INTERNATIONAL STANDARD

ISO 105-S02

Second edition
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Textiles — Tests for colour fastness —

Part S02:
Colour fastness to vulcanization: Sulfur monochloride

Textiles — Essais de solidité des teintures —

Partie S02: Solidité des teintures à la vulcanisation: Monochlorure de soufre

Reference number
ISO 105-S02:1993(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.

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 105-S02 was prepared by Technical Committee ISO/TC 38, *Textiles,* Sub-Committee SC 1, *Tests for coloured textiles and colorants.*

This second edition cancels and replaces the first edition (included in ISO 105-S:1978), of which it constitutes a minor revision.

ISO 105 was previously published in thirteen "parts", each designated by a letter (e.g. "Part A"), with publication dates between 1978 and 1985. Each part contained a series of "sections", each designated by the respective part letter and by a two-digit serial number (e.g. "Section A01"). These sections are now being republished as separate documents, themselves designated "parts" but retaining their earlier alphanumeric designations. A complete list of these parts is given in ISO 105-A01.

International Organization for Standardization
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INTERNATIONAL STANDARD ISO 105-S02:1993(E)

Textiles — Tests for colour fastness —

Part S02:
Colour fastness to vulcanization: Sulfur monochloride

1 Scope

This part of ISO 105 specifies a method for determining the resistance of the colour of textiles of all kinds and in all forms to the action of sulfur monochloride under the conditions usually occurring during the cold vulcanizing of rubber.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this part of ISO 105. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this part of ISO 105 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-A01:1989, *Textiles — Tests for colour fastness — Part A01: General principles of testing.*

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

ISO 105-F:1985, *Textiles — Tests for colour fastness — Part F: Standard adjacent fabrics.*

3 Principle

A specimen of the textile is exposed to sulfur monochloride vapour. The change in colour of the specimen is assessed with the grey scale before and after neutralizing with ammonium hydroxide.

4 Apparatus and reagents

4.1 Heated exposure chamber, in which the specimens are hung. Dry air can be aspirated through the apparatus and provision is made for putting a beaker containing sulfur monochloride, or ammonium hydroxide, inside the chamber (see figure 1).

4.2 Sulfur monochloride (S_2Cl_2).

NOTE 1 The sulfur monochloride should not be darker than yellow, as a brown coloration indicates decomposition.

4.3 Ammonium hydroxide solution, containing 300 g of NH_3 per litre (relative density 0,88).

4.4 Grey scale for assessing change in colour, complying with ISO 105-A02.

5 Test specimen

5.1 If the textile to be tested is fabric, use a specimen measuring 40 mm × 100 mm.

5.2 If the textile to be tested is yarn, knit it into a fabric and use a specimen measuring 40 mm × 100 mm or wind it round a piece of thin inert material measuring 40 mm × 100 mm to obtain the specified area of the textile for test.

5.3 If the textile to be tested is loose fibre, comb and compress enough of it to form a sheet measuring 40 mm × 100 mm and sew it on to a cotton adjacent fabric complying with ISO 105-F, section F02, to support the fibres.

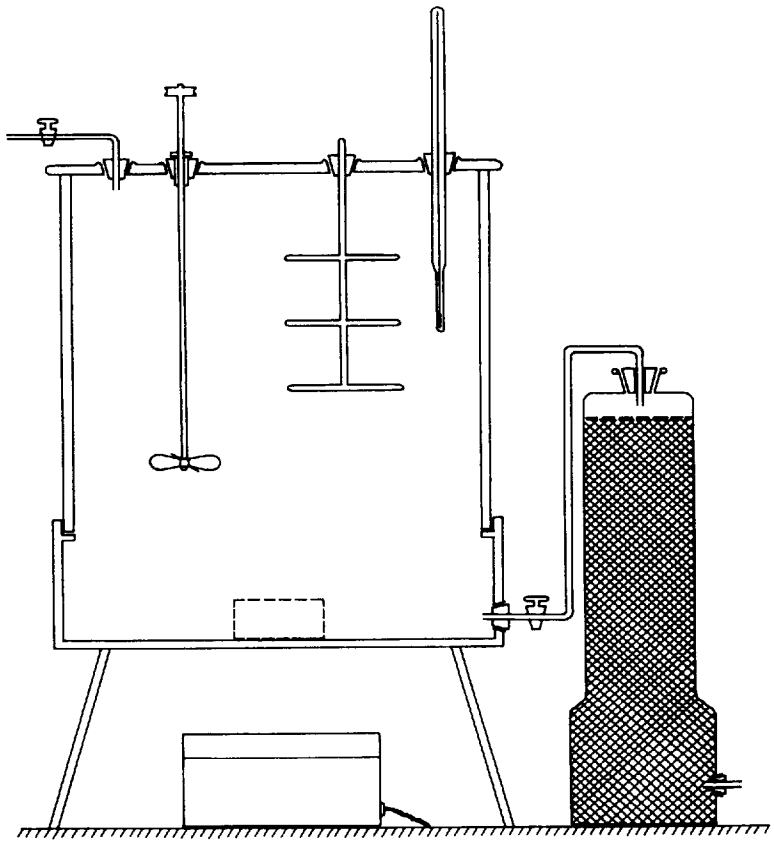

Figure 1 — Exposure chamber for vulcanizing with sulfur monochloride

6 Procedure

6.1 Suspend the specimen in the exposure chamber (4.1). Heat the air in the chamber to 50 °C ± 4 °C and aspirate dry air through the chamber for 15 min. Close the tap leading from the drying tower and disconnect the lead to the vacuum line.

6.2 Place a beaker containing 0,01 g of sulfur monochloride (4.2) for each litre of exposure chamber capacity inside the chamber and maintain the temperature at 50 °C ± 2 °C for 1 h.

6.3 Switch off the heater and aspirate dry air through the chamber for 2 h.

6.4 Remove the specimen and cut it in half across the width; put one half back in the exposure chamber. Place inside the chamber a beaker containing 0,05 g of ammonium hydroxide solution (4.3) for each litre of exposure chamber capacity. Leave at room temperature for 1 h.

6.5 Assess the change in colour of the specimen with the grey scale (4.4) immediately before and after neutralizing with ammonium hydroxide.

7 Test report

The test report shall include the following particulars:

a) the number and date of publication of this part of ISO 105, i.e. ISO 105-S02:1993;

b) all details necessary for the identification of the sample tested;

c) the numerical rating for change of colour of the test specimen before and after neutralizing with ammonium hydroxide.

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Descriptors: textiles, dyes, tests, vulcanizing tests, determination, colour fastness.

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