

Specification for

Cold reduced steel wire for the reinforcement of concrete

ICS 77.140.15; 91.080.40

Committees responsible for this British Standard

The preparation of this British Standard was entrusted by the Iron and Steel Standards Committee (ISM/-) to Technical Committee ISM/9 upon which the following bodies were represented:

- British Independent Steel Producers' Association
- British Precast Concrete Federation Ltd.
- British Reinforcement Manufacturers' Association
- British Steel Industry
- British Steel Industry — Wire Section
- Cement and Concrete Association
- Concrete Society
- County Surveyors' Society
- Department of the Environment (Property Services Agency)
- Department of Transport (Highways)
- Electricity Supply Industry in England and Wales
- Federation of Civil Engineering Contractors
- Greater London Council
- High Yield Bar Development Association
- Institution of Civil Engineers
- Institution of Structural Engineers
- UK Certification Authority Reinforcing Steels

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Foreword

This British Standard has been prepared under the direction of the Iron and Steel Standards Committee and supersedes BS 4482:1969 which is withdrawn. This standard reflects developments since 1969 and aligns the property requirements of steel for the reinforcement of concrete with those specified in other current standards for these materials. In particular, the requirements have been aligned with the principal requirements of BS 4449 and BS 4461 relating to bar reinforcement. All reinforcing steels supplied in accordance with this standard are readily weldable, providing that the requirements of BS 5135 are observed.

Purchasers ordering to this standard are advised to specify in their purchasing contract that the supplier operates a quality system in compliance with BS 5750-2 to ensure to their satisfaction that products claiming to comply with this standard consistently achieve the required level of quality.

NOTE A new British Standard on the welding of reinforcement is in preparation and, until it becomes available, the requirement of BS 5135 together with the reinforcement manufacturer's recommendation should be observed.

A British Standard does not purport to include all the necessary provisions of a contract. Users of British Standards are responsible for their correct application.

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Summary of pages

This document comprises a front cover, an inside front cover, pages i and ii, pages 1 to 11 and a back cover.

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1 Scope

This British Standard specifies requirements for cold reduced plain and deformed steel wire used for the reinforcement of concrete and for the manufacture of steel fabric in accordance with BS 4483.

Wire that may be used for the prestressing of concrete and wire used for ties, lifting and other general engineering or industrial purposes is not included in this standard.

The nominal wire size range specified in this standard is 4 mm to 12 mm.

NOTE The titles of the publications referred to in this standard are listed on the inside back cover.

2 Definitions

For the purposes of this British Standard the following definitions apply.

2.1

batch

any quantity of finished wire of one type and size, produced by one manufacturer or supplier, presented for examination at any one time

2.2

bundle

a number of lengths properly bound together

2.3

coil

one continuous length of wire wound into spiral rings

2.4

deformed wire

a wire with surface characteristics designed to increase its bond with concrete

2.5

length

a piece of nominally straight wire cut to a specified length

2.6

nominal size

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

2.7

nominal density

the value of 0.007 85 kg/mm² per metre run taken for the purpose of converting a length and cross-sectional area of a wire to its mass

2.8

rib

a protrusion on the outside of the wire designed to increase its bond with concrete

2.9

size

the nominal size of a wire in millimetres

2.10

wire

a steel product of any form of cross section produced by cold reduction of an as-rolled rod

2.11

yield stress

the stress measured during the tensile test when the total extension of the gauge length is 0.43 %