

# BUR repairs made easy with torchable modified bitumen

The use of torchable modified bitumen membranes has seemingly taken the country by storm. The products' success in both new and reroof/recover applications has helped them gain market share at a dramatic rate in the past few years.

While trade press articles have explained this popularity by listing modified bitumen's many advantages, little attention has been paid to the use of these materials in BUR repairs. As a repair material, modifieds have a significant advantage over the multitude of materials and repair methods that have been tried since the advent of built-up roofing.

The trowelable goop and pourable glop contractors have used with various reinforcing materials never seemed to be quite as durable as the membrane that was being repaired. Consequently, most contractors returned to the old tried-and-true roof fixing formula: two or three men using a kettle and a truckload of miscellaneous materials and equipment to perform a hot patch.

## Topical problems solved

When modifieds came on the scene, it gave contractors an effective, easy-to-use alternative to the hot patch method. The products' compatibility with asphalt (and in some cases, even aged coal tar), their relative ease in application, and their strength have made modifieds a natural choice for many repair jobs.

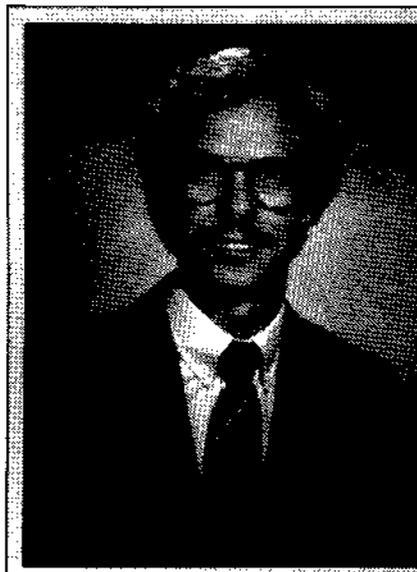
Modifieds lend themselves particularly well to topical problems such as punctures, splits and fishmouths. They can also be used for base flashing repair and replacement. The benefits to be gained by using modifieds are not limited to these applications, however. With proper preparation of the patch area, these systems can be used to repair virtually all types of built-up roof problems.



When APP-modified membranes are used for repairs, they can add strength and durability to the patched area. With polyester and fiber glass reinforcing layers, these membranes are often stronger than many of the built-up roofs on which they are applied. SBS-modified membranes lend not only strength but also flexibility to repair applications. The membrane is even pliable enough to be used almost as an expansion joint cover in cases where the roof has split due to structural movement. Specific recommendations for this type of application can be provided by the individual material manufacturer.

## Saving time

Contractors will also find that using a torchable modified bitumen can make a repair job go much quicker. It is conceivable that one worker with a torch and a small piece of modified membrane could complete a topical repair in less than one hour. This same repair could easily take two workers two to three hours using traditional methods and built-up roofing materials. Much of this time would be spent



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*To ensure the success of a modified repair, workers must be properly trained in the products' use and application.*

Modified lends itself well to typical repairs. Here a patch is being applied to a split at a gravel stop joint.

setting up, loading and heating the kettle. With modifieds, on the other hand, much less equipment is needed so it takes less time to prepare for the job. Most repairs using modifieds require only the following tools:

- a torch and a 30-pound propane tank;
- a round nose trowel;
- a brush or roller for applying primer;
- a small blast board made of heavy-gauge metal or treated plywood to keep burning flames away from the roof; and
- a fire extinguisher.

Another factor that saves time and simplifies repair procedures is modified's more forgiving nature. If the repair must be made on a windy or cold day, for example, using modifieds can be much more reliable than asphalt because the workers need not worry about maintaining a proper equiviscous temperature.

Modifieds are even a good choice for repair jobs where looks count. The products are available with surfacings that can match most types of built-up roofing. The three types of surfacings that are generally available are smooth, mineral and metal foil. Most smooth-surfaced sheets can be graveled or coated. Mineral surfaces come in a variety of colors, including white, grey, green, brown and black. Metallic foil is available in aluminum, copper and stainless steel.

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## Safety shouldn't be ignored

Just because the crew is doing a small repair job, proper safety precautions shouldn't be overlooked. Care must be exercised any time a torch is taken up on a roof. The following list of basic safety guidelines should be remembered by everyone on the job:

- A thorough working knowledge of torch, tank and regulator must be acquired before using the equipment.
- A fire extinguisher should accompany every torch.
- A torch should never be left unattended.
- The tank should always be upright and at least 10 feet from an open flame.
- After torching is completed, the applicator should remain on the roof to check for hot spots or smoke.

A complete safety program is available for training roofing contractors in the use of modifieds. It was developed through the cooperation of NRCA, the Asphalt Roofing Manufacturers Association and the Union of Roofers, Waterproofers and Allied Workers.

Before readers throw away their kettles, a little word of caution is in order. Contrary to what some manufacturers would like us to think, no roofing material made today is a panacea. Each generic type of material has relative advantages and disadvantages. With this in mind, contractors should consider each repair situation individually and give special attention to the severity of the problem, the flammability of surrounding materials and structures, and applicable fire codes. In many situations, the compatibility, ease of application and strength make torchable modified bitumen membranes the roofing contractor's choice of material when doing built-up roof repairs.

## You've got to know how

To ensure the success of a modified repair, workers must be properly trained in the products' use and application. Even though many of the principles that have been developed for built-up roofing carry over to modifieds, there are specific procedures and techniques that roofers must learn before satisfactory repairs can be made.

Training for specific application techniques is readily available from the manufacturers. However, there are some general guidelines that workers should follow regardless of the specific brand of roofing used. First of all, the area to be fixed must be prepared using the same procedures workers use with built-up repair materials. On gravel-surfaced roofs, the area must be scraped, thoroughly cleaned, and primed a minimum of 6 inches around the perimeter of the problem being treated. On smooth-surfaced roofs, thorough cleaning and priming are required, especially in the presence of coatings.

Because primers are extremely flammable, extra care must be taken to make sure the primer has dried before torching begins. One way to reduce the fire hazard of a torch application is to use the torch-and-flop method. This procedure is well suited to small field repairs, and is recommended for flashing work, where the flammability of existing cants and structural wall or curb components can pose a problem. To torch and flop modifieds, workers should measure, precut and lay the repair material bottom-side-up on a blast board a few feet away from flammable materials. The repair membrane material is heated while still on the board. After the proper application temperature range is reached, the material is flopped onto the repair area and pressed into place.

The alternative to this method is to torch the material and roll it directly over the repair area. This method can be used on larger repairs such as fixing splits or reflashing existing gravel stops or drip edges. For this procedure, workers should precut the material to size, roll it out cold and then back roll it. Then, after heating and setting 2 to 3 feet of one end, the crew torches and rolls the remaining material into place.

After either method, it is essential for the workers to check and finish the side laps by using a hot trowel according to the manufacturer's recommendations.