INTERNATIONAL STANDARD

ISO 105-G01

Third edition
2016-06-01

Textiles — Tests for colour fastness —

Part G01: Colour fastness to nitrogen oxides

Textiles — Essais de solidité des teintures —

Partie G01: Solidité des teintures aux oxydes d'azote

Reference number
ISO 105-G01:2016(E)

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

Contents

Page

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).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

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 WTO principles in the Technical Barriers to Trade (TBT) see the following URL: Foreword - Supplementary information.

The committee responsible for this document is ISO/TC 38, *Textiles*, Subcommittee SC 1, *Tests for coloured textiles and colorants*.

This third edition cancels and replaces the second edition (ISO 105-G01:1993), which has been technically revised. It also incorporates the Technical Corrigendum ISO 105-G01:1993/Cor 1:1995. The main technical changes are the following:

a) the test-control fabric dyed with Disperse Blue 3 was deleted;

b) the test-control fabric dyed with Disperse Violet 1 and the test-control fabric dyed with Disperse Blue 56 were added.

ISO 105 consists of many parts designated by a part letter and a two-digit serial number (e.g. A01), under the general title *Textiles — Tests for colour fastness*. A complete list of these is given in ISO 105-A01.

Textiles — Tests for colour fastness —

Part G01:
Colour fastness to nitrogen oxides

1 Scope

This part of ISO 105 specifies two methods for determining the resistance of the colour of textiles of all kinds and in all forms to the action of nitrogen oxides produced during combustion of gas, coal, oil, etc., and when air is passed over heated filaments.

The two tests differ in severity; one or both of them are used, depending on the result obtained (7.2.4).

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

ISO 105-F02, *Textiles — Tests for colour fastness — Part F02: Specification for cotton and viscose adjacent fabrics*

ISO 139, *Textiles — Standard atmospheres for conditioning and testing*

ISO 3696, *Water for analytical laboratory use — Specification and test methods*

3 Principle

Specimens of textiles are exposed to nitrogen oxides in a closed container until either one or three test-control fabrics exposed simultaneously with the test specimens have changed in colour to a predetermined extent. The change in colour of each specimen is assessed with the grey scale.

4 Apparatus and materials

4.1 Exposure chamber, see Annex A.

4.2 Nitric oxide, from a commercially supplied cylinder or a generator (see Annex B).

WARNING — Nitric oxide is toxic. The maximum concentration in a working room should not exceed 6,7 mg/m^3.

4.3 Sulfuric acid, containing 1 100 g/l of H_2SO_4 (relative density 1,603).

4.4 Sodium nitrite ($NaNO_2$), saturated solution in grade 3 water (4.13).

4.5 Sodium hydroxide, dilute solution (approximately 100 g/l of NaOH).