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Commercial Sealants & Waterproofing

Technical Service Bulletin No. S-17-05

TREMproof 6145 & TREMproof 6100 Hot Rubberized Asphaltic Membranes – Cold Weather Application Guidelines & Substrate Conditions

The purpose of this Technical Service Bulletin is to confirm that Tremco's hot rubberized asphaltic membranes can be installed in cold weather conditions. The following procedures may be found valuable when installing these products under these climactic conditions.

Ambient & Substrate Requirements

- The concrete substrate must be below 4.5% surface moisture content (as measured with Tramex CME4 moisture meter)

- The concrete surface profile must be prepared in accordance with our standard application instructions (i.e.—via shot blast, scarification, surface grinding, etc.), and be free of any contamination such as loose debris, dust, laitance, and/or dirt

- If ambient air and substrate temperatures drop below freezing (i.e.—less than 32°F or 0°C), surface moisture readings can be affected by frozen moisture trapped within the concrete. An effective test for determining moisture entrapment within frozen concrete is as follows:

    - Heat the frozen concrete for approximately 10 seconds via gas fired torch (i.e.—"tiger torch"). Wait for 30 seconds to allow the concrete to cool, so that it is warm to the touch, but not hot. Place a mat with a rubberized back over the torched area. Wait 10 to 20 minutes, then lift the mat and visually inspect the concrete surface. If too much moisture is present, it will appear as a damp or frozen matrix of ice on the surface of the concrete. This will indicate that the concrete has moisture beyond the limit required to be successfully waterproofed

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Product Conditioning Guidelines

- During sub-zero substrate installations, TREMproof 6100 and 6145 can be heated to a maximum of 425°F (218°C) to enhance the flow of the membrane. When heating to this temperature, the kettle's agitator must always be moving. At the end of the shift, when the burners are turned off, the agitator must run for an extra 20 to 30 minutes with the doors open prior to shut down. This will prevent the segregation of components within the hot rubberized asphalt.

Cold Weather Installation Guidelines

- When installing the hot rubber onto cold substrates, the applicator must also adjust their installation speed. Cold substrates will rapidly cool the membrane, which can directly affect the ability of the reemay fabric to bond to the first layer of membrane. Because of this, it is suggested the applicator apply the first layer of membrane in shorter runs, followed immediately by the installation of Tremco's reemay. "The colder the deck, the shorter the run of membrane" is the general rule of thumb. The applicator must assure that adequate "bleed through" is achieved when installing the reemay and should adjust their speed of installation to accommodate this.

- Cold substrates also make it more difficult to install the hot rubber in thin layers. For systems such as Permaphalt, it is important that the installer maintain overall membrane thicknesses, as the Permaphalt system will not function properly if applied too thick. When rapid cooling of the product occurs due to cold substrate temperatures, it may be too difficult to achieve the specified thicknesses; in these instances, the job should be postponed until warmer weather is present, or until alternative measures can be taken to heat the substrate.

- In conditions where neoprene sheet is specified for detail work in cold weather, priming can be accomplished by applying TREMprime HR with a rag wipe on the backside of the sheet that faces the first lift of HRA. TREMprime HR dries more rapidly on the sheet than on the concrete. The primer should be applied to produce a thin translucent film on the neoprene sheet. Allow the primer to dry fully before installation.

- Temperature of the substrate is not the only critical component in determining the feasibility of membrane installation. As such, ongoing qualitative inspections should be completed during the installation of the membrane to insure optimal material temperature, proper installation thicknesses, and positive adhesion to the primed substrate.