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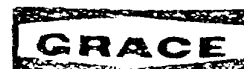
CONSOLIDATED MONTHLY REPORT

NOVEMBER 1972

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W. R. GRACE & CO.
RESEARCH DIVISION



WASHINGTON RESEARCH CENTER, CLARKSVILLE, MARYLAND 21029
Telephone 301 - 531-5711

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MONTHLY REPORT FOR NOVEMBER 1972

CONSOLIDATED EDITION

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REFORMULATION AND EVALUATION OF MONO-KOTE (Project 2659)

The objectives of the current Mono-Kote experimental program are:

- (1) Determine the effect of environmental conditions on curing of MK-IV and MK V.
- (2) Determine the factors promoting shrink-crack.
- (3) Determine the effect of gypsum manufacturing techniques on Mono-Kote properties.
- (4) Determine means for mold-growth inhibition.

The Mathematical Department is analyzing data on item (1). At completion of the analyses, the computer will be used to prepare a series of contour plots describing the behavior of Mono-Kote under various curing conditions. The shrink-crack phenomena [item (2)] can be induced under laboratory conditions by delayed spraying and overwatering of the Mono-Kote slurry. Critical times and water levels are being quantified. Results will be useful to CPD for explanation of the shrink-crack problem which occurs under field conditions. No additional data are available on item (3). Both sodium propionate and Hyamine 2389 continue to show favorable results in arresting mold growth when applied to the surface of Mono-Kote installations.

(Legal, Kraus)

ZIC PRODUCT IMPROVEMENT (Project 2681)

Zonolite insulating concrete (ZIC) has been produced by pneumatic-hose technique at wet densities below 50 pcf and dry densities below 28 pcf with properties comparable to the present product. Water content of the freshly applied material can be reduced by approximately 50% from the present product permitting spraying of vertical and overhead surfaces which is not possible with the present technique. Experimental results and future plans have been discussed with CPD on how best to use these findings for development of new commercial products. Possibilities are:

- (1) Acoustical materials
- (2) Fireproofing
- (3) Intermediate density - high compressive strength
- (4) Thermal insulation