



Krytol Internal Membrane™ (KIM®)

## Instructions for Ready-Mix Truck Driver

### DESCRIPTION

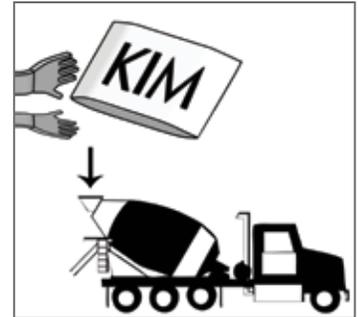
Krytol Internal Membrane (KIM) is a chemical admixture in powder form used to create waterproof concrete. KIM is used in place of externally applied surface membranes to protect against moisture transmission, chemical attack, and corrosion of reinforcing steel.

### EFFECT ON PLASTIC CONCRETE

KIM admixture has been specially formulated to meet the requirements of projects in different climate conditions as follows:

- KIM-HS: This version of KIM is used for most common applications. KIM-HS is compatible with common admixtures, such as plasticizers, accelerators, retarders and air-entrainers.
- KIM-AE: This version of KIM is specially designed for concrete requiring air-entrainment to resist freezing and thawing cycles. KIM-AE will increase air content by 3-5%. Adjust or remove any air-entraining admixtures accordingly.
- KIM-ES: This version of KIM is specially designed for use in hot climates and mass concrete. KIM-ES will prolong the slump retention of the concrete and delay the initial setting time. Adjust or remove set retarding admixtures accordingly.

All versions will typically delay the setting times of concrete. Be aware of the differences in air entrainment and retardation between KIM-HS, KIM-AE & KIM-ES.



### BATCHING CONSIDERATIONS

- Ensure your drum is empty of water prior to batching.
- Do not use recycled water unless test batches show acceptable results.
- When using multiple admixtures in the same batch of concrete, they should be dispensed separately into the concrete to avoid intermixing and possible interference of the admixtures.
- It is recommended that cast-in-place concrete be batched at a w/c ratio of approximately 0.40 (0.37 for shotcrete). The maximum total w/c ratio is either 0.45 (0.40 for shotcrete) or the specified maximum w/c ratio. This includes all water present in the concrete and any added on route and on site.
- Under some circumstances, you may observe slump loss at 25 minutes. This is false set and slump will recover with continued mixing. False set normally occurs during transport and is not noticed. Avoid placing concrete during the false set period.
- If possible, add only a portion of the specified HRWR when batching, and send the rest to the jobsite to be added just prior to unloading.

### ADDING KIM DOSAGE ON SITE

- KIM dosed at 2% of cementing materials by weight, to a maximum dosage of 8 kg/m<sup>3</sup> (13.5 lb. /cu. yd.). Dosage may be varied for specific projects in consultation with Kryton's Technical Services Department.
- If adding KIM on site, premeasure the required KIM material and carry on the truck.
- Before opening KIM pails, loosen compacted material by turning the pail over once or twice. Dispense directly into concrete mixer.
- KIM in bags can be thrown un-opened into the concrete mixer. The bags are designed to disintegrate in the mixer.
- Store any unused portions in an airtight container to prevent moisture contamination.
- Mix concrete at medium to high speed for one minute per cubic meter/yard in the batch and a minimum of 3 minutes. If the slump is below specification, add a mid or high range water reducer to achieve the required slump. Only add additional water with the approval of the quality control technician. Record all water additions on the batch ticket and do not exceed the specified w/c ratio.
- The addition of water without supervision and approval may void the manufacturer's warranty.

#### Kryton International Inc.