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ASPHALT APPLICATION TEMPERATURES

Equiviscous temperature (EVT) is the ideal temperature for applying roofing bitumen (asphalt or coal tar). It reflects the mopping temperature where the bitumen will yield its most uniform application and good adhesion. Since asphalt is a natural product, its viscosity or flow characteristics, can vary with the crude source and/or the way it is processed. The EVT range (EVT temperature +/- 13 degrees Celsius (C), [25 degrees Fahrenheit (F)], is defined as the temperature range at which the viscosity of the asphalt is between 50 and 200 centipoise. The mopping behaviour is good and an asphalt film of between 17 and 27 pounds per square is achieved. The EVT of roofing asphalt is the temperature at which the viscosity of the asphalt is 125 centipoise.

The Asphalt Roofing Manufacturer's Association (ARMA) has endorsed separate EVT numbers corresponding to viscosities of 125 and 75 centipoise; for hand mopping and mechanical asphalt spreaders respectively. These guidelines are applicable for the installation of built-up roofing (BUR) membranes where 20-25 pounds per square of mopping asphalt is beneficial. **Note: If there are simultaneous mop and mechanical spreader applications, the NRCA recommends the use of the EVT for mechanical spreader application for both applications to avoid the use of two separate kettles or tankers.**

Although these EVT values are suitable for interply BUR membrane applications, they may not be appropriate for all roof asphalt uses. For example, the application of the roof insulation requires at least 30 pounds per square of mopping asphalt and the flood coat for gravel adhesion double this amount. A recommended application temperature for insulation to ensure a heavier mopping of asphalt should be 15–20 degrees C (25-35 degrees F) lower than the EVT temperature for the mopping asphalt. To obtain a heavier flood coat of asphalt, the application temperature is recommended to be 22-33 Degrees C (40-60 degrees F) lower than the asphalt's EVT.

With mop-applied modified bitumen membranes, high asphalt temperatures are essential to soften the SBS membranes to promote adequate membrane adhesion. IKO recommends the mopping asphalt should be applied at its equiviscous temperature or a minimum temperature of 425 Degrees F (218 Degrees C) for all modified bitumen applications.

Applying bitumen at the optimum temperature range can help ensure complete coverage, optimum wetting and mopping properties, proper mopping weights and good adhesion in various roofing applications.

For additional information on any of IKO's products or application requirements, visit us on the web at www.iko.com (North America), or contact us in Canada/United States at 1-800-361-5836 (press "1" for English and then "2" for our Technical Support Department).

