
**Rubber and plastics hoses and
hose assemblies, wire- or textile-
reinforced, for hydraulic power units
used in heavy duty hydraulic tool
applications — Specification**

*Tuyaux et flexibles en caoutchouc et en plastique, à armature
textile ou métallique, pour des applications de vérin hydraulique —
Spécifications*





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ISO copyright office
Ch. de Blandonnet 8 • CP 401
CH-1214 Vernier, Geneva, Switzerland
Tel. +41 22 749 01 11
Fax +41 22 749 09 47
copyright@iso.org
www.iso.org

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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For an explanation on the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see the following URL: www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 45, *Rubber and rubber products*, Subcommittee SC 1, *Rubber and plastics hoses and hose assemblies*.

Rubber and plastics hoses and hose assemblies, wire- or textile- reinforced, for hydraulic power units used in heavy duty hydraulic tool applications — Specification

1 Scope

This document specifies the requirements for wire- or textile-reinforced hydraulic hose and hose assemblies used in heavy duty hydraulic tool applications of sizes ranging from 5 to 10. They are suitable for use with hydraulic fluids HH, HL, HM, HR and HV in accordance with ISO 6743-4 at temperature ranging from -20 and +55 °C.

This document does not include requirements for the connection ends. It is limited to the performance of hoses and hose assemblies. The hose assembly maximum working pressure is regulated by the lowest maximum working pressure of the components.

Typical usage of this product includes, but is not limited to, applications where the hose is in close proximity to the operator, such as rescue tools and electrical utilities service tools, using hydraulic power units (electrical, pneumatic, etc.).

NOTE It is the responsibility of the user, in consultation with the hose manufacturer, to establish the compatibility of the hose with the fluid to be used.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 1402, *Rubber and plastics hoses and hose assemblies — Hydrostatic testing*

ISO 1817, *Rubber, vulcanized or thermoplastic — Determination of the effect of liquids*

ISO 4671, *Rubber and plastics hoses and hose assemblies — Methods of measurement of the dimensions of hoses and the lengths of hose assemblies*

ISO 6743-4, *Lubricants, industrial oils and related products (class L) — Classification — Part 4: Family H (Hydraulic systems)*

ISO 6803, *Rubber or plastics hoses and hose assemblies — Hydraulic-pressure impulse test without flexing*

ISO 7326:2016, *Rubber and plastics hoses — Assessment of ozone resistance under static conditions*

ISO 8330, *Rubber and plastics hoses and hose assemblies — Vocabulary*

ISO 8331, *Rubber and plastics hoses and hose assemblies — Guidelines for selection, storage, use and maintenance*

ISO 10619-1, *Rubber and plastics hoses and tubing — Measurement of flexibility and stiffness — Part 1: Bending tests at ambient temperature*

ISO 10619-2:2011, *Rubber and plastics hoses and tubing — Measurement of flexibility and stiffness — Part 2: Bending tests at sub-ambient temperatures*

ISO 12100, *Safety of machinery — General principles for design — Risk assessment and risk reduction*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 8330 apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at <http://www.iso.org/obp>
- IEC Electropedia: available at <http://www.electropedia.org/>

4 Classification

All hoses are classified on their electrical properties using grades:

- Grade 1, no electrical requirements.
- Grade 2, “non-conductive”.

Non-conductive means the current reading shall be no greater than 50 μ A when tested in accordance with [Annex D](#).

5 List of significant hazards

5.1 General

This clause contains some of the significant hazards, hazardous situations and events, as far as they are dealt with in this document, identified by risk assessment as significant for this type of machinery and which require action to eliminate or reduce the risk.

5.2 Hazards due to bursting or leaking of hoses

Hazards can occur when a hose bursts or leaks. The escaping stream of liquid can cause personal injury or property damage. See [Figure 1](#).

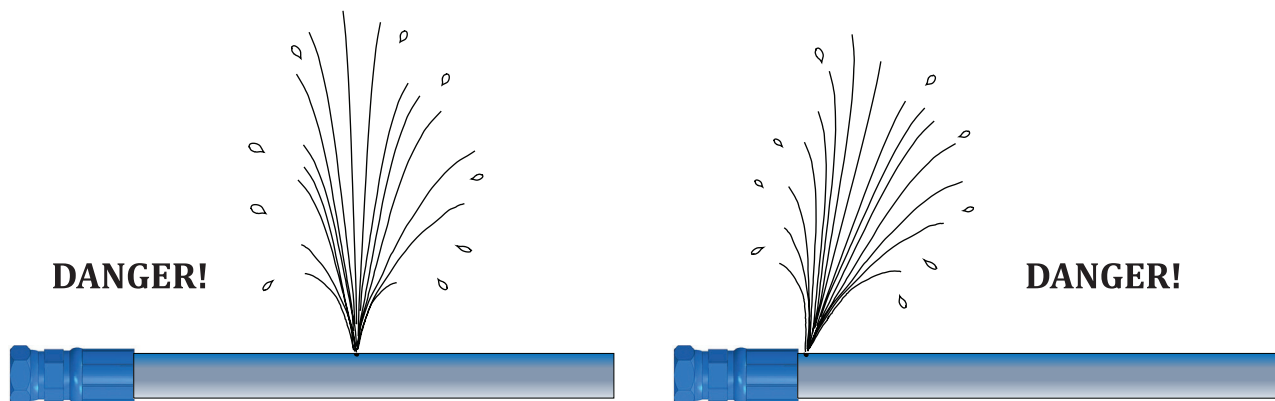


Figure 1 — Hazards due to bursting or leaking of hoses