RUG RENOVATING

TIMELESS EXCELLENCE SINCE 1896

United States Testing Company, Inc.

California Division

5521 TELEGRAPH ROAD, LOS ANGELES, CALIFORNIA 90040

(213) 723-7181 • (213) 722-0608

REPORT OF TEST

COMPOSIL PACIFIC, LTD.
1229-G Waimanu Street
Honolulu, Hawaii 96814

FLAME SPREAD CLASSIFICATION;
SMOKE AND FUEL CONTRIBUTION

TREATED AND UNTREATED
CARPET

December 22, 1975

Test Engineer: James H. Heywood

Test Technician: K. Heywood

TEST REPORT NO. LA 13009

SIGNED FOR THE COMPANY

BY Bernd S. Givon

Bernd S. Givon
Professional Engineer

UNITED STATES TESTING COMPANY, INC.

LA 13009

REFERENCE

Client's letters of 11/19/75 and 12/1/75 signed by Messrs. Al Bergstrom and Thomas W. Bates.

REQUIREMENT

Perform standard flame spread, smoke density and fuel contributed classification tests on carpet samples supplied by the Client, in accordance with ASTM Designation E-84 "Standard Method of Test for Surface Burning Characteristics of Building Materials".

SAMPLE IDENTIFICATION

The carpet samples tested were submitted and identified by the Client as:

Both knitted carpets, latex back, single level looped construction, green tweed:

a. Treated with Componil Stain and Water Repellant.

b. untreated, commercial (for comparison).

Both carpets are commercial type to be installed in hospitals in Anchorage, Alaska.

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PREPARATION AND CONDITIONING

The carpets were cut into sections 20 inches wide by 8 feet long and adhered to slabs of 1/4 inch asbestos-cement board with a sodium silicate adhesive. The sample slabs were placed in the conditioning room (maintained at a dry-bulb temperature between 70°F and 75°F and a relative humidity between 35 and 40 percent) and allowed to come to equilibrium.

TEST PROCEDURE

The carpet samples were tested following calibration and preheating. The evaluation was performed in conformance with the specifications set forth in ASTM Designation E-84, "Standard Method of Test for Surface Burning Characteristics of Building Materials", both as to equipment and test procedure. The foregoing test procedure is identical in all respects to UL 723, ANSI #A2.5, NFPA No. 255 and UBC No. 42-1.

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SUMMARY OF TEST RESULTS

Because of the possible variations in reproducibility, the results are adjusted to the nearest figure divisible by 5.

1. For these specimens submitted by Composil Pacific, Ltd.

	FSC	Fuel Contribution	Smoke Density
A. Carpet, Composil treated	30	15	130
B. Carpet, untreated	35	10	170

2. The corresponding Building Materials Surface Burning Classifications* are:

NFPA - Class B

UBC - Class II

3. No significant differences were revealed.

*NFPA CLASS	UBC CLASS	FLAME SPREAD
A	I	0 through 25
B	II	26 through 75
C	--	76 through 200
-	III	76 through 225
D	--	201 through 500
E	--	Over 500

BUILDING CODES CITED

1. National Fire Protection Association, NFPA No. 101, "Life Safety Code".

2. UNIFORM BUILDING CODE, Part VIII, "Fire Resistive Standard for Fire Protection".

   Vol. I (1973), Chapter 42 - Interior Wall and Ceiling Finish, Sections 4201-4203.

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ASTM E-84 DATA SHEET

CLIENT: COMPOSIL PACIFIC, LTD. DATE: 12-20-75

MATERIAL: KNITTED CARPET, LOOPED, TREATED/COMPOSIL STAIN & WA. REP.

THICKNESS: ——— MOISTURE LOSS: 0.21 kg

TEST MEASUREMENTS:

AIR: Temp. (db) 70 °F Temp. (wb) 55 °F R. H. 37.0 %

Velocity: 240 fpm Gauge 0.075 "H_2O

GAS: Total Consumed 50.07 cf Pressure: Static 9.00 Kin. 6.00 "H_2O

FLAME SPREAD:

Spotty Ignition 19 SECONDS Steady Ignition 26 SECONDS

Flame Spread 6.0 (ft. max.) Time 10 MINUTES

Afterburning NONE Calculation 5.128 x 6.0 = 30.8

Test Specimen	FLAME SPREAD NUMBER	FUEL CONTRIBUTED FACTOR	SMOKE DENSITY FACTOR
ASBESTOS/CEMENT BOARD	0	0	0
Integration Factor	N/A	1374	0
RED OAK FLOORING	100	100	100
Integration Factor	N/A	2357	384
SAMPLE TESTED	30	15	130
Integration Factor	N/A	1524	499

