BS ISO 2424:2024

BSI Standards Publication

Textile floor coverings — Vocabulary

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National foreword

This British Standard is the UK implementation of ISO 2424:2024. It supersedes BS ISO 2424:2007, which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee PRI/60, Resilient and Laminate Floor Coverings.

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

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Fifth edition
2024-07

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Foreword

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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).

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This document was prepared by Technical Committee ISO/TC 219, *Floor coverings*.

This fifth edition cancels and replaces the fourth edition (ISO 2424:2007), which has been technically revised.

The main changes are as follows:

— rephrasing some words and definitions;

— adding some definitions.

A list of all parts in the ISO 2424 series can be found on the ISO website.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

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Textile floor coverings — Vocabulary

1 Scope

This document defines terms relating to textile floor coverings and categories of these products.

2 Normative references

There are no normative references in this document.

3 Terms and definitions

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at https://www.electropedia.org/

3.1
textile floor covering
system having a *use-surface* (3.2) composed of textile material and generally used for covering floors

Note 1 to entry: Textile floor coverings may be plain or patterned.

3.2
use-surface
part of a *textile floor covering* (3.1) directly exposed to traffic

3.3
substrate
base fabric
support fabric
construction, integral with the *use-surface* (3.2) and composed of one or more layers, which serves as a support for the use-surface

Note 1 to entry: The substrate can be built, for example, by a woven, non- or needled layer in case of a tufted floor covering or needled floor covering, or by a binding warp in case of a woven floor covering.

Note 2 to entry: The substrate can stabilize the dimensions and/or act as a cushion.

Note 3 to entry: Certain *textile floor coverings* (3.1) without *pile* (5.1) don't need to have a substrate distinct from the use-surface.

4 Terms related to categories of textile floor coverings as a function of their constructions

4.1
textile floor covering with pile
pile carpet
floor covering having a textile *use-surface* (3.2) to form a layer of yarns or fibres onto a *substrate* (3.3) which can be processed like *weaving* (4.1.1), *tufting* (4.1.2), *knitting* (4.1.3) or *needling* (4.1.6).

Note 1 to entry: For the definition of pile, see 5.1.

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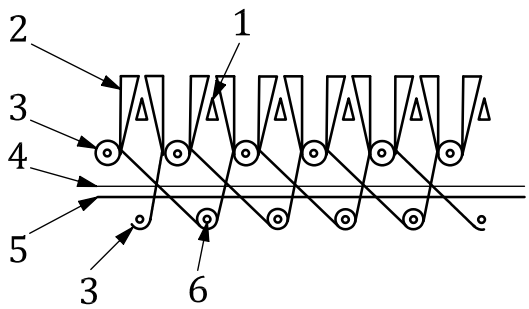
Note 2 to entry: The floor covering can have a defined use-surface and a backing substrate (heterogeneous), or a proportion of fibres that is consistent from surface to back (homogeneous).

4.1.1
woven textile floor covering with pile
woven pile carpet
pile carpet (4.1) produced on a weaving machine so that the *pile* (5.1) is bound by interlacing with backing yarns

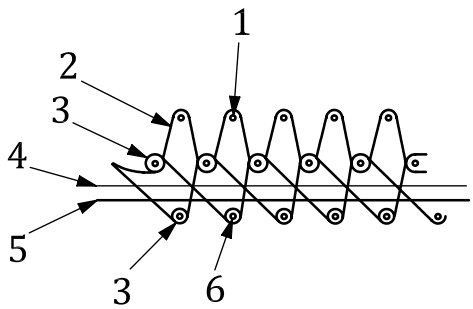
4.1.1.1
wire Wilton textile floor covering
a *pile carpet* (4.1) made by weft wise wire insertion on the full width of the weaving machine

Note 1 to entry: Examples are given in Figures 1 and 2.



Key
1 pile wire
2 cut pile
3 backing: chain, slack or binding warp
4 incorporated dead pile
5 backing: stuffer warp or tight warp
6 backing: weft

Figure 1 — Wire-Wilton-textile floor covering cut pile (warp ways cross-section)



Key
1 loop pile wire
2 loop pile yarn
3 backing: chain, slack or binding warp
4 incorporated dead pile
5 backing: stuffer warp or tight warp
6 backing: weft

Figure 2 — Wire Wilton-textile floor covering loop pile (warp ways cross-section)

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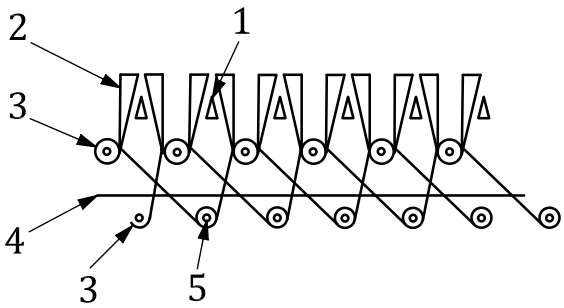
4.1.1.1.1
plain wire Wilton textile floor covering
pile carpet (4.1), generally of a single colour in the same warp course, in the production of which there is no provision for alternative selection of *pile* (5.1) yarns

Note 1 to entry: An example is given in Figure 3.



