

SVENSK STANDARD

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Specification for ancillary components for masonry –

Part 3: Bed joint reinforcement of steel meshwork

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Denna standard ersätter SS-EN 845-3:2013, utgåva 3.

The European Standard EN 845-3:2013+A1:2016 has the status of a Swedish Standard. This document contains the official English version of EN 845-3:2013+A1:2016.

This standard supersedes the Swedish Standard SS-EN 845-3:2013, edition 3.

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Denna standard är framtagen av kommittén för Murverk och Puts, SIS/TK 180.

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EUROPEAN STANDARD

EN 845-3:2013+A1

NORME EUROPÉENNE

EUROPÄISCHE NORM

July 2016

ICS 91.080.30

Supersedes EN 845-3:2013

English Version

Specification for ancillary components for masonry - Part 3: Bed joint reinforcement of steel meshwork

Spécifications pour composants accessoires de
maçonnerie - Partie 3: Treillis d'armature en acier pour
joints horizontaux

Festlegungen für Ergänzungsbauteile für Mauerwerk -
Teil 3: Lagerfugenbewehrung aus Stahl

This European Standard was approved by CEN on 21 March 2013 and includes Amendment 1 approved by CEN on 9 April 2016.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels

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European foreword

This document (EN 845-3:2013+A1:2016) has been prepared by Technical Committee CEN/TC 125 “Masonry”, the secretariat of which is held by BSI.

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of an identical text or by endorsement, at the latest by January 2017, and conflicting national standards shall be withdrawn at the latest by April 2018.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

This document includes Amendment 1 approved by CEN on 2016-04-09.

This document supersedes A1 EN 845-3:2013 A1.

The start and finish of text introduced or altered by amendment is indicated in the text by tags A1 A1.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s).

For relationship with EU Directive(s), see informative Annex ZA, which is an integral part of this document.

A1 *deleted text* A1

EN 845, *Specification for ancillary components for masonry*, consists of the following parts:

- *Part 1: Wall ties, tension straps, hangers and brackets*
- *Part 2: Lintels*
- *Part 3: Bed joint reinforcement of steel meshwork*

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

1 Scope

This European Standard specifies the requirements for masonry bed joint reinforcement for structural use (see 5.2.1) and for non-structural use (see 5.2.2).

Where products are intended for use in cavity wall construction, this European Standard covers only the performance of the meshwork as reinforcement in bed joints and not its performance as wall ties across the cavity.

This European Standard is not applicable to:

- a) products in the form of individual bars or rods;
- b) products formed from materials other than specified grades of austenitic stainless steel, austenitic ferritic stainless steel, zinc pre-coated steel sheet or zinc coated steel wire with or without organic coating.

NOTE Annex ZA refers only to welded wire meshwork intended for structural use referred to in 5.2.1 as there are no known regulated requirements for products of this family for non-structural use.

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.

EN 846-2, *Methods of test for ancillary components for masonry — Part 2: Determination of bond strength of prefabricated bed joint reinforcement in mortar joints*

EN 846-3, *Methods of test for ancillary components for masonry — Part 3: Determination of shear load capacity of welds in prefabricated bed joint reinforcement*

EN 10020, *Definition and classification of grades of steel*

EN 10088 (all parts), *Stainless steels*

EN 10143, *Continuously hot-dip coated steel sheet and strip — Tolerances on dimensions and shape*

EN 10244 (all parts), *Steel wire and wire products — Non-ferrous metallic coatings on steel wire*

EN 10245-1, *Steel wire and wire products — Organic coatings on steel wire — Part 1: General rules*

EN 10245-2, *Steel wire and wire products — Organic coatings on steel wire — Part 2: PVC finished wire*

EN 10245-3, *Steel wire and wire products — Organic coatings on steel wire — Part 3: PE coated wire*

EN 10346, *Continuously hot-dip coated steel flat products — Technical delivery conditions*

EN ISO 15630 (all parts), *Steel for the reinforcement and prestressing of concrete — Test methods*

3 Terms, definitions and symbols

3.1 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1.1

bed joint

mortar layer between the bed faces of masonry units

3.1.2

bed joint reinforcement

steel reinforcement that is prefabricated for building into a bed joint

3.1.3

bond strength

tensile load that can be resisted by a specified length of reinforcement in a masonry bed joint

3.1.4

characteristic yield strength

value of the yield strength above which 95 % of all the individual test results occur

3.1.5

cross-wires

wires which connect longitudinal wires

3.1.6

declared value

value for a product property, determined in accordance with this standard, that a manufacturer is confident of achieving bearing in mind the variability of the manufacturing process

3.1.7

element

complete length of bed joint reinforcement either in straight cut lengths or in a roll

3.1.8

anchorage length

minimum embedment of a length of bed joint reinforcement in mortar in order to achieve the full effectiveness of the reinforcement

3.1.9

longitudinal wire

wire placed parallel to the length of the masonry

3.1.10

meshwork

network created with welded or woven wires or as a result of expanding a strip with a series of parallel slits

3.1.11

profile height

maximum overall height (distance between the upper and lower surfaces at right angles to the length and width of the joint) of the embedded portion of the bed joint reinforcement

3.1.12

shear load capacity

mean value for sample of product specimens of the failure loads at the junction between two wires loaded in the direction of the longitudinal axis in the plane of the bed joint reinforcement

3.1.13

width

overall dimension in the plane of the bed joint reinforcement measured perpendicular to the longitudinal axis

3.1.14

wire

longitudinal cold drawn metal of any cross-sectional shape

3.1.15

wire size

diameter of a circle with an area equal to the cross-sectional area of the wire

3.2 Symbols

A_c	is the cross-sectional area of deformed plain wire, in mm ² ;
A_e	is the cross-sectional area of bed joint reinforcement, in mm ² ;
A_{gt}	is the percentage total elongation at maximum force, in %;
a	is the width of the bed joint reinforcement, in mm;
b	is the pitch of the cross-wire, in mm;
c	is the wire size of the longitudinal wires, in mm;
d	is the wire size of the cross-wires, in mm;
e	is the pitch of the longitudinal wires in woven wire meshwork, in mm;
f	is the aperture length of the expanded metal meshwork (centre to centre), in mm;
g	is the aperture width of the expanded metal meshwork (centre to centre), in mm;
l_s	is the length of a specimen of deformed plain wire or expanded metal meshwork, in mm;
l	is the length of an element of bed joint reinforcement as delivered by the manufacturer, in m;
m	is the mass of a specimen of deformed plain wire or expanded metal meshwork, in g;
ρ	is the nominal density of the material, in kg/m ³ ;
R_m	is the tensile strength, in N/mm ² ;
R_e	is the yield strength, in N/mm ² ;
R_{eH}	is the upper yield strength, in N/mm ² ;
$R_{p0,2}$	is the 0,2 % proof strength, non-proportional extension, in N/mm ² ;
$R_{e0,5}$	is the proof strength at a total extension of 0,5 %, in N/mm ² ;
t	is the profile height, in mm.