POST TEST NOTATIONS

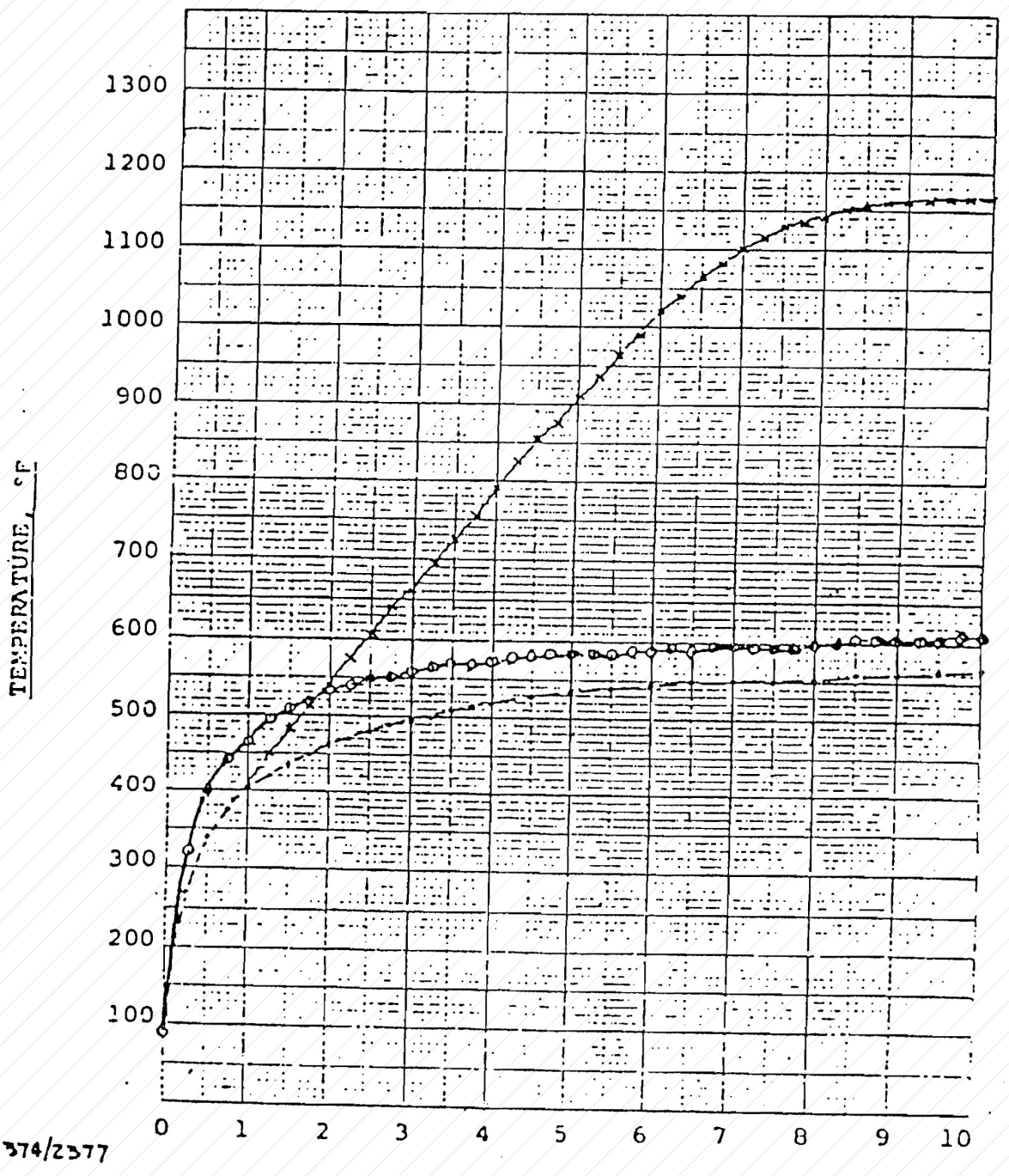
Post test examination revealed the sample to be completely consumed in the area directly over the burners and extending 2 feet forward. Surface burning (pile) only was noted to the 6 foot mark, with moderate to light smoke and heat damage the next 2 feet. Discoloration only was noted beyond to the end of the sample.

No afterburning was noted at test completion.

UNITED STATES TESTING COMPANY, INC. IA 13009

FUEL CONTRIBUTED TEMPERATURE

Key:
Sample —o——o— COMPOSIL-PACIFIC; CARPET-TREATED
Red Oak -+——+——+ Asbestos Cement Board -•---•---•-



