Perform with Precision

DAYTON SUPERIOR

Guide to Tilt-Up Bond Breakers

A bond breaker is a 'material used to prevent adhesion of the newly placed concrete to the substrate'.*

When a bond breaker is needed at a construction joint, a curing compound, form release agent and the like can act as a bond breaker. Bond breakers used in tilt-wall construction, however, are specifically formulated for that purpose and the chemistry involved with these bond breakers is different than that of other "bond breakers".

**ACI Cement and Concrete Terminology*

Dayton Superior Bond Breakers

- ***Sure-Lift™ with Dye J6D solvent-based***
- ***Sure-Lift™ J6WB water-based***
- ***Maxi-Tilt™ with Dye water-based***

Curing:

Proper, and immediate, curing is vital to a successful tilt-wall project

- Timing is more critical on the cure coat than the bond breaker coat
- Proper curing will help create a less porous , more dense surface
- The more dense the surface the easier the panels will lift
- For projects requiring an ASTM C-309 cure, use the Dayton System:

Prior to placement of the ***Sure Lift™ with Dye J6D*** cure the slab with ***Sure Lift™ with Dye J6D*** or one of the following solvent-based curing & sealing membranes:

- Cure & Seal 25% J22UV @ 200-400 Ft²/Gal
- Cure & Seal LV 25% J20UV@ 200-400 Ft²/Gal
- Cure & Seal 30% J23UV @ 200-400 Ft²/Gal

Prior to placement of the ***Sure-Lift™ J6WB*** or the ***Maxi-Tilt ™ with Dye*** cure the slab with ***Sure-Lift™ J6WB***, ***Maxi-Tilt ™ with Dye*** or one of the following water-based products:

- Cure & Seal 309 J18 @ 200 Ft²/Gal
- Cure & Seal 309 EF @ 200 Ft²/Gal
- Cure & Seal 1315 EF @ 300 Ft²/Gal
- Cure & Seal 1315 J22WB @ 300 Ft²/Gal

Preparation for applying the Bond Breaker

- All surfaces must be clean
- For hot weather precautions, prior to the first bond breaker application, soak the slab to satisfy it's 'thirst' and reduce it's porosity; After soaking, squeegee off the excess water then immediately apply the bond breaker. Using this procedure will help to keep the bond breaker on the *surface*, not in the concrete.

Placement of the Bond Breaker

- Always read and follow the instructions in the current data sheet
- Apply the bond breaker evenly, being sure not to leave puddles
- It is best to have several lighter applications than one heavy application

"Good Indications"

- Three quick checks that indicate good parting of the panels:
  - feel a soapy residue on the surface
  - beading of water
  - observing an uniform appearance of the bond breaker

Solvent-Based vs. Water-Based

Water has very high surface tension while solvents are low. Surface tension is directly related to wetting and adhesion. Liquids with a high surface tension, like water, are not necessarily as efficient in this respect as the lower surface tension materials like solvents.

This is the reason why water-based materials do not lay down as easily as solvent-based materials and why water based are easier to over apply

Dayton Superior Bond Breaker Comparisons			
Sure Lift™ with Dye J6D		**Sure-Lift™ J6WB**	**Maxi-Tilt™ with Dye**
Shelf Life:	12 months	9 months	9 months
Mixing:	Not required	Agitation required prior to each use	Agitation required prior to each use
Flammability	High	NO	NO
Freezable:	No	YES	YES
Meets ASTM C-309:	YES	YES	YES