There are numerous papers, alerts and bulletins circling the roofing industry regarding potential issues with structural lightweight concrete roof decks. Some of the bulletins even go so far as to discourage its use and warn roofing contractors to stay away from it altogether.

Structural Lightweight Concrete utilizes a porous aggregate that can absorb as much as 25% water by weight. The typical structural concrete deck using normal aggregate holds less water and is generally ready to roof within 28 days. On the other hand, a structural lightweight deck may take twice the time to dry as a normal structural concrete deck. And, the issue is exasperated if the material is poured over non-removable or non-venting substrates.

The Single Ply Roofing Institute (SPRI) released Industry Information Bulletin 2-13: “Moisture Concerns in Roofing Systems Applied Over Lightweight Structural Concrete Roof Decks” in July of 2013, which discusses the various issues that can be directly attributed to latent moisture.

To quote the SPRI Bulletin:

“The potential for high moisture content in this type of deck, coupled with the need for extended drying times, can pose significant risk to long-term performance and possible premature roof failure.”

At this time, Seaman Corporation discourages and will not accept the use of structural lightweight concrete for applications that depend on the bond of materials at the deck interface. Furthermore, Seaman Corporation requires that a vapor barrier be utilized in conjunction with a mechanically fastened substrate and or membrane system.

Seaman Corporation will not make dryness recommendations or be responsible for moisture related issues associated with any deck material.

If you have any concerns or questions regarding the information in this Bulletin, please feel free to contact FiberTite Technical Services at: 1-800-927-8578.

Respectfully,
FiberTite Technical Services