



Use of KIM® Admixture: Instructions for Placers & Finishers

IMPORTANT

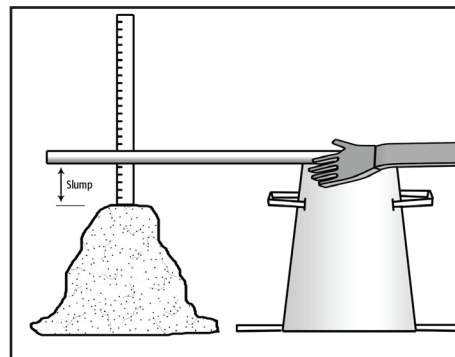
You are making a waterproof membrane out of the concrete/shotcrete. This is different from traditional construction, where the concrete just forms the structure. The KIM concrete you are placing will be the only barrier to water penetration. This means that common defects found in typical concrete cannot be tolerated. Poor consolidation, unplanned cold joints, cracks, penetrations, contaminations, etc. will all result in a leaking structure. To avoid leakage and to achieve success, you must follow the critical instructions outlined in this document.

EFFECT ON PLASTIC CONCRETE

The 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 the concrete. Consult with a Kryton Technical Services Representative for the most appropriate KIM® admixture for your project.



SAFETY

- Before using or handling, read the Material Safety Data Sheet for this product.
- Safety precautions for KIM concrete are no different than for normal concrete.
- KIM powder becomes caustic when mixed with water or perspiration. Take appropriate safety precautions to prevent contact with skin or eyes and to prevent breathing dust.

NOTE

In cases where concrete loads are accepted that are not conforming to the specifications, record the name of the person authorizing the acceptance and the location of concrete placement.

Be aware of the differences in air entrainment and retardation between KIM-HS, KIM-AE & KIM-ES.

General influence of KIM® admixture on concrete plastic properties at standard laboratory conditions (actual field setting times may be shorter):

	Initial Setting Time* (hh/mm)	Air Content* (%)
Plain	3:00	1.5
KIM-HS	4:30	1.6
KIM-AE	4:00	6.0
KIM-ES	6:00	1.6

* This table is to be used as a guide only. Actual setting times and air contents depend on mix design, temperature, and the influence of other chemical admixtures and must be based on trial mix.

CONCRETE HANDLING

- 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 water-cement ratio.
- Under some circumstances, you may observe slump loss at 25-40 minutes. This is false set and slump may recover with continued mixing. False set may be avoided by dosing KIM on the project site. Avoid placing KIM during the false set period.
- The addition of water without supervision and approval may void the manufacturer's warranty.



FINISHING

- Superior consolidation of the concrete is essential to achieve the performance and benefits of KIM.
- KIM treated concrete will typically delay the initial and final setting times of the concrete. Adjust your finishing or stripping schedule accordingly. Evaporation retarder may be needed.
- Alert the site superintendent and/or manufacturer immediately of any concerns.

CURING

- KIM improves the internal cure of concrete. However, KIM is not a replacement for proper curing procedures.
- Proper curing is essential to achieve the performance and benefits of KIM. Cure in accordance with ACI 308.1 guidelines.
- Wet curing the concrete with a fog mist spray, sprinkler or wet burlap for 5 to 7 days is recommended. Protect from rain, excessive wind, and sun.
- Alert the manufacturer immediately of any concerns.