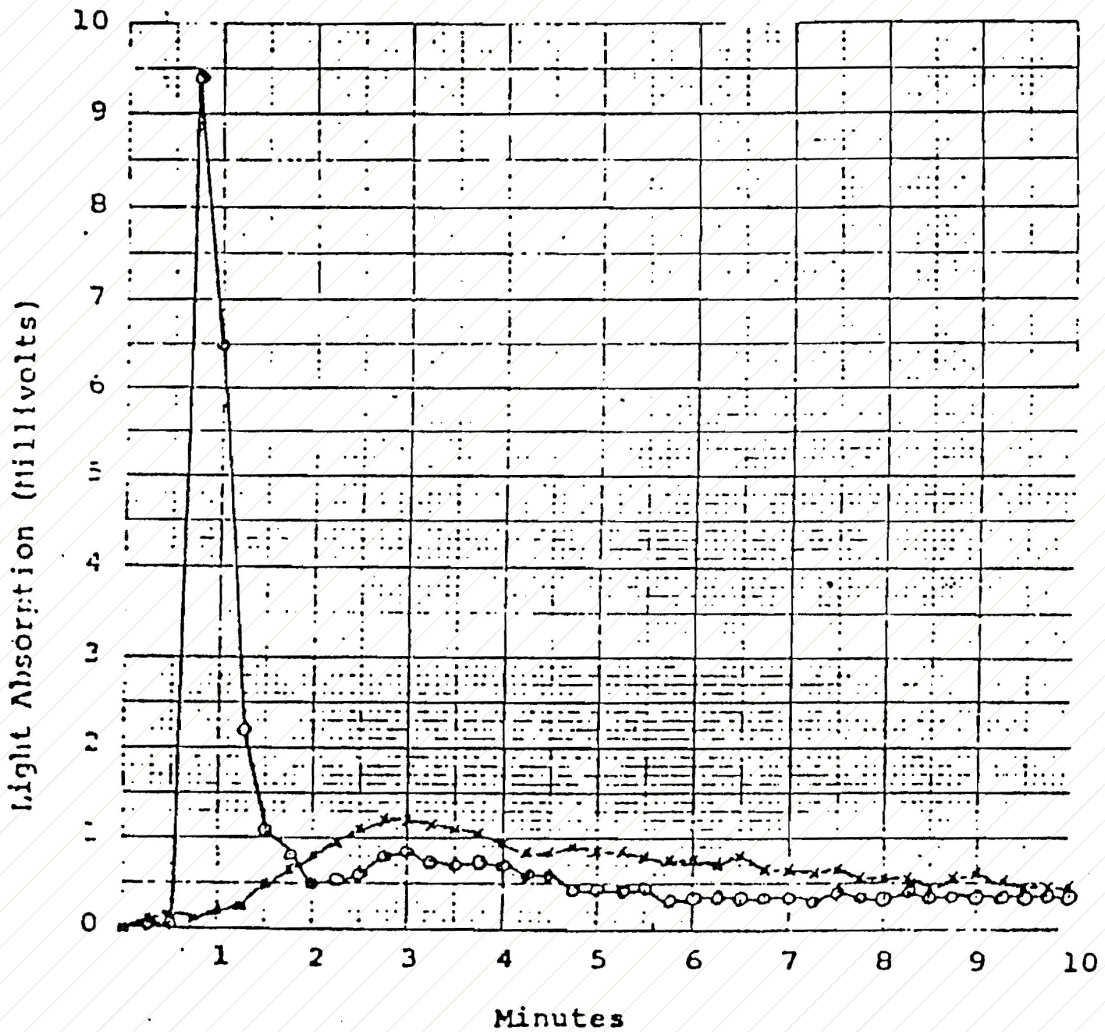
XEC75: 1374/2377

UNITED STATES TESTING COMPANY, INC. LA 13009

SMOKE DENSITY

KEY: Sample -c—c- COMPOSIL PACIFIC; CARPET TREATED

Red Oak -t—t-



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RUG RENOVATING

TIMELESS EXCELLENCE SINCE 1896

UNITED STATES TESTING COMPANY, INC.

LA 13009

ASTM E-84 DATA SHEET

CLIENT: COMPOSIL PACIFIC, LTD. DATE: 12-16-75

MATERIAL: KNITTED CARPET, LOOPED, UNTREATED

THICKNESS: ——— MOISTURE LOSS: 0.34 kg

TEST MEASUREMENTS:

AIR: Temp. (db) 70 °F Temp. (wb) 55 °F R. H. 37.0 %

Velocity: 240 fpm Gauge 0.075 "H_2O

GAS: Total Consumed 50.21 cf Pressure: Static 9.0 Kin. 6.00 "H_2O

FLAME SPREAD:

Spotty Ignition 14 SECONDS Steady Ignition 22 SECONDS

Flame Spread 6.5 (ft. max.) Time 10 MINUTES

Afterburning SLIGHT@EDGE Calculation 5.128×65 = 33.3

Test Specimen	FLAME SPREAD NUMBER	FUEL CONTRIBUTED FACTOR	SMOKE DENS FACTOR
ASBESTOS/CEMENT BOARD	0	0	0
Integration Factor	N/A	1374	0
RED OAK FLOORING	100	100	100
Integration Factor	N/A	2377	384
SAMPLE TESTED	35	10	170
Integration Factor	N/A	1485	645

POST TEST NOTATIONS

Post test examination revealed the sample to be completely consumed in the area directly over the burners and extending 2 feet forward. Surface burning (pile) only was noted to the 6½ foot mark, with moderate to light smoke and heat damage the next 2½ feet. Discoloration only was noted beyond to the end of the sample.

