



BSI Standards Publication

# Textile floor coverings — Guidelines for acceptable colour deviations

**National foreword**

This Published Document is the UK implementation of CEN/TS 16641:2014.

Attention is drawn to the fact that during the development of this Technical Specification, the UK voted against its approval. The reason for this is that UK committee considers the method for determining colour match has some limitations. At least + 0.5 of a grade could make the decision borderline, therefore, it is suggested that instrumental colour measurement is used.

The UK participation in its preparation was entrusted to Technical Committee PRI/3, Textile floor coverings.

A list of organizations represented on this committee can be obtained on request to its secretary.

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English Version

**Textile floor coverings - Guidelines for acceptable colour  
deviations**

Revêtements de sol textiles - Lignes directrices pour les  
écarts de couleur acceptables

Textile Bodenbeläge - Leitlinien für akzeptable  
Farbabweichungen

This Technical Specification (CEN/TS) was approved by CEN on 26 November 2013 for provisional application.

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## **Foreword**

This document (CEN/TS 16641:2014) has been prepared by Technical Committee CEN/TC 134 “Resilient, textile and laminate floor coverings”, the secretariat of which is held by NBN.

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## **1 Scope**

This Technical Specification gives guidance in case of complaints when a colour deviation is observed after installation of a textile floor covering by the installer and/or end user.

The colour deviation can be observed within different parts of the installation or between the installed textile floor covering and the initially presented sample on which the choice for ordering was made.

## **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.

CEN/TS 14472-2, *Resilient, textile and laminate floor coverings - Design, preparation and installation - Part 2: Textile floor coverings*

EN 20105-A02, *Textiles - Test for colour fastness - Part A02: Grey scale for assessing change in colour (ISO 105-A02)*

ISO 2424, *Textile floor coverings - Vocabulary*

## **3 Terms and definitions**

For the purposes of this document the terms and definitions of ISO 2424 apply.

## **4 General information on colour deviation and initial requirements**

### **4.1 Carpet manufacturing**

During the manufacturing of textile floor coverings (carpets) it is not always possible to maintain equal colour nuances. Slight differences in colour can occur due to different dyeing methods, visual colour assessment, changes in manufacturing processes, different dates of completion, subsequent deliveries, etc.

### **4.2 Installation**

Textile floor coverings are intended to be installed according to the general installation guideline CEN/TS 14472-2 and to the manufacturer's installation manual.

It is recommended to install in one and the same room textile floor covering of the same production batch. The requirement for colour uniformity is restricted to one room and basically ends at the doors, unless otherwise agreed. For larger projects it is recommended to agree with the manufacturer an installation plan, so that the total amount can be subdivided into smaller, colour-equal production batches or a combination of colour-equal production batches.

The installer shall check the colour uniformity of the textile floor covering at the moment of installation.

When installing different sheets or carpet tiles in one room, the colour uniformity is only relevant when the pile direction for all parts is in the same direction, linear to each other. A different pile direction can cause a different colour impression.

## **5 Assessment of colour deviation**

Colour deviation shall be assessed by using the larger grey scales according to EN 20105-A02. The grey scales consist of five pairs of mat, grey fabrics. The five pairs represent the colour distances which correspond to the colour fastness grades 5, 4, 3, 2 and 1.

The first band of each pair is in neutral grey and the second band of the pair which represents fastness 5, is equal to the initial sample. The second bands of the other pairs represent, from 4 to 1, increasingly clear grey tones, so that each pair shows increasing contrasts or colour distances which have been determined in a colourimetric way. The colour difference can be determined by one or more of the following colour characteristic features: colour tone, colour depth and purity (brilliant).

During the assessment the colour deviation on the textile floor covering shall be compared with the different colour distances of the grey scales. The grey scale coming most closely to the colour deviation on the textile floor covering gives the result of the assessment. A result of colour fastness scale 5 is given when no colour deviation is observed.

The assessment shall be performed on an area representative for the complaint.

The assessment shall be performed by at least three different assessors. The median value of all assessors is reported as the final result of the assessment.

## **6 Requirements for acceptance**

In larger areas where more production batches are needed to cover the floor, limited deviations in colour tone are no reason for complaints if the overall image of the carpet is not substantially harmed.

When assessing colour deviations in new installations, attention is needed for the final application and the fully equipped room. The furnishing, artificial lighting and shades can cover a big part of the floor covering, resulting in a situation where the colour deviation is not visible anymore or will be no longer a relevant factor.

An observed colour difference corresponding to grade 4 on the grey scale is considered to be production-bound and is therefore an acceptable colour deviation.

If a colour difference corresponding to grade 3 on the grey scale is observed, the decision on the acceptance will depend on the degree to which the colour deviation harms the overall view.

An observed colour difference lower than grade 3 on the grey scale, is not acceptable.

## **7 Report**

The results of the colour deviation assessment shall be written in a report, indicating:

- a) the location of assessment;
- b) a description of the room situation;
- c) the number of assessors;
- d) the assessment result of each individual assessor;
- e) the median of all assessments.

## **Bibliography**

EN ISO 105-A01, *Textiles - Tests for colour fastness - Part A01: General principles of testing (ISO 105-A01)*





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