

SINGAPORE STANDARD

**Specifications for steel for the reinforcement of
concrete**

– Part 2 : Ribbed bars (Steel grade 500)

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Foreword

The Singapore Standard Specification for 'Steel for the reinforcement of concrete' was prepared by the Technical Committee on Steel under the direction of the Building Materials Product Standards Committee.

It is a revised edition of SS 2 : Part 3 : 1987 (formerly known as SS 2 : 1987) and consists of the following two parts:

- Part 1. Plain bars (Steel grade 300)
- Part 2. Ribbed bars (Steel grade 500)

It is based on ISO 6935 'Steel for the reinforcement of concrete - Part 2 : Ribbed bars'. Modifications to certain areas of the ISO Standard were made to suit local practice. These areas include bar size and bar grade.

This standard is released to allow time for the designers in the industry to introduce any necessary changes. The continued relevance of SS 2 : Part 3 : 1987 will be reviewed when CP 65 – 'Code of practice for structural use of concrete' is next reviewed.

Acknowledgement is made for the use of information from ISO.

Annexes A to C are for information only. Included in Annex B (Informative) is a specification to limit ionising radiation from steel for the reinforcement of concrete. The specification is introduced to address concerns of possible radioactive contamination during the manufacturing process and the risk to health through exposure to radioactivity from the finished steel product.

Attention is drawn to the possibility that some of the elements of this Singapore Standard may be the subject of patent rights. Enterprise Singapore shall not be held responsible for identifying any or all of such patent rights.

NOTE

1. *Singapore Standards (SSs) and Technical References (TRs) are reviewed periodically to keep abreast of technical changes, technological developments and industry practices. The changes are documented through the issue of either amendments or revisions.*
2. *An SS or TR is voluntary in nature except when it is made mandatory by a regulatory authority. It can also be cited in contracts making its application a business necessity. Users are advised to assess and determine whether the SS or TR is suitable for their intended use or purpose. If required, they should refer to the relevant professionals or experts for advice on the use of the document. Enterprise Singapore shall not be liable for any damages whether directly or indirectly suffered by anyone or any organisation as a result of the use of any SS or TR.*
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Specification for steel for the reinforcement of concrete - Part 2 : Ribbed bars (Steel grade 500)

1 Scope

This part of SS 2 specifies technical requirements for ribbed bars designed for reinforcement in ordinary concrete structures and for non-prestressed reinforcement in prestressed concrete structures.

One grade of steel is defined. The grade, RB 500W, is readily welded by conventional welding procedures.

This part of SS 2 applies to hot-rolled steel without subsequent treatment and to hot-rolled steel with controlled cooling and tempering. The production process is at the discretion of the manufacturer.

It also applies to reinforcement supplied in coil form. The requirements of this part of SS 2 apply to the straightened product.

Ribbed bars produced from finished products, such as plates and railway rails, are excluded. Steel bars for use as lifting hooks are also not included.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this part of SS 2. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this part of SS 2 are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below.

ISO 404 : 1992	Steel and steel products - General technical delivery requirements.
ISO 10144 : 1991	Certification scheme for steel bars and wires for the reinforcement of concrete structures.
ISO 14284 : 1996	Steel and iron - Sampling and preparation of samples for the determination of chemical composition.
SS 427 : 1998	Steel bars for reinforcement of concrete - Bend and rebend tests.
SS 456 : 1999	Metallic materials - Tensile testing at ambient temperature.