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Steel fabric for the reinforcement of concrete — Specification

ICS 77.140.15; 91.080.40

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British Standard

The preparation of this British Standard was entrusted by Technical Committee ISE/9, Steel for concrete reinforcement, to Subcommittee ISE/9/1, Bars, wire and fabric for concrete reinforcement, upon which the following bodies were represented:

British Coatings Federation
British Precast Concrete Federation
Concrete Society
Department of Transport — Highways Agency
Galvanizers Association
Institution of Structural Engineers
UK Certification Authority for Reinforcing Steels
UK Steel Association

This British Standard was published under the authority of the Standards Policy and Strategy Committee on 30 September 2005

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First published October 1985
First revision 30 September 2005

Amendments issued since publication

Amd. No.	Date	Comments
17105	30 April 2007	See foreword

The following BSI references relate to the work on this British Standard:
Committee reference ISE/9/1
Draft for comment
04/30109896 DC

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This British Standard has been prepared by Subcommittee ISE/9/1, and is a revision of BS 4483:1998, which will be withdrawn on 1 January 2006. This edition incorporates a full revision of the standard. All steel fabric conforming to this standard is to be made using ribbed bar in accordance with BS 4449:2005 with the exception of the wrapping fabrics D49 and D98 where BS 4482 may be used.

The start and finish of text introduced by Amendment No. 1 is indicated in the text by tags **A1** **A1**.

BS 4449:2005 grade B500A in sizes below 8 mm does not conform to BS EN 1992-1-1:2004 (Eurocode 2).

This standard has been written so that it can be used in conjunction with BS EN 10080:2005. Definitions, symbols, manufacturing processes, routine inspection and testing, test methods, identification of the manufacturer and technical class and verification in the case of dispute are all taken from BS EN 10080:2005.

BS EN 10080:2005 does not define steel grades or technical classes, and requires that these should be defined in accordance with BS EN 10080:2005, by specified values of R_e , R_m/R_e , A_{gt} , $R_{e,act}/R_{e,nom}$ (where appropriate), fatigue strength, bend performance, weldability, bond strength, tolerances and dimensions.

BS EN 10080:2005 contains an informative Annex ZA, which describes how that standard can be used for the purposes of CE marking of reinforcing steels. Annex ZA and 8.2, 8.3 and 8.4 of BS EN 10080:2005 relate to the role of the notified body in assessing products for an EC certificate of conformity, and as such are not included in this standard. It is not a requirement of this British Standard that materials produced to it should meet the requirements for CE marking.

Where CE marking is required for the purposes of complying with the EU Construction Products Directive, reference ought to be made to BS EN 10080:2005.

It is recommended that purchasers specify reinforcing steel that has been manufactured and supplied to a recognized third party product certification scheme. 8.2 specifies the determination of the long term quality level under such a scheme. As an alternative, Annex B provides a batch testing method for material which has not been produced under such a scheme.

This standard comes into effect on 1 January 2006.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

Compliance with a British Standard cannot confer immunity from legal obligations.

Summary of pages

This document comprises a front cover, an inside front cover, pages i and ii, pages 1 to 13 and a back cover.

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1 Scope

This British Standard specifies requirements for sheets of factory-made machine-welded steel fabric for the reinforcement of concrete, manufactured from ribbed bars conforming to BS 4449:2005, or manufactured from wire conforming to BS 4482 for wrapping fabrics D49 and D98.

NOTE Where the term "bar" is used in this standard, it includes bar or decoiled product conforming to BS 4449:2005. For clarity only, it can also include wire conforming to BS 4482 for wrapping fabrics only.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

BS 4449:2005, *Steel for the reinforcement of concrete — Weldable reinforcing steel — Bar, coil and decoiled product — Specification.*

BS 4482, *Steel wire for the reinforcement of concrete products — Specification.*

BS 8666, *Scheduling, dimensioning, bending and cutting of steel reinforcement for concrete — Specification.*

BS EN 10080:2005, *Steel for the reinforcement of concrete — Weldable reinforcing steel — General.*

BS EN ISO 15630-1, *Steel for the reinforcement and prestressing of concrete — Test methods — Part 1: Reinforcing bars, wire rod and wires.*

BS EN ISO 15630-2, *Steel for the reinforcement and prestressing of concrete — Test methods — Part 2: Welded fabric.*

3 Terms and definitions

3.1

welded fabric

arrangement of longitudinal and transverse bars of the same or different nominal diameter and length that are arranged substantially at right angles to each other and factory electrical resistance welded together by automatic machines at all points of intersection

3.2

characteristic value

value of a material or product having a prescribed probability of not being attained in a hypothetical unlimited test series

3.3

minimum value

value below which no test result shall fall

3.4

maximum value

value which no test result shall exceed

3.5

batch

quantity of welded fabric of one type produced by one manufacturer and presented for examination at any one time

3.6

factory production control

permanent internal control of production performed by the manufacturer

3.7

standard property

property which is part of the routine inspection and test requirements for every test unit