

ICS 59.080.01

CCS W 04



**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 6152-1997

**Textiles. Tests for colour fastness. Colour fastness to hot
pressing**

(English Translation)

Issued on: June 9, 1997

Implemented on: December 1, 1997

Issued by: The State Bureau of Quality and Technical Supervision

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1 Scope

1.1

This Standard specifies the test methods for determining the resistance of various types of textile materials and textile products to hot pressing and hot tumbling.

1.2

Textiles can be subjected to heat compression testing in dry, wet and damp conditions. This is usually determined by the end use of the textile.

2 References

The provisions contained in the following standards constitute the provisions of this Standard through reference in this Standard. When this Standard is published, the versions shown are valid. All standards will be revised, and the parties using this standard should explore the possibility of using the latest versions of the following standards.

GB 250-1995, Textiles -- Tests for colour fastness -- Grey scale for assessing change in colour (idt ISO 105-A02.1993)

GB 251-1995, Textiles -- Tests for colour fastness -- Grey scale for assessing staining (idt ISO 105-A03.1993)

GB/T 6151-1997, Textiles. Tests for colour fastness. General principle of testing (eqv ISO 105-A01.1994)

GB 6529-86, Textiles -- Standard atmospheres for conditioning and testing (neq ISO

139.1973)

GB 7565-87, Textiles -- Tests for colour fastness -- Specification for standard adjacent fabric. Cotton and viscose (neq ISO 105-F02.1985)

3 Principle

3.1

Dry conditions. The dry specimen is pressed in a heating device at a specified

Textiles -- Tests for colour fastness --

Colour fastness to hot pressing eqv ISO 105-X11.1994 replacing GB 6152-85 temperature and pressure for a certain period of time.

3.2

Damp conditions. The dry specimen is covered with a piece of wet cotton lining fabric and then pressed in a heating device at a specified temperature and pressure for a certain period of time.

3.3

Wet conditions. The wet specimen is covered with a piece of wet cotton lining fabric and then pressed in a heating device at a specified temperature and pressure for a certain period of time.

3.4 Evaluation. Immediately after the test, use the grey scale to evaluate the

discoloration of the specimen and the staining of the adjacent fabric. Then, the evaluation shall be repeated after exposure to air for a period of time in accordance with the provisions of Chapter 10 of GB/T 6151.

4 Equipment and accessories

4.1

Heating device. It consists of a pair of smooth parallel plates, equipped with a precisely controlled electric heating system, and can impart a pressure of $4\text{ kPa} \pm 1\text{ kPa}$ to the specimen.

4.1.1

To obtain the required pressure ($4\text{ kPa} \pm 1\text{ kPa}$), the total area of the wool flannel pad should be in a suitable ratio to the weight of the heating plate pressed on the pad.

If the fabric to be tested is quite thick, the area of the specimen needs to be increased.

Or a suitable pad made of the same material as the specimen can be used to expand the pressure-bearing surface. If the flat plate of the heating device is smaller than the size of

the specimen, the pressure depends on the design of the device (the ratio of the weight of the upper plate to the area).

4.1.2

Heat should only be transferred from the upper plate to the test specimen. If the heating system installed on the lower plate cannot be turned off, the asbestos sheet (4.2) will serve as the insulation layer.

4.1.3

If there is no heating device, a household iron can be used. However, its temperature should be able to be measured with a surface pyrometer or temperature- sensitive paper. The iron must be weighted so that its area and total weight form a suitable ratio to produce a pressure of $4 \text{ kPa} \pm 1 \text{ kPa}$. However, irons generally use an on-off two-position temperature control method, and the surface temperature fluctuates greatly, which limits the accuracy and repeatability of the test. When using a household iron for the test, it must be stated in the report.

4.2

Smooth asbestos sheet. 3 mm~6 mm thick.

The asbestos sheet used for thermal insulation should be smooth and not bent. It is best to combine it with the asbestos sheet before placing the specimen in the heating device (4.1). During the two tests, the asbestos sheet must cool down and the wet wool pad must be dried.

4.3

Padding. wool flannel with a mass per unit area of 260 g/m^2 .

Use two layers of wool flannel to make a pad approximately 3 mm thick. You can also use similar smooth wool fabric or felt to make a pad approximately 3 mm thick.

4.4

Undyed, unmercerized bleached cotton cloth. mass per unit area is $100 \text{ g/m}^2 \sim 130 \text{ g/m}^2$, and the surface is smooth.

4.5

Cotton interlining fabric. should comply with GB 7565, size is 40 mmx100 mm.

4.6

Grey scale for assessing color change. should comply with GB 250;

Grey scale for assessing staining. should comply with GB 251.

4.7

Grade Three water (according to GB 6151).

5 Specimens

5.1

If the specimen is fabric, take a 40 mmx100 mm specimen.

5.2

If the specimen is yarn, weave it into a fabric. Take a 40 mm x 100 mm specimen, or wrap the yarn tightly around a 40 mm x 100 mm thin thermally inert material to form a thin layer only as thick as the yarn.

5.3

If the specimen is loose fiber, take a sufficient amount. Comb it into a thin layer of 40 mm x 100 mm, and sew it onto a piece of cotton lining fabric for support.

6.1 Overview

6.1.1

The pressing temperature is determined according to the type of fiber and the structure of the fabric or garment. For blended fabrics, the recommended temperature should be adapted to the least heat-resistant fiber. The following three temperatures are usually used.

110°C±2°C

150°C±2°C

200°C±2°C

If necessary, other temperatures may be used, but must be noted in the test report.

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