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## TECHNICAL BULLETIN

No. 101

### Heating KLB-100 Bitumen

The contractor shall become thoroughly familiar with the unique handling characteristics of SEBS polymer-modified bitumen.

As all Barrett SEBS modified asphalt membrane specifications indicate, the maximum heating temperature in the summer should be 500°F and in the winter, 525°F. The EVT of 125 centipoise for KLB-100 is generally around 500°F. However, the ideal viscosity, at the point of application, is approximately 180 centipoise, which occurs at about 450°F.

This material is heat sensitive and should not be held at elevated temperatures for prolonged periods of time. If bitumen usage throughout the day is expected to be of limited quantity, for example, just installing flashings all day, the contractor should consider using a small kettle to avoid prolonged heating of the bitumen that could occur in a larger kettle or tanker.

Once the material is heated and in a fluid state, it should be kept under constant agitation in the kettle or tanker, using an asphalt pump or other approved mixing device. This is very important in preventing polymer segregation.

When the kettle or tanker is initially loaded, it should be empty of all other bitumen to the lower part of the heating tubes.

If a tanker is employed, it requires a two inch or larger pump providing constant agitation. Automatic thermal controls should always be turned off over weekends and inclement weather.

Do not smoke or permit any ignition sources around melting kettles or tankers. Bitumen fumes are combustible.

Due to the great adhesive properties of KLB-100, contractors should consider using Barrett "Roof Release Agent" spray directly on all equipment tires and shoe soles to minimize sticking and pick-up of the bitumen. Do not use Roof Release Agent over interply courses.

### Pumping KLB-100 Bitumen

Roofing contractors routinely pump KLB-100 roofing bitumen to rooftops, sometimes as high as 13 stories. The ability to pump that high will depend on several factors. KLB-100 is more viscous than regular mopping grade asphalt. Because of this higher viscosity, its ability to be pumped will depend on several factors. The two most critical are outside temperature, and equipment capability.

As the outside temperature becomes colder, steps need to be taken to hold the materials temperature as close as possible to the recommended kettle temperature to the point of application. As the material is transported through the piping to the roof level, it will lose heat and can create a build-up in the line, putting unnecessary stress on the pump and ultimately clogging the line. As with any hot applied bitumen, summer temperatures are less challenging, while colder seasons may require other provisions. To overcome pipeline heat loss, insulating the transfer pipe is important. In some cases, contractors find heat tracing of the line under the insulation helps assure suitable delivery of hot material. The pipeline should be properly supported and attached to the building.

Follow all other procedures for safe bitumen handling and installation as published in the latest addition of the NRCA Roofing Manual, the kettle manufacturer's instructions and best industry practices.