

Recommended Application Procedures for SILCOSEAL Cure and Bondbreaker During Hot Weather Conditions

Cure and bondbreaker application during hot weather conditions demands special consideration to ensure a successful result.

Hot weather conditions necessitate additional care for adequate curing of the casting slab. Improperly cured casting slabs typically exhibit increased surface porosity and reduced surface strength. Normal application of the tilt-up bondbreaker to improperly cured casting slabs often results in inadequate surface accumulation of the bondbreaker.

In particular, when using Type 1L cement mixes, the lower bleedwater can lead to early surface crusting or false set, creating challenges during finishing. Additionally, the use of certain pozzolans such as fly ash in the concrete mix can exacerbate the problem by slowing the concrete set time, thereby delaying the application of the curing compound and resulting in critical moisture loss. The use of Nox-Crete's Stage 1 finishing aid and evaporation reducer during the floating and troweling process helps extend workability, reduce surface crusting, and promote a more uniform finish — providing a stronger base for the curing compound and bondbreaker application.

Recommended curing practices include the application of the bondbreaker cure coat IMMEDIATELY after final finishing and control joint cutting. The SILCOSEAL Cure and Bondbreaker cure coat application should be to the point of uniform surface film accumulation. Casting slab surfaces with increased porosity or surface area resulting from a rougher finish may require heavier applications of the cure coat to ensure adequate holdout and surface accumulation.

In order for SILCOSEAL Cure and Bondbreaker to perform properly, it is ESSENTIAL to develop a uniform surface accumulation on the casting slab. Proper application of the cure coat is the most important step toward ensuring adequate bondbreaker holdout on the successive bondbreaker coats. SILCOSEAL Cure and Bondbreaker applied as a cure coat chemically reacts with the surface concrete, forming a waterproof soap barrier which prevents successive bondbreaker coats from absorbing into the casting slab, thereby ensuring uniform holdout of the bondbreaker.

If the cure coat application of SILCOSEAL Cure and Bondbreaker to the casting slab must be delayed or if the slab was not cured at all or is suspected of being porous, the surface should be saturated with water prior to the bondbreaker application. Excess water should be squeegeed off the surface immediately prior to the bondbreaker application. Saturating the casting slab with water in this manner will ensure that the SILCOSEAL Cure and Bondbreaker will achieve proper surface holdout.

Following the cure coat application, it is necessary to apply successive bondbreaker coat(s) to the casting slab until the surface is uniformly dark in appearance with the presence of a “dry soap-like feel” uniformly apparent to the touch over the entire casting slab surface with no indication of greater accumulations in low spots or depressions. Variations in concrete mix designs, weather conditions, finishing procedures and curing conditions make it impossible to predict the exact number of bondbreaker coats and/or application rates necessary to ensure adequate surface accumulation.

Since each casting slab is inherently different, it is critical to the success of the project that the tilt-up contractor understands that during hot weather conditions, it becomes more important than ever that the bondbreaker cure coat is properly applied, and that successive bondbreaker coats are applied until the “dry soap-like feel” is uniformly apparent to the touch over the entire area.

THE PRIMARY REASON FOR PANELS STICKING TO CASTING SLABS IS AN INADEQUATE FILM OF BONDBREAKER ON THE CASTING SLAB SURFACE AT THE TIME OF PANEL CONCRETE PLACEMENT. IT IS YOUR RESPONSIBILITY TO VERIFY THAT A CONTINUOUS FILM OF BONDBREAKER CAN BE FELT ON THE CASTING SLAB SURFACE AS DESCRIBED ABOVE, IMMEDIATELY PRIOR TO THE PLACEMENT OF PANEL CONCRETE. PLEASE READ THE APPROPRIATE PRODUCT TECHNICAL BULLETINS AND USE INSTRUCTIONS PRIOR TO USE.