
International Standard



7313

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Aircraft — High temperature convoluted hose assemblies in polytetrafluoroethylene (PTFE)

Aéronefs — Tuyauterie flexible, haute température, convolutive, en polytétrafluoréthylène (PTFE)

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Foreword

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Draft International Standards adopted by the technical committees are circulated to the member bodies for approval before their acceptance as International Standards by the ISO Council.

International Standard ISO 7313 was developed by Technical Committee ISO/TC 20, *Aircraft and space vehicles*, and was circulated to the member bodies in June 1982.

It has been approved by the member bodies of the following countries:

Australia	Egypt, Arab Rep. of	Romania
Austria	France	South Africa, Rep. of
Belgium	Ireland	Spain
Brazil	Italy	Sweden
Canada	Japan	United Kingdom
China	Netherlands	USSR

The member bodies of the following countries expressed disapproval of the document on technical grounds:

Czechoslovakia
Germany, F.R.

Aircraft — High temperature convoluted hose assemblies in polytetrafluoroethylene (PTFE)

1 Scope and field of application

This International Standard specifies characteristics of hose assemblies with corrosion-resistant metallic braid and convoluted polytetrafluoroethylene (PTFE) inner tube for use in aircraft fluid systems at temperatures between -55 and $+200$ °C and at nominal pressures, depending on bore size, up to 6,8 MPa. Special approval from the proper national authority may be required if these hoses are to be part of a pressurized gas storage system.

Two types of hose assembly are covered in this International Standard:

Type 1: Non-conductive inner tube

Type 2: Conductive inner tube

2 References

ISO 756, *Propan-2-ol for industrial use — Methods of test —*

Part 1: General.

Part 2: Determination of acidity — Titrimetric method.

Part 3: Test for miscibility with water.

ISO 3768, *Metallic coatings — Neutral salt spray test (NSS test).*

3 Requirements

3.1 Qualification

The hose assemblies furnished under this International Standard shall be a product identical to that which has been tested and has passed the qualification tests herein and shall be suitable for use in aircraft fluid systems under conditions specified herein.

3.2 Materials

The hose assemblies shall be uniform in quality and free from defects in material as is consistent with good manufacturing practice. Materials shall conform to applicable specifications and the requirements specified herein.

3.2.1 Metals

Metals shall be of corrosion-resistant type or be suitably treated to resist corrosion due to fluid being conveyed and/or salt

spray and atmospheric conditions to which the hose assembly may be subjected when in storage or during normal service use.

3.2.2 Non-metallic materials

All materials used in the hose assemblies shall be "non-ageing" for storage and shall be compatible with system fluids and other hose assembly materials and suitable for the service intended.

3.3 Design

The hose assembly shall consist of a convoluted PTFE inner tube which may be covered with convoluted woven glass cloth and other suitable material and reinforced with stainless steel wire braid and with end fittings suitable for the intended installation. This International Standard shall specifically cover the hose assembly made up of the specified hose and the hose attachment mechanism of the fitting.

3.3.1 Inner tube

The inner tube shall be of convoluted construction designed to promote easy bending. It shall be free from pitting or projections on the inner surface which may interfere with fluid flow.

3.3.2 Reinforcement

The reinforcement shall consist of a stainless steel wire braid or braids of sufficient strength and corrosion resistance to meet the requirements of this International Standard.

3.3.3 Interlayers

Interlayers, if used, shall be of suitable material.

3.3.4 Fittings

The fittings shall be specifically designed for this hose and materials shall be selected for the specific operating conditions. When the requirements for these fittings and this International Standard conflict, this International Standard shall govern. Threads shall conform to ISO metric screw threads.

3.3.5 Dimensions

The dimensions of the hose assemblies shall be in accordance with table 1.