

INTERNATIONAL STANDARD

ISO 11758

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Rubber and plastics hoses — Exposure to a xenon arc lamp — Determination of changes in colour and appearance

*Tuyaux en caoutchouc et en plastique — Exposition à la lampe à arc
au xénon — Détermination du changement de coloration et d'aspect*



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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.

Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

International Standard ISO 11758 was prepared by Technical Committee ISO/TC 45, *Rubber and rubber products*, Subcommittee SC 1, *Hoses (rubber and plastics)*.

Annexes A, B and C form an integral part of this International Standard.

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International Organization for Standardization

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Introduction

Measuring the effect of a light source on hoses is of value as a means of inspecting the conservation of the colour, which is often indicative, and the integrity of the coating material that protects the components making up the hose.

Accordingly, this International Standard pursues a threefold aim:

- a) to carry out accelerated artificial ageing using existing material, with a source approximating as closely as possible to natural light;
- b) to measure the effects of this light source on hoses;
- c) to set a limit on deterioration, by agreement between the manufacturer and the user.

A related International Standard is ISO 8580:1987, *Rubber and plastics hoses — Determination of ultra-violet resistance under static conditions*, which refers only to fluorescent lights.

The only other International Standard in this field, ISO 4665-3:1987, *Rubber, vulcanized — Resistance to weathering — Part 3: Methods of exposure to artificial light*, is not specific to hoses.

Rubber and plastics hoses — Exposure to a xenon arc lamp — Determination of changes in colour and appearance

WARNING — Persons using this International Standard should be familiar with normal laboratory practice. This standard does not purport to address all of the safety problems, if any, associated with its use. It is the responsibility of the user to establish appropriate safety and health practices and to ensure compliance with any national regulatory conditions.

1 Scope

This International Standard specifies a method for exposing rubber and plastics hoses to a laboratory light source for the purpose of evaluating the changes in colour and appearance produced by such exposure.

NOTE 1 A xenon arc was chosen from among a variety of sources since, when correctly filtered and maintained, it yields a spectrum closely similar to that of daylight.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 105-A02:1993, *Textiles — Tests for colour fastness — Part A02: Grey scale for assessing change in colour*.

ISO 105-B01:1994, *Textiles — Tests for colour fastness — Part B01: Colour fastness to light: Daylight*.

ISO 4665-1:1985, *Rubber, vulcanized — Resistance to weathering — Part 1: Assessment of changes in properties after exposure to natural weathering or artificial light*.

ISO 4665-3:1987, *Rubber, vulcanized — Resistance to weathering — Part 3: Methods of exposure to artificial light*.

CIE Publication No.85:1989,¹⁾ *Solar spectral irradiance*.

3 Principle

Sections of rubber or plastic hose are exposed, without stress and in a defined environment, to radiation from a xenon lamp for a predetermined period and inspected in order to assess visually any change in colour and appearance.

NOTE 2 Other exposure conditions may be used and other parameters assessed, provided they are defined by agreement between the producer and the user.

1) Published by the International Commission on Illumination, Central Bureau, P.O. Box 169, A-1033 Vienna, Austria.