

CONSTRUCTION
PRODUCTS
DIVISION

NUMBER: 68697
GROUP: Specialty Materials Unit
DATE: 1/16/87
CHARGE NO.: 1182
REQUISTOR: Anne Doyle

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MARKETING or MANUFACTURING APPROVAL

REQUEST FOR TECHNICAL SERVICE:

NAME: J. S. Hamilton

APPROVED: J. S. Hamilton

PROBLEM TITLE: Bulk Sample #12-031-101 taken from Palos Community Hospital, Palos Heights, IL.

SIGNIFICANCE: Mr. Cal Bouma/Mr. David Garlock, Physical Plant Director of Hospital have asked for test results of sample. Sample being sent in by Mr. McHenry of Occusafe.

SPECIFIC OBJECTIVE: 1. Determine if sample contains asbestos.
2. Determine its asbestos content (%).
3. Determine if sample is MONOKOT-3.

SUGGESTED APPROACH: Standard Analytical Techniques.

DEADLINE (Last day information will be of value): January 30, 1987

DETAILS OF PROBLEM: Is the fireproofing sample MONOKOTE-3.

ACCEPTED BY RESEARCH DEPT.: John O'Leary

DATE: 1/16/87

ASSIGNED TO: B. O'Leary

ADDITIONAL COPIES: Original to Library/R. J. Bettacchi, R. C. Walsh, J. S. Hamilton, J. C. Yang
S. Venuti, J. W. Hughes, C. I. Sanders.

CONFIDENTIAL

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REQUEST FOR TECHNICAL SERVICE

NUMBER: RFTS 68697

GROUP: Specialty Materials

COST: \$250.00

DATE: January 29, 1987

Summary

Three bulk samples coded #12-031-101-A to C taken from Palos Community Hospital, Palos Hts., IL, were analyzed for their chemical composition. All the samples were like having the following composition:

10% chrysotile asbestos fiber, 79% gypsum and the balance was vermiculite.

Based on the analytical results, it is concluded that these samples had the same ingredients of MK-3, but the gypsum content was much higher than the standard MK-3 formulation.

ExperimentalGeneral Observation

<u>Sample ID</u>	<u>Location</u>	<u>Total Wt (g)</u>	<u>Observation & Comments</u>
A	Fan room - tunnel @ entrance	95	All samples were alike, with grayish brown binder, con- tained vermiculite & fibers.
B	Sub-basement/ X-ray file	75	
C	Ped. soiled linen room	80	

Microscopic Examination

By PLM and DS techniques, the fibers were identified to be chrysotile.

XRD Studies

Major: Gypsum and vermiculite
Intermediate: Chrysotile (10%)
Minor: Plaster of paris, quartz

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3.

Acid Dissolution

The samples were digester in 1 liter of hot 0.75N HCl for 1½ hours.

<u>Sample ID</u>	<u>Sample Wt (g)</u>	<u>Residue Wt (g)</u>	<u>Binder of as gypsum</u>
12-031-101-A	9.71	2.00	79

Conclusion

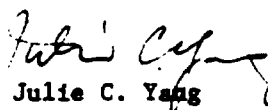
All three samples are alike, they have the following composition:

10% chrysotile fiber, 79% binder as gypsum and 11% vermiculite
(by difference).

Based on the analytical results, it is concluded that these samples have the same ingredients as MK-3, but the gypsum content is much higher (15% or more) than the standard MK formulation.

Reference

XRD 1182-176
Notebook 2139-89


Julie C. Yang

JCY/mas
68697:jcy3

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