



BSI Standards Publication

**Specification for 2.5%  
nickel-chromium-  
molybdenum (high carbon)  
steel billets, bars, forgings  
and parts  
(1 160 – 1 310 MPa: limiting  
ruling section 155 mm)**

**Publishing and copyright information**

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### Summary of pages

This document comprises a front cover, an inside front cover, pages i to ii, pages 1 to 6, an inside back cover and a back cover.

## Foreword

### Publishing information

This British Standard is published by BSI Standards Limited, under licence from The British Standards Institution, and came into effect on 31 December 2014. It was prepared by Panel ACE/61/-/15, *Steels for aerospace purposes*, under the authority of Technical Committee ACE/61, *Metallic materials for aerospace purposes*. A list of organizations represented on this committee can be obtained on request to its secretary.

### Supersession

This British Standard supersedes BS 2S 98:1964, which is withdrawn.

### Information about this document

This is a full revision of the Standard, and introduces the following principal changes:

- the requirements are stated in tabular format in accordance with BS EN 4500-1 and BS EN 4500-5;
- requirements are added for forgings in the softened condition (designation S 98G);
- limiting ruling section is increased from 150 mm to 155 mm;
- reference is made to the latest edition of BS 7100; and
- properties and dimensions are given in SI units.

### Hazard warnings

**WARNING.** This British Standard calls for the use of substances and/or procedures that can be injurious to health if adequate precautions are not taken. It refers only to technical suitability and does not absolve the user from legal obligations relating to health and safety at any stage.

### Presentational conventions

The provisions of this standard are presented in roman (i.e. upright) type. Its requirements are expressed in sentences in which the principal auxiliary verb is "shall".

*Commentary, explanation and general informative material is presented in smaller italic type, and does not constitute a normative element.*

### Contractual and legal considerations

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.**

## 1 Scope

This British Standard specifies requirements for 2.5% nickel-chromium-molybdenum (high carbon) steel supplied in the following forms, and as parts.

- Forging stock: softened, designation S 98A.
- Forgings: hardened and tempered, designation S 98C.
- Forgings: softened, designation S 98G.
- Black bars for machining: hardened and tempered, designation S 98B.
- Black bars for machining: softened, designation S 98E.
- Bright bars for machining: hardened and tempered, designation S 98D.
- Bright bars for machining: softened, designation S 98F.

## 2 Normative references

The following British Standard, in whole or in part, is normatively referenced in this document and is indispensable for its application. As this is an undated reference, the latest edition of this referenced British Standard (including any amendments) applies.

BS S 100, *Procedure for inspection, testing and acceptance of wrought steels (other than plate, sheet, strip and tube)*

## 3 Technical requirements

3.1 Material to this standard shall conform to Tables 1 and 2.

*NOTE* The format and symbols used in Table 1 and Table 2 are derived from BS EN 4500-1 and BS EN 4500-5.

3.2 One top sample shall be taken from each ingot for sulfur printing or deep etching tests.

3.3 The material shall be overall dressed at a suitable stage in manufacture.

3.4 Parts hardened and tempered after machining shall conform to Section 1 and Section 7 of BS S 100.

3.5 Parts shall be supplied in the hardened and tempered condition.