Chapter 13

FEPSIL CABLES

CONTENTS

Introduction

1 Fepsil cables, which are obsolescent, are manufactured with a single core covered by insulators and sheathed in fluorinated ethylene propylene (FEP). Two metal braided types are available, Fepsilmet and Fepsilmetsheath which are manufactured with an outer metal braid and an inner metal braid respectively. The cables are designed for aircraft wiring in circuits where the potential between conductors, or between a conductor and either the metal braid or the aircraft structure, does not exceed 600 volts (rms) and the frequency does not exceed 1600 Hz. Fepsil cables may be used where any combination of ambient temperature and conductor current for continuous service, does not produce a stabilized conductor temperature in excess of 190 °C.

2 The cables are suitable for fixed wiring in aircraft at temperatures down to -75 °C, but are not suitable for severe flexing at temperatures below -55 °C. The cables do not support combustion but are designed to function after limited exposure to fire. The cables are unaffected by chemicals, fuels, oils, ester based lubricants, hydraulic fluids or kerosene, but in situations where the cables might be exposed to severe splashing or contact with fluids the cable ends should be sealed at terminations.

TABLE 1 FEPSIL CABLE TYPES AND WIRE PROPERTIES

Number and nominal dia. of conductor wires/core (in.)		Overall cable dia. maximum in.	mm	Nominal mass	Maximum resistance at 20 °C (ohms/100 ft)	Sect/Ref No.
Unifepsil No.						
22	19/0.006	0.090	2.29	-	1.655	5E/1172520
20	19/0.0076	0.100	2.54	-	1.032	5E/1172521
18	33/0.0076	0.115	2.92	-	0.594	5E/1172522
16	40/0.0076	0.130	3.30	-	0.490	5E/1172523
14	70/0.0076	0.150	3.81	-	0.280	5E/1172524
12	110/0.0076	0.170	4.32	-	0.178	5E/1772525
10	73/0.012	0.200	5.08	-	0.108	5E/1172526
8	120/0.012	0.255	6.48	-	0.066	-
6	182/0.012	0.310	7.87	-	0.043	5E/1172528
4	294/0.012	0.370	9.40	-	0.027	5E/1172529
2	-	-	-	-	-	5E/6208453
1	-	-	-	-	-	5E/6454142
Unifepsilmetsheath No.						
22	19/0.006	0.140	3.56	-	1.655	-
20	19/0.0076	0.150	3.81	-	1.032	5E/1172545
18	33/0.0076	0.165	4.19	-	0.594	5E/1172546
16	40/0.0076	0.190	4.83	-	0.490	5E/1172547
Dufepsil No.						
22	19/0.006	0.170	4.32	-	1.655	-
20	19/0.0076	0.190	4.83	-	1.032	-
18	33/0.0076	0.220	5.59	-	0.594	-
16	40/0.0076	0.245	6.22	-	0.490	-
14	70/0.0076	0.285	7.24	-	0.280	-
12	110/0.0076	0.325	8.25	-	0.178	-
Dupfepsilmetsheath No.						
20	19/0.0076	0.275	6.98	-	1.032	-
Trifepsil No.						
22		0.184	4.67	-	1.655	-
20		0.205	5.21	-	1.032	5E/1172537
18		0.237	6.02	-	0.594	-
16		0.264	6.71	-	0.490	-
14		0.307	7.80	-	0.280	-
12		0.350	8.90	-	0.178	-
10		0.415	10.54	-	0.108	-
8		0.530	13.46	-	0.066	-
4		0.780	19.81	-	0.027	5E/1172543