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IEEE-45 RECOMMENDED PRACTICE FOR ELECTRIC INSTALLATIONS ON SHIPBOARD FIRE EVALUATIONS OF ELECTRICAL CABLES COATED WITH BURN BARRIER™ MASTIC NO. 70 AND NO. 77

FINAL REPORT

SwRI PROJECT NO. 01-8303-413-b

AUGUST 1985

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1-1/2 in. above the centerline of the burner varied from 1620 to1720° F.

TEST RESULTS

The results from the tests are summarized in Table 1. As shown in this summary, all cable samples exhibited flame retardant properties. No flaming of the cable outside the flame contact zone was observed. All cable samples self-extinguished prior to the end of the test. There was no after flame above the flame contact zone in either test.

TABLE I. SUMMARY OF TEST RESULTS

Sample No.	Test No.	Afterburn Time, min:s	Distance of Jacket Damage Above Burner	Distance of Conductor Damage Above Burner
70	1	None	24 in.	24 in.
77	2	None	24 In.	24 in.

The cables as tested meet the criteria for acceptance as specified in paragraph 18.13.5 Flammability Test, IEEE-45, “Recommended Practice for Electrical Installations on Shipboard,” June 30, 1977. Observations on the progress of the burn are given in Appendix B.

Fire Retardants Inc.
SwRI Project No. 01-8303-413-b
Test Material: No 70 Mastic
Test No. 1
Test Date: August 8, 1985

TIME (min:s)	**OBSERVATIONS**
0:00	Ignition of the burner
1:00	Flames up 3 ft from the end of the tray
7:00	Flames flashing up 38 in.
	No smoke
10:00	No change
14:00	Flames flashing up 30 in.
15:30	Flames are up 36 in.
18:00	Flames receding
	The insulation does not appear to be contributing to the fire
	No smoke
20:00	Burner off
	No afterburn
	END OF TEST

DAMAGE ASSESSMENT

Jacket and wire damaged 24 in. above flame contact zone. No damage to jacket, coating or wire above 4 ft from the base of the cable tray.

Fire Retardants Inc.
SwRI Project No. 01-8303-413-b
Test Material: No 77 Mastic
Test No. 2
Test Date: August 8, 1985

TIME (min:s)	**OBSERVATIONS**
0:00	Ignition of the burner
1:00	Flames up 3-1/2 ft from the end of the tray
2:00	Flames flashing up 3 ft.
	Very light smoke
5:10	Flames flashing up to 5 ft.
12:00	Flames up 3-1/2 ft. from the bottom of the tray
15:00	Flames flashing up 3 ft.
17:00	The insulation on the cables does not appear to be contributing to the fire
19:00	No change
20:00	Burner off
	Flames out
	END OF TEST

DAMAGE ASSESSMENT

Jacket and wire damaged 24 in above flame contact zone. No damage to jacket, coating or wire above 4 ft from the base of the cable tray.