

ISO

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION

ISO RECOMMENDATION R 1076

GENERAL PURPOSE ELECTRICAL CABLES
WITH ALUMINIUM OR ALUMINIUM ALLOY CONDUCTORS
FOR AIRCRAFT

1st EDITION

May 1969

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BRIEF HISTORY

The ISO Recommendation R 1076, *General purpose electrical cables with aluminium or aluminium alloy conductors for aircraft*, was drawn up by Technical Committee ISO/TC 20, *Aircraft and space vehicles*, the Secretariat of which is held by the British Standards Institution (BSI).

Work on this question led, in 1965, to the adoption of a Draft ISO Recommendation.

In November 1966, this Draft ISO Recommendation (No. 1121) was circulated to all the ISO Member Bodies for enquiry. It was approved, subject to a few modifications of an editorial nature, by the following Member Bodies :

Belgium	Israel	Switzerland
Canada	Italy	Thailand
Chile	Japan	U.A.R.
Czechoslovakia	Netherlands	United Kingdom
France	Portugal	U.S.A.
Germany	Spain	

No Member Body opposed the approval of the Draft.

The Draft ISO Recommendation was then submitted by correspondence to the ISO Council which decided, in May 1969, to accept it as an ISO RECOMMENDATION.

**GENERAL PURPOSE ELECTRICAL CABLES
WITH ALUMINIUM OR ALUMINIUM ALLOY CONDUCTORS
FOR AIRCRAFT**

1. SCOPE

This ISO Recommendation states the requirements for cables with aluminium or aluminium alloy conductors for general purpose wiring of aircraft circuits in which the voltage between conductors or between conductors and the aircraft structure does not exceed 600 volts (r.m.s.) and in which the frequency does not exceed 1600 Hz. The cables are suitable for use where, in continuous service, no combination of ambient temperature and conductor current produces a stabilized conductor temperature in excess of 105 °C. 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 - 30 °C. The cables do not support combustion, but they should not be regarded as complying with the requirements of ISO Recommendation R ..., * *Environmental and operational conditions of aircraft electrical equipment – Part 5 : Fire resistance*, in regard to fire resistance.

2. TERMINOLOGY

- 2.1 *Cable*. Complete assembly of conductor, insulation and protective covering.
- 2.2 *Conductor*. Conducting portion of a cable.
- 2.3 *Wire*. Cylindrical metallic wire of uniform cross-sectional area, used to form the conductor.
- 2.4 *Stranded conductor*. Conductor composed of a number of wires twisted together. When the conductor consists of more than one layer, alternate layers are twisted in opposite directions.
- 2.5 *Bunched conductor*. Conductor composed of a number of wires in which all wires are twisted together in the same direction.
- 2.6 *Rope lay conductor*. Conductor in which a number of groups of wires are assembled in concentric layers. Each group may consist of wires assembled in stranded or bunched formation.
- 2.7 *Insulation*. Part of a cable which serves to insulate the conductor.
- 2.8 *Core*. Conductor and insulation of a cable, excluding all additional coverings.
- 2.9 *Protective covering*. Outside covering of a cable protecting the insulation against deterioration caused by abrasion or injurious fluids.
- 2.10 *Sample*. Amount of cable of one and the same dimension and type, taken from a batch.
- 2.11 *Test piece*. Continuous length of cable taken from a sample.

* At present under review.