Key

1 pile wire
2 cut pile
3 backing: chain, slack or binding warp
4 backing: stuffer warp or tight warp
5 backing: weft

Figure 3 — Wire-Wilton-textile floor covering plain cut pile (warp ways cross-section)

4.1.1.1.2
patterned wire Wilton textile floor covering
pile carpet (4.1) produced on a weaving machine with a Jacquard or other patterning mechanism and having a design obtained by predetermined selection of required colour of *pile* (5.1) yarns from those available in each *broche* (6.4), other pile yarns remaining as incorporated *dead pile* (6.8) yarns in the *ground weave* (6.13)

Note 1 to entry: Examples are given in Figures 4 to 6.

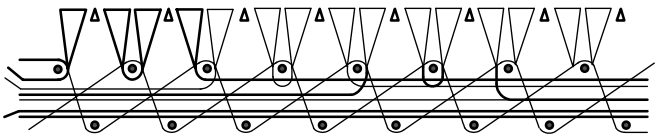


Figure 4 — 1/2 V-weave (two-shot weave) with pile not through to the back and with incorporated dead pile

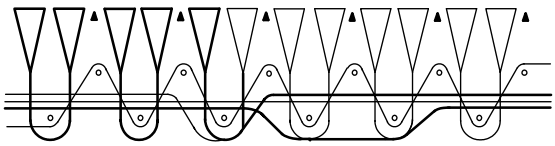


Figure 5 — 1/2 V-weave (two-shot weave) with pile through to the back and with incorporated dead pile

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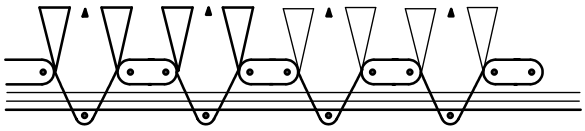
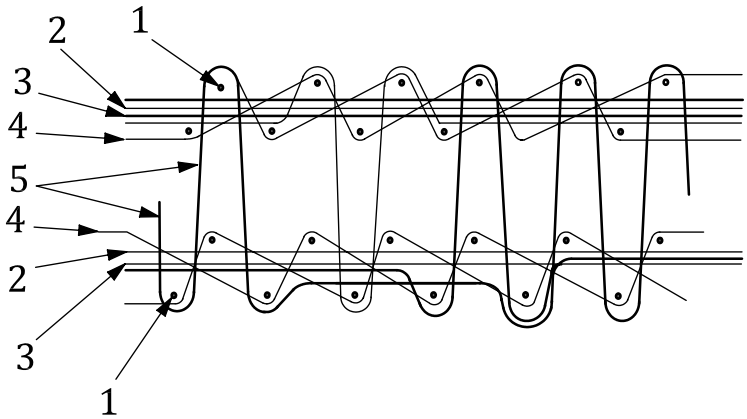


Figure 6 — 2/3 V-weave (three-shot weave) with pile not through to the back and with incorporated dead pile

4.1.1.2
face-to-face woven pile textile floor covering
pile carpet (4.1) made on a weaving machine that produces simultaneously, face-to-face, two *ground weaves* (6.13) joined by the *pile* (5.1) yarn, which are divided by the cutting motion of the knife producing a bottom *textile floor covering* (3.1) (BC) and a top carpet (TC)

Note 1 to entry: An example is given in Figure 7.

Note 2 to entry: In face-to-face textile floor coverings, three different weaving techniques are distinguished: the *single rapier weaving technique* (4.1.1.2.1), the *double rapier weaving technique* (4.1.1.2.2) and the *triple rapier weaving technique* (4.1.1.2.3).



