



CURECRETE DISTRIBUTION, INC.

Technical Services

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THE ASHFORD FORMULA & BONDBREAKERS

Tilt-wall construction has become a very popular method of erecting large retail stores, distribution warehouses, and manufacturing facilities. In this method of construction, what will eventually become the building's floor is used as the casting bed for the walls. Once the wall panels are ready, they are hoisted in place with a large crane. Preventing the wall panels from sticking to the casting bed is achieved by treating the casting bed with a bond-breaker prior to pouring what will eventually become a wall. Inquiries pertaining to the compatibility of The Ashford Formula and specific bond-breakers are very common.

Specifically, such inquiries are brought forward in the context of using The Ashford Formula as a curing compound to be followed by a bond-breaker. Our research and field experience indicates that when applied to the casting bed as a curing agent, The Ashford Formula will not degrade the performance of the bond-breakers. However, when The Ashford Formula is used in this fashion, it is very important that no residue of The Ashford Formula be left on the surface of the casting bed before the application of a bond-breaker.

THOROUGHLY FLUSHING THE CONCRETE SURFACE OF ANY RESIDUE OF THE ASHFORD FORMULA IN PREPARATION FOR THE BOND-BREAKER IS OF UTMOST IMPORTANCE

It is also very important to adhere strictly to the bond-breaker manufacturer's instructions for installation. Generally, manufacturers include specific instructions for determining whether a bond-breaker has been applied properly and in sufficient amounts. In most cases, manufacturers of bond-breakers have confirmed in writing that their product is well suited to be used on a casting bed treated with The Ashford Formula. Statements of compatibility have been issued for the following bond-breakers: Nox Crete Silco seal 97E, Nox Crete Silco seal 77, Richmond Maxi-Tilt, Richmond Rich-Tilt, Richmond Maxi-Tilt E, Richmond Super Maxi-Tilt, Conspec CST, Conspec Tilt-Eez, Conspec CST WB, Conspec Tilt-Eez WB, Thompson C&B, Thompson Waterborne CB, Unitex Easy Lift, Dayton Superior J-5, Dayton Superior J-6, Dayton Superior J-7, Dayton Superior J-7 WB, Dayton Superior J-7 FD and Progressive Construction KLEENKOTE.

It is recommended that local regulations regarding the use of bond-breakers be closely examined as several states disallow the use of solvent-based bond-breakers. Maxi-Tilt E, Silco seal 97E, 2000F & 2000C, CST WB, Tilt-Eez WB, and Waterborne CB are all water-based bond-breakers that meet environmental guidelines. Incidentally, the companies Dayton-Superior and Burke have since revoked their statements of compatibility as they

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have introduced competing products. While they may no longer be recommended for use with The Ashford Formula, they continue to work well as they are presently constituted.

With the recent entry of simple silicate and water curing agents into the marketplace, it has been suggested these products might compromise the effectiveness of certain bond-breakers and should be avoided. While The Ashford Formula is a silicate-based product, it bears no similarity to such products and should not be considered as pertaining to the same category.

The effectiveness of The Ashford Formula is well established. It continues to be the most widely used and specified densification process in the world because of its performance in sealing, waterproofing, hardening, dustproofing, curing and bonding concrete and masonry building materials, including tilt-wall construction. No lifting failures, negative implications or side effects have been attributed to The Ashford Formula after fifty years of use—about the same length of time that tilt-up construction has been widely implemented.

If another curing agent is to be used on the casting bed (usually the bond-breaker itself), The Ashford Formula can still be used to seal and protect the floor after the wall panels have been lifted. However, this requires that the curing compound and/or bond-breaker be **thoroughly stripped and cleaned** from the floor before The Ashford Formula is applied. Otherwise, The Ashford Formula will not be able to penetrate, resulting in puddle-like white stains and/or a poor seal. **It is essential not to assume that the curing compound or bond-breaker will dissipate by itself even if the slab appears to be clean** because solids from the bond-breaker may still be concealed in the pores of the concrete. A number of water tests on different parts of the slab will help determine if the concrete is adequately prepared for treatment with The Ashford Formula. If water readily penetrates the concrete surface, it is generally indicative that The Ashford Formula should as well. Keeping in mind however, that a water test is not always conclusive.

What product will ultimately be used for cleaning a slab that has been cured with something other than The Ashford Formula depends entirely on that product. Two types of bond-breakers are generally available: reactive and membrane forming. Both types can be either water or solvent based, although because of environmental reasons, solvent-based products are being phased out. Since each type of bond-breaker will present special cleaning requirements, it is always best to contact the manufacturer of the bond-breaker to find out the best way to remove it. Treating the casting bed with The Ashford Formula **before** the bond-breaker is applied is not only effective, but also convenient and not as labor intensive.