

Reinforcement - Specifications for woven fabrics - Part 1: Designation

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EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN 13417-1:2002 sisaldab Euroopa standardi EN 13417-1:2001 ingliskeelset teksti.</p> <p>Käesolev dokument on jõustatud 19.04.2002 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN 13417-1:2002 consists of the English text of the European standard EN 13417-1:2001.</p> <p>This document is endorsed on 19.04.2002 with the notification being published in the official publication of the Estonian national standardisation organisation.</p> <p>The standard is available from Estonian standardisation organisation.</p>
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<p>Käsitlusala: This part of EN 13417 establishes a method of designation for woven fabrics which may be used as a basis for specifications of fabrics used for the reinforcement of plastics. This designation system applies to fabrics made from para-aramid, carbon, glass, polyethylene, polyester and ceramic fibre in the form of single yarns, plied yarns, cabled yarns, textured yarns, rovings, tows etc. and which are intended to provide reinforcement in plastic composite materials.</p>	<p>Scope: This part of EN 13417 establishes a method of designation for woven fabrics which may be used as a basis for specifications of fabrics used for the reinforcement of plastics. This designation system applies to fabrics made from para-aramid, carbon, glass, polyethylene, polyester and ceramic fibre in the form of single yarns, plied yarns, cabled yarns, textured yarns, rovings, tows etc. and which are intended to provide reinforcement in plastic composite materials.</p>
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Võtmesõnad: aramide fibres, carbon fibres, descriptions, fabrics, packages, packing, plastics, plastics fibre, polyesters, polyethylene, reinforcement fibres, reinforcing material, textile industry, woven fabrics, woven glass fibres

ICS 59.100.01

English version

Reinforcement - Specifications for woven fabrics - Part 1:
Designation

Renfort - Spécifications des tissus - Partie 1: Désignation

Verstärkung - Spezifikationen für Gewebe - Teil 1:
Bezeichnung

This European Standard was approved by CEN on 16 August 2001.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Management Centre or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.



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Foreword

This European Standard has been prepared by Technical Committee CEN/TC 249 "Plastics", the secretariat of which is held by IBN.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by April 2002, and conflicting national standards shall be withdrawn at the latest by April 2002.

EN 13417 consists of the following parts, under the general titre "Reinforcement – Specifications for woven fabrics":

- *Part 1 : Designation*
- *Part 2 : Methods of test and general requirements*
- *Part 3 : Specific requirements*

This standard includes a Bibliography.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

1 Scope

1.1 This Part 1 of EN 13417 establishes a method of designation for woven fabrics which may be used as a basis for specifications of fabrics used for the reinforcement of plastics.

1.2 This designation system applies to fabrics made from para-aramid, carbon, glass, polyethylene, polyester and ceramic fibre in the form of single yarns, plied yarns, cabled yarns, textured yarns, rovings, tows, etc. and which are intended to provide reinforcement in plastic composite materials.

The material used may be used on its own or in combination (hybrids).

1.3 The designation of a fabric is structured in a product hierarchy which includes several levels which determine families and sub-families of fabrics.

It is not intended that this hierarchy takes into account all the attributes of individual fabrics which may use different yarn types or different yarn counts. Neither is it intended to imply that woven fabrics having the same designation give necessarily the same performance.

This Part 1 of EN 13417 does not give engineering data, performance data or data which may be required to specify woven fabrics for a particular application or method of processing.

If such additional properties are required they shall be determined in accordance with the test methods specified in EN 13417-2.

2 Normative references

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies (including amendments).

EN 13417-1:2001 (E)

EN 13417-2; *Reinforcement – Specifications for woven fabrics – Part 2: Methods of test and general requirements*

EN 13417-3; *Reinforcement – Specifications for woven fabrics – Part 3: Specific requirements*

ISO 472, *Plastics – Vocabulary*.

3 Terms and definitions

For the purposes of this Part 1 of EN 13417 the terms and definitions given in ISO 472 apply. Additional terms are defined in Part 2 of this standard.

4 Designation System

The designation system for woven reinforcement fabrics is based on the following standardised pattern (see Note)

Designation				
Identity Block	Individual Item Block			
Standard Number Block	Data Block	Data Block	Data Block	Data Block
	1	2	3	4

It consists of an Identity Block comprising the European Standard number and an Individual Item Block. For unambiguous coding the Individual Item Block is subdivided into 4 data blocks comprising the following information:

- Block 1 : Identification of the reinforcing material type and grade
- Block 2 : Construction fabric properties
- Block 3 : Weight in g/m²
- Block 4 : Warp/weft ratio (used only for unidirectional, mixed and hybrid fabrics)

To ensure legibility:

- the description blocks shall be under square brackets;
- spaces shall be inserted between blocks;
- individual positions inside blocks shall be separated from each other by a stroke between two spaces;
- if a data block is not used, the block does not appear.

NOTE This standardised pattern is a modification of the frame text given in ISO 1043-2, adapted to the designation of these reinforcement products.

4.1 Data Block 1

In this data block the material type and grade are identified by letters according to Table 1.

In the case of combinations of different materials (hybrid or mixed fabrics), the different materials and grade shall be identified by their letters with each constituent separated by a comma. The materials shall appear in descending order of their content by weight in the fabric. For each constituent the letters shall be followed by a number equal to the percentage content by total weight rounded to the nearest 5 %.