Key

1 weft
2 backing: stuffer warp or tight warp
3 incorporated dead pile
4 backing: chain, slack or binding warp
5 pile

Figure 7 — Face-to-face textile floor covering (warp ways cross-section)

4.1.1.2.1
single rapier weaving technique
technique in which only one weft is introduced per weaving cycle so that, on the first weaving cycle, a shed is made for the top *carpet* (3.1) (TC) and, on the second weaving cycle, a shed is made for the bottom carpet (BC)

Note 1 to entry: The single rapier weaving technique also includes with no incorporated *dead pile* (6.8), in which case the dead pile yarn floats on the back of the bottom textile floor covering and is subsequently removed by a "scraping" process as part of the finishing process.

Note 2 to entry: Textile floor coverings woven with the single rapier technique have a pile row on every *pick* (6.11) (see Figure 8).

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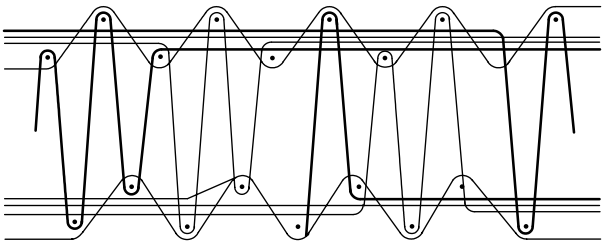

Figure 8 — 1/1 V-weave (one-shot weave) with pile through to the back and with incorporated dead pile

4.1.1.2.2
double rapier weaving technique
technique in which two wefts are inserted simultaneously per weaving cycle, one weft for the shed of the top *carpet* (3.1) (TC) and one weft for the shed of the bottom carpet (BC)

Note 1 to entry: Textile floor coverings woven with the double rapier technique have a *pile* (5.1) row on every two *picks* (6.11) (see Figures 9 and 10).

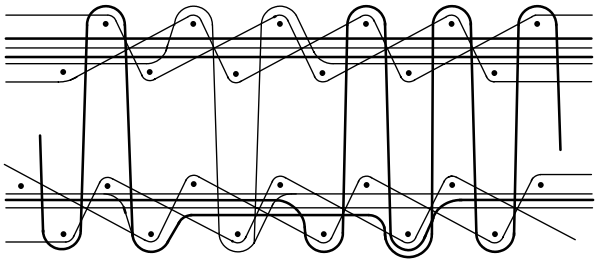

Figure 9 — 1/2 V-weave (two-shot weave) with pile through to the back and with incorporated dead pile

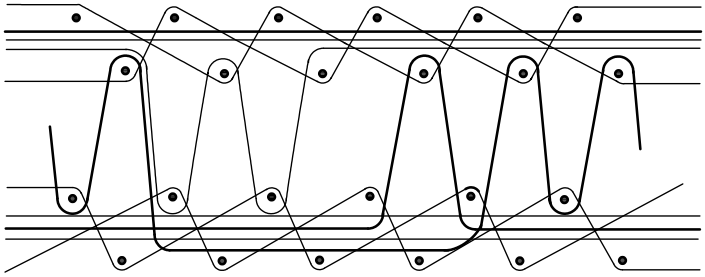

Figure 10 — 1/2 V-weave (two-shot weave) with pile not through to the back and with incorporated dead pile

4.1.1.2.3
triple rapier weaving technique
technique in which three wefts are inserted simultaneously per weaving cycle so that, on the first weaving cycle, two wefts are inserted in the shed of the top *carpet* (3.1) (TC) and one weft in the shed of the bottom carpet (BC) and, on the second weaving cycle, two wefts are inserted in the shed of the bottom carpet (BC) and one weft in the shed of the top carpet (TC)

Note 1 to entry: Textile floor coverings woven with the triple rapier technique have a *pile* (5.1) row every three *picks* (6.11), obtained in two machine revolutions (see Figure 11).

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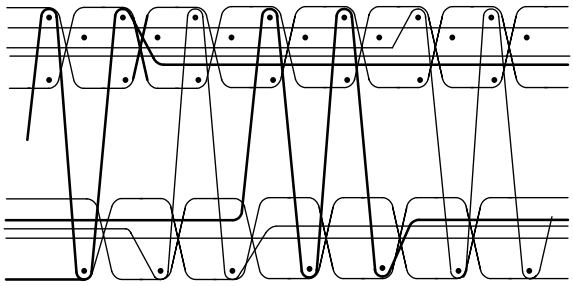


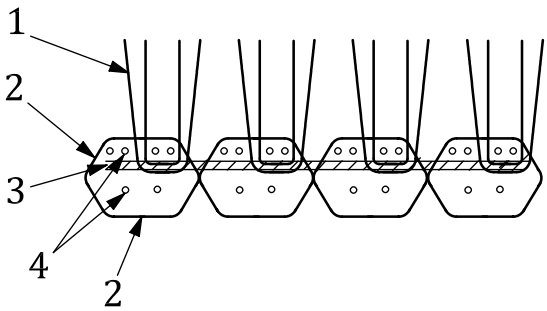
Figure 11 — 2/3 V-weave (three-shot weave) with pile through to the back and with incorporated dead pile

4.1.1.3
Axminster textile floor covering
cut pile (5.5) *textile floor covering* (3.1) produced by inserting, during weaving, successive rows of *tufts* (5.3) having colours arranged according to a predetermined order

Note 1 to entry: As a consequence of its weaving, this type of textile floor covering does not contain dead yarns.

