

Specifying CERTA

Proper design and applicator training is necessary for CERTA compliance

by Mark S. Graham

Since 2004, NRCA and the Midwest Roofing Contractors Association (MRCA) have worked together to improve roofing torch safety through the Certified Roofing Torch Applicator (CERTA) program. If you are involved in the design and specification, product manufacturing or application of torch-applied roofing products and/or roof systems, you should be aware of what the CERTA program entails.

CERTA guidelines

The daylong CERTA training program consists of teaching experienced roofing workers how to safely use roof torches to apply

polymer-modified bitumen roofing products. Participants are taught how to use personal-protective equipment and first-aid procedures specific to torching activities, torch equipment safety, rooftop fire hazard identification and mitigation, and post-torch work fire watch techniques.

NRCA provides train-the-trainer classes to authorize CERTA trainers who conduct CERTA classes for applicators. To date, more than 1,400 roofing professionals have been designated as authorized trainers who have conducted training classes for more than 18,000 CERTA-authorized applicators.

CERTA's best safety practices for roof torch use include specific provisions for field-of-the-roof and flashing designs and installations. For example, for noncombustible roof decks, such as concrete or gypsum, torch-applied polymer-modified bitumen membrane roof systems can be installed directly to the deck, provided the deck is free of voids, cracks or joints through which an open flame could infiltrate.

For combustible roof decks and roof assemblies with above-deck insulation, a cover board that functions as a thermal barrier needs to be included in the roof system design. Acceptable thermal barriers include minimum ¾-inch-thick perlite board, fiberglass or mineral wool board insulation or ¼-inch-thick glass-faced gypsum board. Over the thermal barrier, adhered base plies or an adhered base sheet should be included and applied using a method other than torch application to prevent an open flame from infiltrating board joints.

At raised roof perimeter edges and flashing conditions, a roof membrane's base plies or base sheet should extend up and over cant strips and be sealed to prevent infiltration of open flames from torching operations into roof-to-vertical joints.

For vertical flashings, the CERTA program requires an adhered backer layer with sealed laps to be installed over vertical flashing substrate and extend over the cant strip and onto the roof surface. Polymer-modified bitumen sheet flashings then can be installed using the direct torching method provided a single-burner, low-output (105 K Btu or less) detail torch is used for flashing application.

CERTA's requirements for a fire watch provide for a dedicated competent person to monitor conditions on the roof and from the building's interior for any signs of fire for at least two hours after torching operations have been completed for the day. Special attention should be paid to the roof deck's underside and any concealed attic or plenum areas.

Compliant designs


Although CERTA primarily addresses application of torch-applied polymer-modified bitumen products and systems, some CERTA requirements have specific design and

specification implications. For example, CERTA's requirement for a thermal barrier cover board over combustible or above-deck thermal insulation implies a CERTA-compliant cover board be included in design specifications. Because polyisocyanurate and polystyrene insulation are combustible, they do not meet CERTA qualifications for a thermal barrier. The specific thermal barrier cover board intended should be specified by the designer and be consistent with the membrane manufacturer's roof system requirements.

Similarly, CERTA's requirement at vertical flashings for an adhered flashing backer layer is more than what many manufacturers recommend. The specific flashing backer intended and its configuration should be included in designs and be consistent with the membrane manufacturer's roof system requirements. Construction details designated as "MB(T)-" in Chapter 10—Construction Details of *The NRCA Roofing Manual: Membrane Roof Systems—2011* illustrate some typical CERTA-compliant flashing configurations.

Implementing CERTA

Employing CERTA-authorized applicators will illustrate your company's commitment to rooftop safety. CERTA-authorized applicators receive and carry personalized CERTA identification cards ensuring their successful completion and status in the CERTA program.

If you are involved in the design and specification of torch-applied roof products or systems, I encourage you to incorporate CERTA practices into your designs and specify application be conducted by CERTA-authorized applicators. 

MARK S. GRAHAM is NRCA's associate executive director of technical services.

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