PLAINTIFF'S EXHIBIT

ATT-173

APPENDIX III

BOARD OF EDUCATION OF THE CITY OF NEW YORK
DIVISION OF SCHOOL BUILDINGS
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SEALANT EVALUATION

FOR

ASBESTOS

ENCAPSULATION

Conducted by:

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ASBESTOS TASK FORCE

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A. INTRODUCTION

In order to determine which products would provide satisfactory results when used as an encapsulating material in our asbestos abatement program, the Asbestos Task Force of the New York City Board of Education conducted it's own test.

The purpose of the test was two fold. First to evaluate the various products on the market to determine their capabilities, in order that we may specify the products for future encapsulation projects, and second, to train painters from each area office in the proper techniques in applying the material should the need arise.

B. LOCATION OF TESTING

Application of Materials and Removal of Test Specimens	CENTRAL REPAIR SHOPS 101-01 FOSTER AVENUE BROOKLYN, NEW YORK 11236
Water Immersion and Flame Spread Tests	DIVISION OF SCHOOL BUILDINGS 28-11 QUEENS PLAZA NORTH LONG ISLAND CITY, N.Y. 11101

C. DATES OF TESTING

Application of Materials	SEPTEMBER 26, 1979
Removal of Test Specimens	OCTOBER 3, 1979
Water and Flame Tests	OCTOBER 5, 1979

D. PRODUCTS TESTED

	TRADE NAME	MANUFACTURER
(1)	OX LINE ABC SEALER	LEHMAN BROTHERS
(2)	DECADEX FIRECHECK	PENTAGON PLASTICS
(3)	CAFCO BOND-SEAL	U.S. MINERAL PRODUCTS
(4)	DUROPLEX	DUROK BUILDING MATERIALS
(5)	FLAME-COAT	UNIROYAL
(6)	ROYAL ADHESIVE	UNIROYAL
(7)	FLAMEGARD	PLASTICS & RESINS
(8)	DECADEX WEATHERSEAL	PENTAGON PLASTICS

NOTE: All of the above products are water based products. Solvent based products are not to be used for encapsulation of asbestos containing materials on Board of Education projects. The reasoning behind this decision is that the build up of volitale fumes emitted by solvent based products cause a dangerous condition in the confined work area.

E. DESCRIPTION OF TESTS

Although the fireproofing material which was being encapsulated did not contain asbestos, the painters wore protective respirators, coveralls, head covers and foot covers to demonstrate the proper attire to be worn when spraying asbestos containing materials.

Areas of fireproofed steel beams in carpentry shop were assigned to each product, and materials were applied using Grayco EM 400 and EH 433 GT airless spray units. Each product was applied in accordance with manufacturers instructions as indicated on summary sheet.

After curing for six (6) days surface coatings were visually examined, both on the fireproofing material and the plywood test panels. Small coated sections of fireproofing were cut away from steel beams and mounted on their respective test panels.

WATER TEST

A portion of each cured test panel was immersed in tap water for fifteen (15) minutes to determine if the water would re-activate the material and if the bond strength of the material was lessened. Surface was rubbed to determine re-activation.

FLAME TESTS

A portion of each test panel was also subjected to a flame spread test, conducted by the Methenamine "pill test" (DOC FF 1-70) and a vertical burn test to determine if the cured material supports combustion.

SEE ATTACHED SUMMARY SHEET FOR TEST COMPARISONS.

CONCLUSIONS/RECOMMENDATIONS

a) The following products have been found NOT acceptable as encapsulating agents because when cured and ignited, they supported combustion and emitted acrid black smoke.

   (4) DUROPLEX by DUROK BUILDING MATERIALS
   (8) DECADEX WEATHERSEAL by PENTAGON PLASTICS

b) The following products, although they don't support combustion have also been found NOT acceptable because they become re-activated when immersed in water.

   (6) ROYAL ADHESIVE by UNIROYAL
   (7) FLAMEGARD by PLASTICS & RESINS

c) The following product although found to be a tough bridging material, which is self extinguishing is also NOT acceptable due to the fact that the material recommended for the first coat, becomes re-activated in water.

   (5) FLAME-COAT by UNIROYAL

d) The following products are ACCEPTABLE as encapsulating materials.

   (1) OX LINE ABC SEALER by LEHMAN BROTHERS
   (2) DECADEX FIRECHECK by PENTAGON PLASTICS
   (3) CAFCO BOND-SEAL by U.S. MINERAL PRODUCTS

NOTE: Photographs of testing and test panels are on file with the Asbestos Task Force.

ASBESTOS ENCAPSULATION SEALANT SUMMARY SHEET

	PRODUCT	DESCRIPTION	1st COAT	2nd COAT	VISUAL OBSERVATIONS	WATER TEST	FLAME TESTS**
(1)	OX LINE ABC SEALER	Paint like material tinted green	2 parts material: 1 part water.	Full Strength	Binding, semi-resilient coating. Easy to apply.	No affect	2 min. 47 sec. Self extinguishing Some gray smoke.
(2)	DECADEX FIRECHECK	Very thick material: Somewhat lumpy	2 parts material: 1 part water	Full Strength	Bridging, very resilient rubber like coating. Tough skin. Difficult to pump, full strength	No affect	1 min. 32 sec. Will not ignite Gray smoke.
(3)	CAFCO BOND-SEAL	Fairly thick glue. Milky white although dries clear.	1 part material: 3 parts water.	1 part material: 3 parts water.	Penetrating and sealing firms up material well. Easy to apply when diluted. Very difficult to apply full strength.	Re-activated slightly	2 min. 17 sec. Will not support combustion.
(4)	DUROPLEX	Paint-like material White	Full strength	Full Strength	Bridging, very brittle type finish – cracks easily. Easy to apply. Poor bond.	No affect.	1 min. 35 sec. Highly flamable. Acrid black smoke.
(5)	FLAME-COAT	Very thick material White in color	3 parts Royal Adh: 1 part water	Full Strength	Very resilient rubber like coating. Tough bridging skin.	No affect	2 min. 26 sec. Self extinguishing. Some white smoke.
(6)	ROYAL ADHESIVE	Fairly thick glue like. White.	3 parts material: 1 part water	3 parts material: 1 part water.	Penetrating and sealing Firms up material.	Peels when wet. Discolors.	2 min. 40 sec. Will not support combustion
(7)	FLAMEGARD	Thick material White in color.	Full Strength	Full Strength	Bridging type material. not as resilient as other bridging materials tested. Easy to apply. Good bond.	Re-activated	2 min. 45 sec. Will not ignite. Gray smoke
(8)	DECADEX WEATHERSEAL	Paint like material. White	Full Strength	Full Strength	Bridging type material. Rubber-like. Easy to apply.	No Affect.	1 min. 50 sec. Supports combustion. Acrid black smoke.

By error, second coat was also diluted, when applied to test surface.

**Pill Test Timed burning Vertical Burn– Visual Observations

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