Slight afterburning was noted at test completion.

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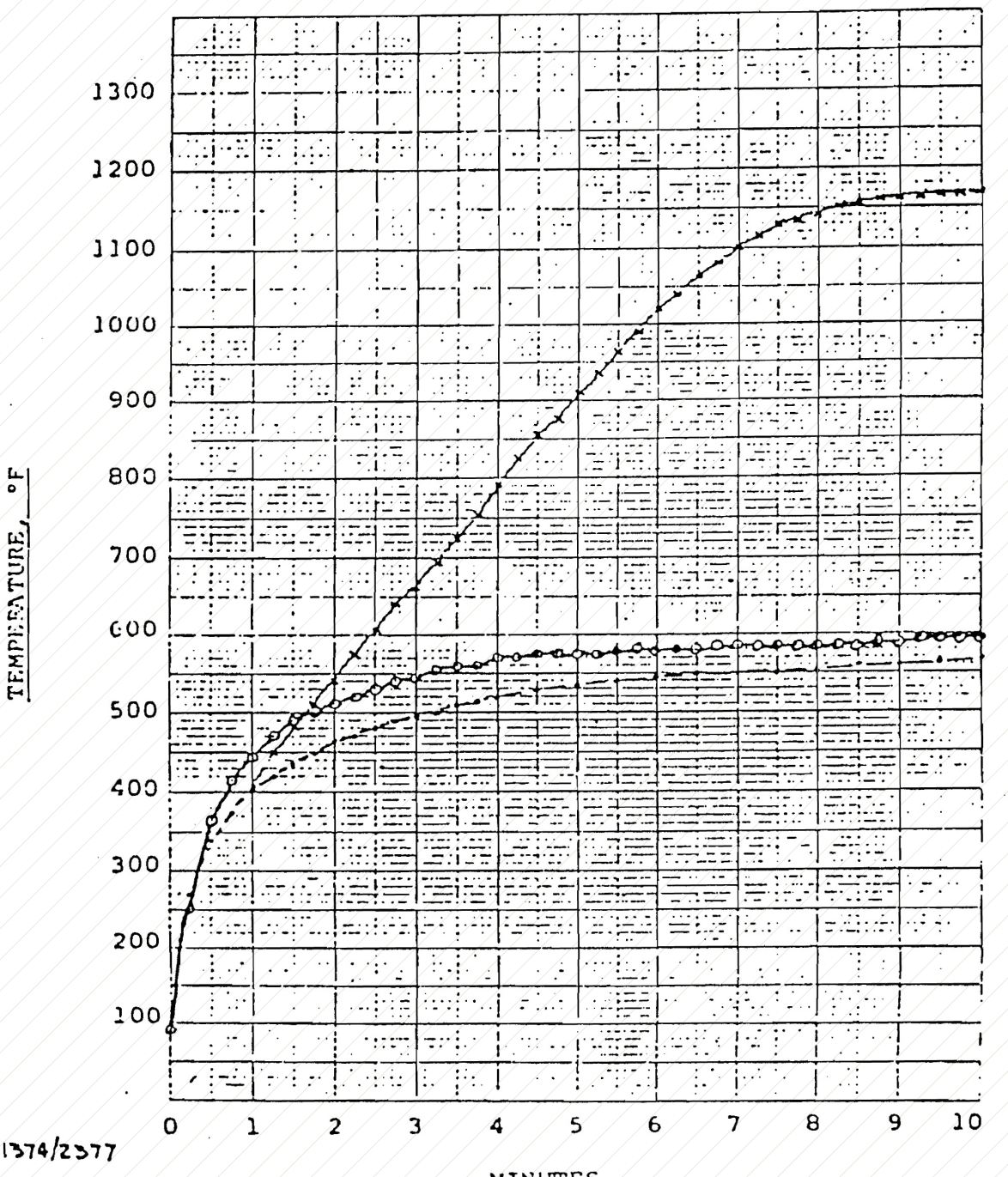
FUEL CONTRIBUTED TEMPERATURE

Key:
Sample —o——o— COMPOSIL PACIFIC; CARPET, UNTREATED
Red Oak —+——+——+ Asbestos Cement Board —•—•—•—



75:1374/2377

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UNITED STATES TESTING COMPANY, INC.

LA 13009

SMOKE DENSITY

KEY: Sample—c—c— COMPOSIL PACIFIC; CARPET "UNTREATED"

Red Oak—t—t—