PLAINTIFF'S EXHIBIT
WRC-1326

POLLUTION ANALYSIS/MICROSCOPY

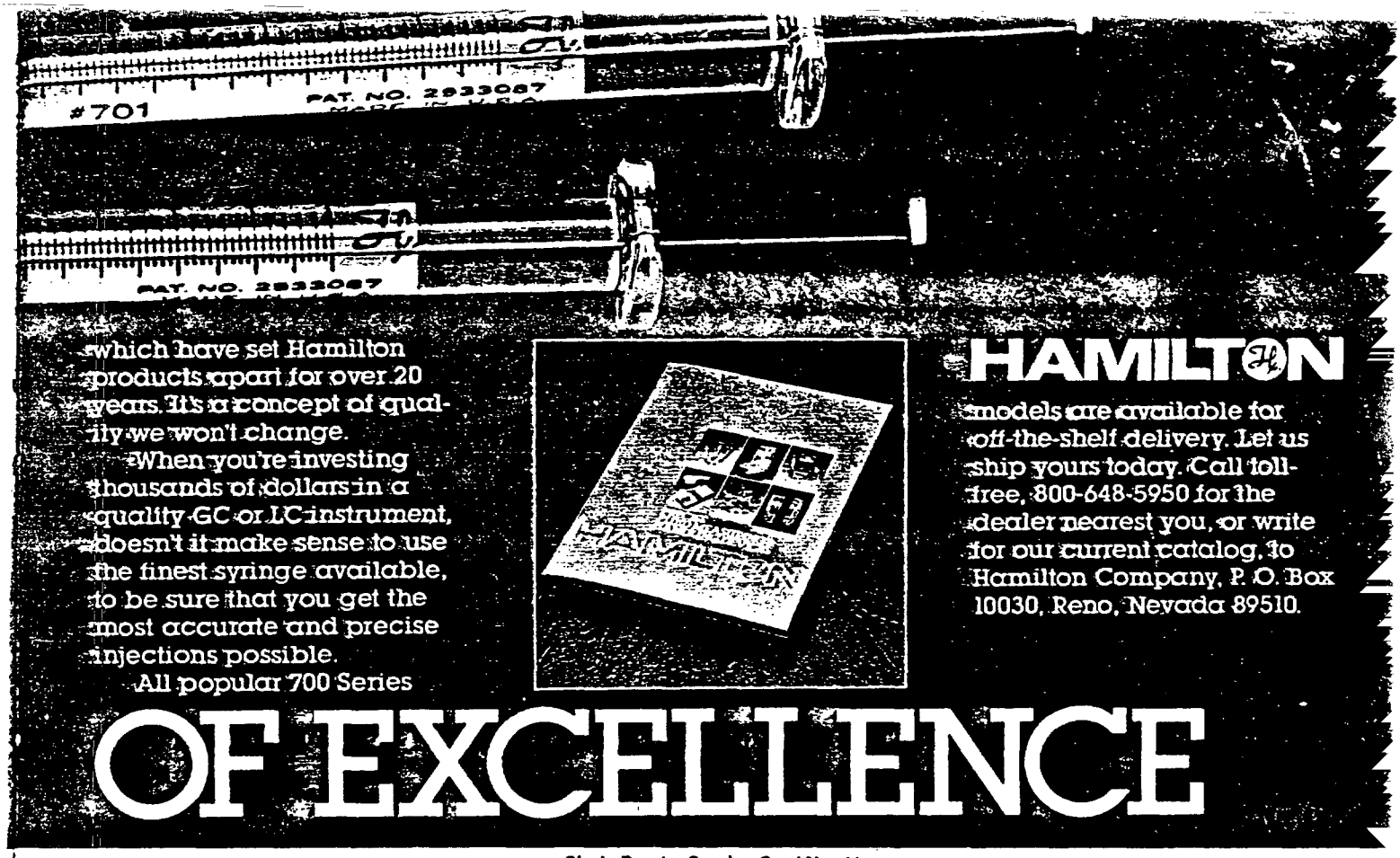
LIBRARY
AN
W. R. GRACE & CO.

American Laboratory



15191566

A 003812 1 7911 0 7810
W. R. GRACE + CO.
62 WHITTEMORE AVE.
CAMBRIDGE MA 02140
Library



Circle Reader Service Card No. 41



Figure 15 *Muscovite mica, another possible component of insulating mortars.*

Another unusual constituent found in several recent samples is a polyester fiber (*Figure 12*). The very high birefringence, uniform cylindrical crossection, and considerable length make this easy to distinguish. The indices are about 1.53 perpendicular (less than chrysotile) and 1.71 parallel (greater than crocidolite).

Other possible nonfibrous constituents

Possible additional constituents of insulation include ground glass, perlite, a heat-expanded volcanic lava (*Figure 13*), diatomaceous earth (*Figure 14*), vermiculite, and mica (*Figure 15*). Of these, ground glass, perlite, and diatoms are isotropic and characteristically shaped. Vermiculite, a clay, and the micas are very thin flat plates often nearly isotropic, but with turned-up, higher birefringent edges. Vermiculite will have indices less than 1.55 and the micas have indices above 1.55 and often above 1.605. If colored brownish-gray, the mica is biotite, with higher indices than colorless muscovite, another common mica.

Other materials may be found in the future but the observations made during the analytical procedure described should uncover the presence of most unknown substances simply because they will not correspond to any of the data given here.

The author believes that a careful microscopist, confident with dispersion staining, will have no difficulty in identifying asbestos and most of the other substances associated with it.

1519156