

Technical Service Bulletin No. S-19-03

Hot Weather Waterproofing with Tremco’s PUMA Technology Systems

Applying Tremco’s PUMA Technology coating systems in hot climates can present some unique issues. Normally, Tremco’s application instructions for applying PUMA systems indicate that you should not apply these products when the UV index is 7 or above. Also, the substrate temperature must be below 115°F. When the UV index is greater than 7 and the substrate temperature is greater than 115°F, the characteristics of the system can change. This may present some unique challenges to the field applicator if not addressed properly. This document will cover all aspects of the application process that need to be changed.

**Substrate Condition:**

In high UV and/or high temperature conditions, concrete may exhibit very high vapor drive. Essentially, this means that moisture is escaping from the concrete at a rapid rate. This may result in the formation of pinholes in the waterproofing membrane as it cures. If this is a concern, then a compatible vapor-mitigating primer can be used in lieu of Tremco’s PUMA primer. Tremco offers TREMPPrime VB which is a 2-part, vapor-mitigating, epoxy primer that is compatible with our PUMA products.

**Initiator Dosages:**

Tremco’s PUMA products are all 2-part coatings, and the curing process is activated using Tremco’s PUMA Initiator. This initiator can be throttled up or down to affect the cure time but must not drop below a lower threshold that is dictated by the ambient temperature. The initiator dosages for common weather conditions are adjusted to accommodate for the above-mentioned conditions; The new table is as follows:

Temperature °F	Temperature °C	Grams or ounces/gallon
Above 75	Above 24	100g or 3.5oz of initiator/gal resin
65 - 75	18 - 24	125g or 4.4oz of initiator/gal resin
Below 65	Below 18	150g or 5.3oz of initiator/gal resin

**Cure Time:**

The most significant detail that changes in these hot weather conditions is the cure time. Tremco’s PUMA coatings cure in about 30-45 minutes. Under high UV and/or high temperature conditions, the cure time is significantly reduced even at low dosages of Tremco’s PUMA Initiator. The resulting effect is a significant reduction in pot life. The installer has a 10 to 15 minute time frame after the PUMA is initiated to work with the material before it should no longer be touched.

**Field Installation Recommendations:**

In the presence of high UV and/or high temperature conditions, the following recommendations may

help with the installation process:

1. Pre-mix all pails for 3 minutes before batching down or adding initiator.
2. Batch down the pails of PUMA material to no more than 3-Gallon batches for large surface areas and no more than 2-gallon batches for smaller surface areas.
3. Mix the batched-down portion thoroughly with Tremco PUMA Initiator in accordance with the hot-weather initiator dosage chart from this document for 2 minutes.
4. After pouring out initiated material, there should be at least 2 people working the material to make sure it gets applied at the correct mil thickness before the pot life has passed.