



**NSAI**  
Standards

Irish Standard  
I.S. EN ISO 6803:2017

# Rubber or plastics hoses and hose assemblies - Hydraulic-pressure impulse test without flexing (ISO 6803:2017)

**I.S. EN ISO 6803:2017**

*Incorporating amendments/corrigenda/National Annexes issued since publication:*

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*This document is based on:*

EN ISO 6803:2017

*Published:*

2017-03-15

*This document was published  
under the authority of the NSAI  
and comes into effect on:*

2017-04-02

ICS number:

23.040.70

23.100.40

NOTE: If blank see CEN/CENELEC cover page

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## National Foreword

I.S. EN ISO 6803:2017 is the adopted Irish version of the European Document EN ISO 6803:2017, Rubber or plastics hoses and hose assemblies - Hydraulic-pressure impulse test without flexing (ISO 6803:2017)

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EUROPEAN STANDARD

EN ISO 6803

NORME EUROPÉENNE

EUROPÄISCHE NORM

March 2017

ICS 23.040.70; 23.100.40

Supersedes EN ISO 6803:2008

English Version

## Rubber or plastics hoses and hose assemblies - Hydraulic-pressure impulse test without flexing (ISO 6803:2017)

Tuyaux et flexibles en caoutchouc ou en plastique -  
Essai d'impulsions de pression hydraulique sans  
flexion (ISO 6803:2017)

Gummi- oder Kunststoffschläuche und -  
schlauchleitungen - Hydraulik-Druck-Impulsprüfung  
ohne Biegung (ISO 6803:2017)

This European Standard was approved by CEN on 10 September 2016.

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**EN ISO 6803:2017 (E)**

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## **European foreword**

This document (EN ISO 6803:2017) has been prepared by Technical Committee ISO/TC 45 "Rubber and rubber products" in collaboration with Technical Committee CEN/TC 218 "Rubber and plastics hoses and hose assemblies" the secretariat of which is held by BSI.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by September 2017 and conflicting national standards shall be withdrawn at the latest by September 2017.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN ISO 6803:2008.

According to the CEN-CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

### **Endorsement notice**

The text of ISO 6803:2017 has been approved by CEN as EN ISO 6803:2017 without any modification.

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# INTERNATIONAL STANDARD

**ISO  
6803**

Fourth edition  
2017-03

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

*Tuyaux et flexibles en caoutchouc ou en plastique — Essai  
d'impulsions de pression hydraulique sans flexion*



Reference number  
ISO 6803:2017(E)

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**ISO 6803:2017(E)**



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## ISO 6803:2017(E)

### 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](http://www.iso.org/directives)).

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Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation on 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](http://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*.

This fourth edition cancels and replaces the third edition (ISO 6803:2008), which has been technically revised to include cool down testing as specified in [4.1](#) and [8.2](#).

# Rubber or plastics hoses and hose assemblies — Hydraulic-pressure impulse test without flexing

## 1 Scope

This document describes hose impulse testing, without flexing, of rubber or plastics hydraulic hose assemblies at both high and low impulse pressures. The high-pressure testing is carried out at pressures greater than 3 MPa and the low-pressure testing at pressures from 1,5 MPa to 3 MPa. The test procedure is applicable to hydraulic hose assemblies that are subject to pulsating pressures in service which are included in the product requirements.

NOTE Impulse test procedures with flexing can be found in ISO 6802.

## 2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 3448, *Industrial liquid lubricants — ISO viscosity classification*

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

ISO/TR 11340, *Rubber and rubber products — Hydraulic hose assemblies — External leakage classification for hydraulic systems*

## 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:

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

## 4 Apparatus

**4.1 Pressure-application apparatus**, capable of applying an internal pulsating pressure to the test piece at a rate specified in 8.2 using a hydraulic fluid circulating through the test hose, while the fluid is maintained at the required test temperature. Each pressure cycle shall be within the tolerances shown in Figure 2 (for high-pressure testing) or Figure 3 (for low-pressure testing). The nominal rate of pressure rise for high-pressure testing is given by Formula (1) in Figure 2. The rate of pressure rise for low-pressure testing shall be such that the pulse remains within the wave form envelope (see Figure 3).

**4.2 Graphical recorder, digital-storage facility or oscilloscope**, capable of measuring the pressure cycle to ensure that the wave form is within the envelope shown in Figure 2 or Figure 3. The recorder shall have a natural frequency of more than 250 Hz and shall be critically damped to give a response which is flat to within 5 % at up to 0,6 times the natural frequency.

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