

BULLETIN

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Heat welding SBS and APP Membranes

Generally the modified bitumen industry has learned that SBS cap sheets cannot be heat welded to a new APP base. The reverse of this however, is true. In fact, many of our specifications call for a film-surfaced SBS glass reinforced base sheet with an APP granular cap. SBS cap sheets may, in some circumstances, be heat welded to an aged exposed APP smooth sheet in re-roofing applications.

Unfortunately, APP smooth sheets, due to the nature of their chemical composition, exude a small amount of oil materials over their life as they are exposed to ultraviolet radiation. These oils migrate to the top or warm surface of the roof. The adhesion at the interface of an SBS cap sheet heat welded to an APP base is affected by this oil exudation and therefore we, and most manufacturers, do not recommend heat welding of an SBS sheet to an APP base in new roofing systems. Although use of a standard primer or modified primer can give reasonable apparent initial adhesion, the integrity of the membrane bond over time remains questionable.

If the APP smooth sheet is old/exposed, the oils, which would interfere with the adhesion in the new system, have had a chance to migrate out of the sheet and have typically weathered off due to ultraviolet, wind, and rain effects of weathering. Therefore, the SBS sheet can adhere to an old APP sheet. As with any other surface, the top of the APP sheet must be prepared for heat welding of the new membrane. All loose dirt, sand, talc, leaves, etc. should be swept and/or power washed from the surface. Aluminum roof coatings should be scrubbed to remove as much of the aluminum coating as practical, or the surface must be roughened so that the SBS can bond directly to the asphalt without interference from the smooth aluminum coating. A standard primer or modified primer should also be used to ensure the adhesion of the new SBS roofing membrane.