

# Tarco ROOFER'S REPORT

## Tile Roofing Just Got a Lot Easier for Paul Bange Roofing

### The Story of a Perfect Underlayment for Tile Roofing

**P**aul Bange has a thriving roofing business in Florida, with customers from Tampa south to Fort Meyers and Naples and across the state to Fort Lauderdale and Broward County.

Paul Bange Roofing, Inc. ([www.paulbangerroofing.com](http://www.paulbangerroofing.com)) in Davie, Florida installs most types of commercial and residential roofing systems, including shingles and tile for steep-sloped roofs, as well as modified bitumen, built-up and single-ply systems for low-sloped (flat) roofs. After 30 years in the business, the company has developed considerable expertise with many kinds of roofing.

In southern Florida, tile has become the predominant roofing system for new construction over the past decade. On a typical day, Bange Roofing may have 60 tile roof projects in the works, ranging in size from small residential jobs of less than 50 squares (5,000 sq. ft) to large commercial tile roofs of more than 4,000 squares (400,000 sq. ft). The company installs millions of tiles each year and its expertise in the installation of tile roofing products is second to none.

### Tried-and-True 90 Pound

Until recently, nearly all tile-roofing systems were installed using traditional hot-mopped 90# as a watertight underlayment. This tried-and-true membrane is ideal for use as an underlayment beneath tile roofing. It consists of a premium quality, asphalt-saturated organic mat that is installed in heat-softened asphalt. The latter provides moisture resistance as well as adhesion to the deck while the

upper surface of the mat is coated with asphalt and embedded with mineral granules, which provide traction for the roofers who install the tiles. An organic mat rather than a fiberglass mat is preferred for tile roofing.

A hot-mopped 90# membrane is near perfect for tile roofing, and Bange has been using it for as long as he can remember. "The 90# mat has withstood the test of time," says Bange.

"Properly installed, it is hard to beat the performance of 90# underlayment."

However, there are two significant drawbacks to traditional 90# roof systems. First, it has to be hot-mopped. In Florida, where labor is often in short supply, especially in the aftermath of severe hurricanes, contractors are continually looking for more efficient ways to get the job done.



"Paul Bange Roofing doesn't compromise on quality but labor is a big issue here. If there was a more efficient way to install a 90# underlayment, then I wanted to know about it," Bange said. So when Tarco introduced patent pending LeakBarrier® Fast90™ premium tile underlayment, Bange was one of the first to try it.

"I saw the potential immediately. I could install 50 squares with two men in one day with the self-adhesive application. By comparison, the hot-mopped 90# required five men to complete the job in one day," he explained. "That's a 60 percent savings in labor costs. So I thought, Wow! If this membrane has the same performance as 90#, then it's really going to change my business."

## Delays in Delivery of Tiles

At the same time that Paul was discovering the labor savings benefits of Fast90, something else was happening in the tile roofing industry: Delays in tile delivery were becoming longer and longer.

Like most roofing contractors in Florida, Bange Roofing has experienced significant delays in tile delivery in recent years. Even before 2004, the worst hurricane season on record, three-month delays were not uncommon. In the aftermath of the 2004 season, all of Florida was scurrying to find materials to repair or rebuild roofs. At one point, roofing contractors were reporting delays of 40 to 60 weeks.

Due to the popularity of tile roofs and the shortage of raw materials, Bange Roofing faced a problem of some magnitude. How can it dependably replace tile roofs when tile delivery dates are completely unpredictable?

## Exposure Limits

The answer is found in exposure limits for the underlayment. A moisture-resistant membrane is required for all tile roofs because the tile itself is not

watertight. When a tile roof is badly damaged in a hurricane and needs to be replaced, the underlayment still protects the home's interior from leaks.

Hot-mopped 90# has a fairly long exposure limit, but this limit is unpredictable because it depends on the temperature history of the hot-mopped asphalt. If the asphalt is held too long at too-high temperatures it breaks down, making the underlayment vulnerable to deterioration by ultraviolet radiation from direct sunlight. Exposure to heat, sun and moisture will eventually cause it to crack, putting the building at risk.

Typically, this problem does not occur because the tiles that protect the underlayment are installed right away. However, when tile deliveries are delayed, exposure limits become a critical issue.

Exposure deterioration is the second major drawback to hot-mopped 90#, but Fast90 underlayment answers this problem as well – it not only saves on labor costs but also has very long exposure limits. Two factors contribute to its long exposure limits. First, installation does not require hot-mopped asphalt, a variable that is difficult to control in field applications. Fast90 is manufactured in factory conditions where temperatures are tightly controlled, so the asphalt used to saturate the mat is never overheated. Second, the self-stick underside of the Fast90 is an SBS-modified bitumen material. This not only provides adhesion to the deck but also offers greater strength and durability compared to hot-mopped asphalt. Not surprisingly, exposure limits of many months have been reported.

"I am confident that I can leave a Fast90 membrane exposed to the elements for nine months or more," says Bange. "I have never had to leave an underlayment exposed for more than nine months. But if I did, I would have more confidence in Fast90 than in 90# or any other modified asphalt

products currently on the market."

According to Steve Ratcliff, president of Tarco, the manufacturer, "Fast90 was specifically developed for tile roofing. It's going to play an important role in places like Florida where tile roofing is king." Tarco is the only company in the market to offer this product, which has a patent pending.

## The Perfect Mat

Some of the latest-generation of modified bitumen products are now manufactured with peel-and-stick surfaces. For these easy-to-install products, the bottom side of the membrane is coated with a tacky SBS-modified asphalt. When the membrane is installed, the roofer peels off a protective film to expose the sticky surface, which is then simply pressed onto the roof deck.

"Some of the other peel and stick underlayments in the marketplace just were not suited for tile roofs," said Bange. "For one thing, none of them offered more than a 90-day exposure limit. Given the shortages of tiles, that's unacceptable. We would be better off using 90# than using those other options, and in fact that is why we were still using 90# prior to the introduction of Fast90."

Fortunately, Fast90 proved to have exactly the features that Bange sought. "For all intents and purposes, Fast90 has all of the benefits of 90# mat with none of the drawbacks," says Bange. "We finally hit on the magic mat, which could offer labor savings without cutting corners on quality, and also allow for long exposure while the underlayment serves as an interim primary roof. In addition, Fast90 is tough enough to allow for stacking of tiles, which is another labor saving benefit. I am confident enough in Fast90 to use it for all of my tile roofing underlayment needs going forward. I like that it performs even better than 90# but is easier to install."



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