

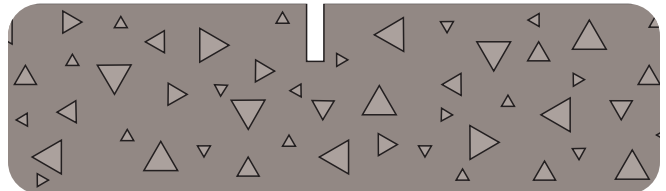
Contractor Information For Crack-Reducing Admixture Technology

Overview

Cracking is a major concern in concrete construction, because *cracks compromise aesthetics and may lead to durability problems, due to leaking in structures.*

Therefore, it is common industry practice to form joints that create planes of weakness in concrete elements to control random cracking, such as tooled or sawn joints in slabs-on-ground. While joints are effective in minimizing random cracking, their installation and maintenance can be costly.

Where joints are either undesired or not feasible, high amounts of reinforcing steel are used to hold cracks that form very tight. The use of high amounts of steel reinforcement, however, may not necessarily prevent leakage through cracks.

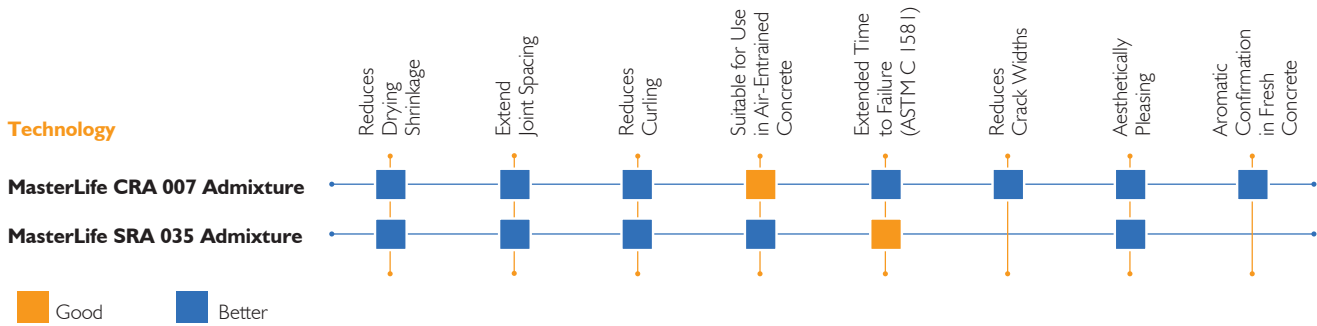


Alternative Option

While there are many causes of concrete cracking, one **major** contributor is drying shrinkage (shrinkage that occurs due to moisture loss after concrete hardens). For a given set of concreting materials, proper mixture proportioning will help in producing concrete with low drying shrinkage. The drying shrinkage of concrete can be minimized further through the addition of conventional shrinkage-reducing admixtures or MasterLife® CRA 007 crack-reducing admixture. Compared to a conventional shrinkage-reducing admixture, MasterLife CRA 007 crack-reducing admixture provides enhanced performance by reducing initial crack widths, should cracking occur.

The use of MasterLife CRA 007 admixture, with or without a Master Builds Solutions' MasterFiber® synthetic macrofiber (depending on the application), can reduce or eliminate the requirements for joints and temperature and shrinkage reinforcement resulting in a faster, safer, and more economical construction.

Technology



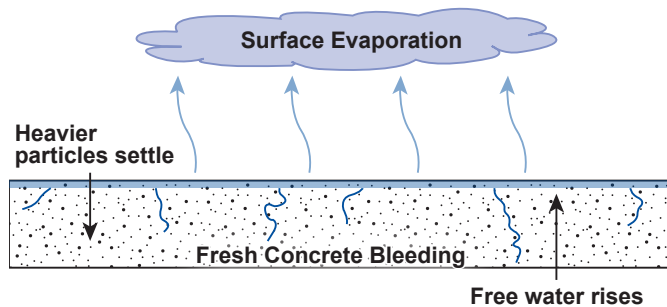
Contractor Notes

The following plastic concrete performance may be noticed when placing concrete treated with MasterLife CRA 007 admixture.

Slump – MasterLife CRA 007 admixture does not affect concrete slump

Setting Time – The time of setting of concrete containing MasterLife CRA 007 admixture may be delayed slightly depending on dosage, temperature, and mixture components. Consult with your producer with respect to the desired setting time for the project and perform a mock-up to confirm the desired performance.

Bleeding – Concrete containing MasterLife CRA 007 admixture may bleed slightly longer and at a lower rate, depending on dosage and ambient conditions. Therefore, the finishing process should be delayed accordingly.



Industry guidelines caution against finishing water into a concrete surface as this practice will compromise the surface integrity and could result in a call back or claim. Under adverse ambient conditions, concrete slab-on-ground surfaces should be protected from premature drying through the application of an evaporation reducer such as MasterKure® ER 50 product or through the use of a synthetic microfiber. Download the free **Master Builders Solutions “Concrete Now” App** and use the Surface Evaporation Calculator to estimate the potential for plastic shrinkage cracking under prevailing ambient conditions.

Pumping – MasterLife CRA 007 admixture will not affect the pumping of concrete.

Finishing – A well-proportioned mixture containing MasterLife CRA 007 admixture should be easy to finish. Because of the slightly increased time of concrete bleeding and time of set, care and judgment should be exercised to prevent premature finishing. Initiating the finishing process too early will lead to bleed water being finished into the concrete surface or trapped under a sealed surface. Either of these will cause surface defects, such as blistering, dusting, and thin-surface delaminations.

Curing – Concrete treated with MasterLife CRA 007 admixture should be cured properly in accordance with industry standards, described in many American Concrete Institute (ACI) documents, or as specified. Where practical, moist curing is the preferred method of curing.

Odor – A slight odor may be noticed when MasterLife CRA 007 admixture is used in concrete placed in confined areas. This odor is an aromatic indication that the admixture is in the concrete. Additional information is available from the Safety Data Sheet (SDS) for MasterLife CRA 007 admixture.

Limitations – To achieve the desired outcome, concrete mixtures should be well-proportioned and industry-accepted construction practices should be followed. No chemical admixture can be added to concrete to overcome cracking issues if shortcuts are taken in proportioning, batching and mixing, or construction procedures.

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