4.1.1.3.1
spool Axminster textile floor covering
pile carpet (4.1) manufactured on a weaving machine, on which the *pile* (5.1) yarns of each weft row are wrapped on a separate spool according to the required design, the spools are prepared, one per each row of the design, in a preparatory process known as spool setting, the *tufts* (5.3) being separated from the yarns presented at the point of weaving after insertion in the *substrate* (3.3)

Note 1 to entry: An example is given in Figure 12.



Key

1 cut pile
2 chain warp
3 stuffer
4 weft

Figure 12 — Spool Axminster textile floor covering (warp ways section)

4.1.1.3.2
gripper Axminster textile floor covering
pile carpet (4.1), manufactured on a Jacquard weaving machine, in which the *tufts* (5.3) of yarn, cut after selection from appropriate bobbins in the creel, are inserted at the point of weaving by grippers

Note 1 to entry: An example is given in Figure 13. Figure 14 illustrates an alternative construction produced in this way, referred to as a Kardax construction.

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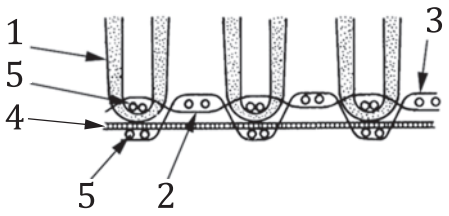
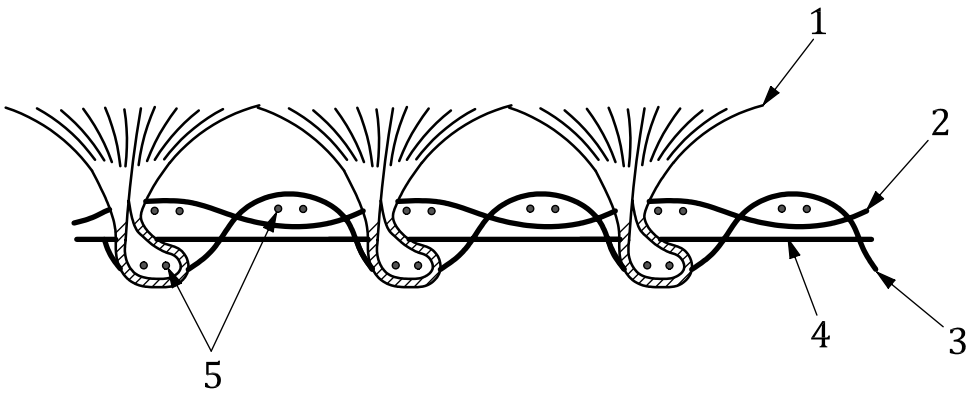


Key

1 cut pile
2 short chain
3 long chain
4 stuffer
5 weft

Figure 13 — Gripper Axminster textile floor covering (warp ways section)



Key

1 tufts
2 short chain
3 long chain
4 stuffer
5 weft

Figure 14 — Gripper Axminster textile floor covering (Kardax construction)

4.1.1.3.3
gripper-spool Axminster textile floor covering
pile carpet (4.1) manufactured on a weaving machine, in which the *pile* (5.1) yarn for each weft ways row is wound on a separate spool, as for spool Axminster weaving, and *tufts* (5.3) severed from the yarns are inserted at the point of weaving by grippers, as in gripper Axminster weaving

4.1.2
tufted textile floor covering with pile
tufted pile carpet
pile carpet (4.1) in which the *pile* (5.1) yarns are inserted into a previously manufactured *substrate* (3.3) by needles like sewing machine needles, and then secured by an adhesive or a mechanical process

Note 1 to entry: Examples are given in Figures 15 and 16.

Note 2 to entry: The yarn is caught by a hook below the cloth, forming a *loop* (5.2) when the needle moves upwards out of the substrate. A knife may be added at each looper assembly to cut the loops created by the interaction between the looper and the needle, thus forming open *tufts* (5.3) of yarn termed *cut pile* (5.5). A combination of both is possible.

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