to be placed** into the same curing water bath with control samples.

### ■ EXPECTED RESULTS

1. Highest volume of cement hydration completes concrete formation without curing. **No curing required.**
2. Exothermic heat is lower at 30% to 50%. There are no shrinkage cracks and slab's curling. **No fibers required.**
3. Yield of mixed batch is higher by 8% to 14% of cement gel. **No water reducer or plasticizer required.**
4. Water impermeability of plaster at ¾" thick and 2" of concrete thick is 100% respectively. **No isolations required.**
5. Early strengthening at 1<sup>st</sup> to 3<sup>d</sup> days at 25%. **No strength gainers and excessive rebar required.**
6. Highest resistance to chemical and climate corrosions due to complete **hydration of cement grains.**
7. Therefore, KC upgrade conventional concrete batch to the **High Performance Concrete.**

### ■ SAFETY

Operation with KALMATRON® KC is similar to cement mixing jobs. Always use an approved respirator and rubber gloves. In case KALMATRON® KC is inhaled or gets in contact with the eyes, rinse and wash abundantly with water.

