



UNITED ASPHALTS

NOSMELL

Built-Up Roofing Specifications

Application of Materials

1.1 The proper application of roofing materials is as important to the satisfactory performance of the roof membrane as the materials themselves. United Asphalts suggests the following guidelines for application of all roofing materials.

A. Wet or damaged materials should not be used.

B. Never apply any roofing materials during rain or snow, or to wet surfaces. Moisture trapped within the roofing system as a result of this can cause severe damage to the roof membrane and insulation.

C. Review the guidelines for application of roofing, roof insulations, coatings and accessories shown in the current BUR (built-up roofing) Commercial/Industrial Roofing Systems Manual of the manufacture being used.

D. Always start application at the low edge of the roof per the individual specification diagram.

E. Good roofing procedure restricts the application of hot asphalt to a maximum of 6' (1.83 m) in front of the roll.

F. When using mechanical felt laying equipment, be sure that all orifices are open.

G. All roofing ply felts should be well set into the hot asphalt utilizing a squeegee or some other device.

H. Take special care when applying coated felts in cold weather. Roll out and cut all mineral surface BUR felts to specified lengths and allow them to flatten. Check the temperature of the asphalt at the mop or asphalt spreader to determine that it is at the proper application temperature. Do not apply mineral-surfaced cap sheet when the air temperature is below 50°F (10°C).

I. Do not mix different grades of asphalt or dilute asphalt with any material.

J. Heat the asphalt according to the recommendations which are printed on our carton. Check the temperature of the asphalt at the kettle and at the point of application. Have accurate thermometers on all roofing kettles. Adhere to the guidelines for the heating of asphalts in this section

of the manual.

K. Always use the proper grade asphalt. A good guideline to follow regarding the use of asphalt is “Use the softest grade of asphalt commensurate with the slope and climatic conditions.”

L. Always install water cutoffs at the end of each day’s work to prevent moisture infiltration into the completed work area. Water cut-offs should be completely removed prior to resuming work.

M. Heed the cold weather application procedures in accordance with the BUR manufacturer that is being used.

N. Always install the complete roofing system at one time. Phased construction may result in slippage of felts due to excessive amounts of asphalt between the phased plies. Blisters due to entrapment of moisture, or poor adhesion of the membrane due to dust and foreign material collecting on the exposed felts, are other hazards of phased construction.

O. It is essential that traffic be minimized on a freshly laid roof, while the asphalt is still fluid. Asphaltic displacement through the porous fiber glass ply felts can result from rooftop traffic during asphalt “set” time. Depending on specific job factors, this set time can be as long as 45 minutes. Asphaltic displacement can result in “phantom” leaks and blistering of the membrane.

P. Always comply with published safety procedures for all products being used. See the current United Asphalts MSDS and container labels for health and safety recommendations.

2.0 Roofing Felts

2.1 There are different fiber glass roofing felts for a variety of roofing needs: felts for flashings, vapor retarders, roof plies, base sheets and special felts for venting.

2.2 Roofing felts are furnished in rolls consisting of one or more squares. A “factory” square of roofing contains sufficient material to cover 100 ft² (9.29 m²) of roof surface accounting for nominal side and end laps.

3.0 Roofing Asphalts

3.1 Roofing asphalts are available in four grades. In general, they are grade specified by softening point. The slope of the roof governs the grade to be used, in conjunction with the climatic constraints. The success or failure of a roofing system depends on the use of the proper grade of asphalt as called for in the roofing specification.

3.2 Heating

Asphalts are susceptible to damage from overheating. Overheating, even for short periods, can “crack” or degrade the asphalt (a drop in softening point and slight oiliness is a symptom). Fall back in softening point can result in slippage of felts in the roofing system. As the softening point decreases, the viscosity or “holding power” of the interply asphalt decreases, resulting in slippage. If the overheating is more gradual, the asphalt may “age” prematurely, losing the

beneficial light oils that help the roofing system weather and stay waterproof. Since asphalts are thermoplastic, their viscosity varies with temperature. Application temperature must be in the range which will permit an adequate film of asphalt, whether applied by mop or machine.

3.3 United Asphalts in conjunction with the National Roofing Contractors Association (NRCA) and the Asphalt Roofing Manufacturing Association (ARMA), has been involved in considerable research developing guidelines for the proper heating and application of hot asphalt. These guidelines use the principle of Equiviscous Temperature.

3.4 In conjunction with these guidelines, the following information is printed on the cartons of asphalt, or on the bill of lading for asphalt shipments.

1. The Softening Point as determined by ASTM D 312.
2. The Minimum Flash Point (FP) of the asphalt as determined by ASTM D 92.
3. The Equiviscous Temperature (EVT). As currently defined by ASTM, this is the temperature at which the asphalt viscosity is 125 centistokes. Asphalt applied within 25°F (14°C) of the EVT at the point of application, will provide a nominal 23-25 pounds of asphalt per 100 ft² (1.12 - 1.22 kg/m²).

In closing the manufacturer instructions of the roofing system components such as felt, fasteners, accessories, insulation must be followed and all local and federal codes must be in compliance with the roofing system.