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## **DMA™: Digestion Material for Asbestos**

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## DMA™: DIGESTION MATERIAL FOR ASBESTOS

### THE NEED

Asbestos is dangerous material and the effort to remove the asbestos from the built facilities has become a problem. Current techniques for removing asbestos-containing fireproofing require the construction of air-tight barriers, labor-intensive scraping of the fireproofing, and the installation of new asbestos-free fireproofing. The current techniques also require removing and replacing older material and consume a lot of time for the entire process.

### THE TECHNOLOGY

The DMA™ product is the result of a joint development by W.R. Grace & Co. and Department of Energy's Brookhaven National Laboratory. The new technology uses a foamy solution sprayed directly onto asbestos-containing fireproofing. After absorbing into the fireproofing, the foam chemically digests asbestos fibers and dissolves them into harmless minerals. The process is the first to chemically destroy asbestos without first removing the fireproofing.

DMA™ is applied at the surface and soaks into the material, penetrating throughout to contact and destroy the chrysotile asbestos contained within. The primary application for DMA™ is the digestion of chrysotile asbestos in gypsum-vermiculite fireproofing (e.g. Monokote Type MK-3). DMA™ can also destroy chrysotile asbestos contained in other porous materials.

Customized application equipment is used to produce a DMA™ foam that is spay-applied to the asbestos-containing substrate. The foam is produced using a compressed-air powered pump and an in-line liquid/air mixer. Foam flows into a dispensing nozzle which is held by the applicator approximately a foot from the target area. Generally, workers applying the foam will work from scaffolding. Several layers of foam are typically applied to obtain the necessary DMA™ dosage. This dosage depends upon the thickness and asbestos content of the material being treated.

As the final step in the process, a surface coating can be applied to provide durable, attractive surface for the non-asbestos material remaining in place.

### THE BENEFITS



- DMA™ treatment of porous materials containing chrysotile produces materials no longer considered asbestos-containing.
- DMA™'s unique application process results in virtually no emissions of asbestos fibers, enabling simpler work area preparation for an OSHA Class III activity.
- Monokote MK-3 treated with DMA™ can remain in-place, eliminating the need to remove, dispose of and re-apply fireproofing. DMA™ can be expected to work similarly with many other materials compositionally similar to MK-3.
- The DMA™ process offers an economic option for managing asbestos-containing materials and additional advantages of in-place treatment and project schedule acceleration.

## STATUS

Grace Construction Products has announced the award of the first license for commercial application of its patented Asbestos Digestion product DMA™. The license was granted to LVI Environmental Services Group Inc.(LVI) of New York, NY. This license authorizes LVI to apply DMA™ to asbestos-containing fireproofing products on structural steel beams and columns throughout the United States and Puerto Rico.

## BARRIERS

More applications of DMA™ are still being investigated and approvals for additional building elements, other than structural steel beams and columns, and different types of fireproofing have not been obtained yet.

## POINT OF CONTACT

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## **REVIEWERS**

Peer reviewed as an emerging construction technology

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