HOT WEATHER APPLICATION

MIXING/POURING SUGGESTIONS FOR BACKING

(HOW TO COMPENSATE FOR SHRINKAGE IN THICK POURS)

The mixing of backing resin with hardener initiates a chemical reaction that generates heat or “exotherm.” The amount of heat generated is dependent on several factors including backing temperature, air temperature, mixing speed, mixing time and "pour" thickness. Typically, backing is designed to be poured in 1-2" sections; thicker pours – more material – are prone to greater "exotherm" or heat generation. Replacement wear parts and crusher temperature may also have an effect on your pour.

Higher ambient temperatures (85-90°F+) or exposure to hot storage conditions will cause the backing to "set" more quickly, increasing the possibility of shrinkage. Thick pours (2-4 inches or more) may generate excessive heat and a faster cure, which may lead to shrinkage, cracking, or "pull away."

Mixing speed and duration may also affect the performance of the backing. Mixing at speeds above 1000 rpm produces an excessive amount of air and generates heat due to friction. The trapped air - if not released during cure - may result in voids in the cured backing, reducing its strength. Rapid heat buildup will reduce work life and increase the possibility of shrinkage or pull away.
To avoid excessive air entrainment use of a slow speed drill (850 rpm or less) is recommended. Mixing time should be limited to 2-3 minutes, or only until a completely streak free color change is noticed.

When it is necessary to pour epoxy backing in thick sections or at elevated temperatures, a double pour is recommended.
The double pour method will minimize the effects of excessive heat generated by the backing and promote a void-free backing matrix. The first pour should be made 1-2 inches short of the top. Allow backing to cure 2-4 hours or when the backing surface has cooled to the “touch.” The second pour will fill any cracks or shrinkage that may have occurred. The bond contact between the first and second pour is not a weak point as backing bonds extremely well to itself.

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