

RESEARCH REPORT

Mississippi Forest Products Laboratory

TESTING THE TERMITICIDAL ACTIVITY OF WOOD BLISS

Documentation: A Letter From Dr. Terry Amburgey
To Dr. D. von Hanstein Dated February 24, 1989



Submitted To:

Dr. Dittmar von Hanstein
MASID Umwelterhaltende Produkte Vertriebs-GmbH
Rosenaustrasse 25
6072 Dreieich
WEST GERMANY

Submitted By:

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June 13, 1989

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FOREST PRODUCTS UTILIZATION LABORATORY

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INTRODUCTION

This report covers termite test results for a termiticide supplied by Rockwood International, Inc.

EXPERIMENTAL

Species: 0.75 cubic inches of southern yellow pine sapwood
Formulation: Wood Bliss I
Concentrations: Full Strength, 1:3, and 1:11 (diluted with water)
Organism: Subterranean termites (Reticulitermes flavipes)
Conditioning: NL is nonleached; L is leached

The termite tests were carried out in accordance with the AWPA M12-72 standard. The treatment procedure was conducted according to ASTM D1413 standard.

RESULTS & DISCUSSION

Blocks of southern yellow pine sapwood treated with Wood-Bliss I and tested against subterranean termites (R. flavipes) by procedures given in AWPA standard M12-72 had no feeding on them when treated with 100% concentration and not leached prior to exposure (Tables 1 & 2). The large weight losses of these non-leached blocks (Tables 1 & 2) are due to loss of treating solution. The leaching of Wood-Bliss I into the sand of the test chambers resulted in no feeding on the blocks. Blocks treated with 100% Wood-Bliss I but leached prior to exposure to R. flavipes had light to moderate feeding on them. The same results were observed when blocks treated with 25% Wood-Bliss I were leached prior to exposure (Tables 1 & 2).

TABLE #1: Summary of the individual percent weight losses of treated southern yellow pine blocks after exposure to subterranean termites.

FORMULATION	% CONC.	COND.	BLOCK #	TREATING SOLUTION RETENTION (pcf) (c)	W1 (g) (d)	W2 (g) (e)	% WT. LOSS	BLOCK RATINGS LTR./NO. (f)
WOOD-BLISS I (WATER)	100.00 (a)	NL	A-1	30.67	5.54	4.73	14.62	A 10
			2	28.76	5.32	4.66	12.41	A 10
			3	23.94	5.26	4.76	9.51	A 10
			4	21.75	5.11	4.65	9.00	A 10
			5	26.67	5.30	4.58	13.58	A 10
WOOD-BLISS I (WATER)	100.00 (a)	L	A-6	34.22	3.85	3.68	4.42	C 7
			7	31.22	4.07	3.92	3.69	C 7
			8	30.67	3.83	3.68	3.92	B 9
			9	22.39	4.12	3.98	3.40	C 7
			10	24.57	3.99	3.87	3.01	B 9
WOOD-BLISS I (WATER)	25.00	NL	A-11	12.04	4.61	4.35	5.64	A 10
			12	11.13	4.50	4.29	4.67	A 10
			13	12.24	4.46	4.19	6.05	B 9
			14	11.63	4.46	4.22	5.38	B 9
			15	12.26	4.53	4.29	5.30	B 9
WOOD-BLISS I (WATER)	25.00	L	A-16	12.20	4.00	3.89	2.75	B 9
			17	11.38	4.32	4.27	1.16	B 9
			18	12.40	4.24	4.10	3.30	C 7
			19	12.40	4.26	4.17	2.11	B 9
			20	12.49	3.98	3.89	2.26	C 7
WOOD-BLISS I (WATER)	8.33	NL	A-21	3.43	4.20	3.94	6.19	C 7
			22	3.56	4.22	3.99	5.45	C 7
			23	3.65	4.32	4.09	5.32	C 7
			24	3.56	4.09	3.81	6.85	C 7
			25	3.51	4.02	3.74	6.97	C 7
WOOD-BLISS I (WATER)	8.33	L	A-26	2.96	3.87	3.67	5.17	C 7
			27	3.63	3.91	3.64	6.91	C 7
			28	3.73	3.87	3.68	4.91	C 7
			29	3.69	3.86	3.70	4.15	C 7
			30	.60	3.93	3.80	3.31	C 7
CONTROL	---	NL	A-31	-----	3.94	3.05	22.59	D 4
			32	-----	3.93	3.15	19.85	D 4
			33	-----	3.81	2.97	22.05	D 4
			34	-----	4.17	3.55	14.87	D 4
			35	-----	3.93	3.18	19.08	D 4

TABLE #2: Summary of the average percent weight losses of treated southern yellow pine blocks after exposure to subterranean termites.

FORMULATION	COND.	TREATING SOLUTION AVG. RETENTION (pcf)	AVG. % WT. LOSS & STD. DEV.	AVERAGE BLOCK RATINGS
WOOD-BLISS I	NL	26.36	11.82 +/- 2.48	10.0
WOOD-BLISS I	L	28.62	3.68 +/- 0.53	7.8
WOOD-BLISS I	NL	11.86	5.41 +/- 0.51	9.4
WOOD-BLISS I	L	12.17	2.32 +/- 0.80	8.2
WOOD-BLISS I	NL	3.54	6.16 +/- 0.76	7.0
WOOD-BLISS I	L	3.52	4.89 +/- 1.34	7.0
CONTROL	NL	---	19.63 +/- 3.07	4.0

pcf = POUNDS PER CUBIC FEET
 RETENTION IS NOT BASED ON ACTIVE INGREDIENT.
 STD. DEV. = STANDARD DEVIATION
 BLOCK RATINGS: A OR 10 IS SOUND, SURFACE NIBBLES PERMITTED.
 B OR 9 IS LIGHT ATTACK.
 C OR 7 IS MODERATE ATTACK.
 D OR 4 IS HEAVY ATTACK.
 E OR 0 IS FAILURE.

COND. = Condition Codes:
 NL = nonleached
 L = leached

- (a) THE BLOCKS TREATED WITH 100% WOOD-BLISS DID NOT SINK
EITHER WITH VACUUM IMPREGNATION OR VACUUM PRESSURE.
- (b) COND. = CONDITIONING:
NL = NONLEACHED
L = LEACHED
- (c) pcf = POUNDS PER CUBIC FOOT
RETENTION IS NOT BASED ON ACTIVE INGREDIENT.
- (d) W1 = WEIGHT OF THE BLOCK BEFORE EXPOSURE TO TERMITES
- (e) W2 = WEIGHT OF THE BLOCK AFTER EXPOSURE TO TERMITES
- (f) BLOCK RATINGS: A OR 10 IS SOUND, SURFACE NIBBLES
PERMITTED.
B OR 9 IS LIGHT ATTACK.
C OR 7 IS MODERATE ATTACK.
D OR 4 IS HEAVY ATTACK.
E OR 0 IS FAILURE.
- LTR. = BLOCK RATINGS LETTER
NO. = BLOCK RATINGS NUMBER