

Swaged collar grooved rivets —

**Part 1: Specification for sizes up to and
including 10 mm diameter**

Confirmed
January 2010

Committees responsible for this British Standard

The preparation of this British Standard was entrusted to Technical Committee GME/6, Rivets, upon which the following bodies were represented:

- British Friction Materials Council
- British Industrial Fasteners Federation
- British Steel Industry (Wire Section)
- Institution of Structural Engineers
- Ministry of Defence
- National Association of Fastener Stockholders
- Society of Motor Manufacturers and Traders Limited

This British Standard, having been prepared under the direction of the Engineering Sector Board, was published under the authority of the Standards Board and comes into effect on 15 December 1995

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The following BSI references relate to the work on this standard:
Committee reference GME/6
Draft for comment 94/705723 DC

ISBN 0 580 24264 1

Amendments issued since publication

Amd. No.	Date	Comments

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Foreword

This Part of BS 7805 has been prepared by Technical Committee GME/6. It defines installed swaged collar grooved rivets by dimensions, materials of manufacture and performance for general engineering purposes.

Further Parts of this standard are in preparation for other diameters up to and including 32 mm diameter.

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 8, an inside back cover and a back cover.

This standard has been updated (see copyright date) and may have had amendments incorporated. This will be indicated in the amendment table on the inside front cover.

1 Scope

This Part of BS 7805 specifies the materials of manufacture, hole diameter, the range of joint thickness and performance of installed swaged collar grooved rivets with nominal shank diameters from 4.8 mm to 10 mm inclusive, and either a brazier, truss or countersunk head.

2 Normative references

This Part of BS 7805 incorporates, by reference, provisions from specific editions of other publications. These normative references are cited at the appropriate points in the text and the publications are listed on the inside back cover. Subsequent amendments to, or revisions of, any of these publications apply to this British Standard only when incorporate in it by updating or revision.

3 Definitions

For the purposes of this Part of BS 7805 the following definitions apply.

3.1

grip g_t

the maximum and minimum total thickness of the work pieces to be joined together

3.2

grip capability g_r

the maximum and minimum total thickness of work pieces to be joined by a particular diameter of swaged collar grooved rivet

3.3

tensile load

the load which the rivet is capable of withstanding prior to failure in tension, when measured under test conditions

3.4

shear load

the load which the rivet is capable of withstanding prior to failure in shear, when measured under test conditions

3.5

hole size

the diameter of the hole in the work pieces to be joined

3.6

collarside protrusion S

protrusion of the fractured surface of the pin above the surface of the collar side of the joint

4 Materials

Swaged collar grooved rivets shall be manufactured from the materials listed in Table 1. The materials shall be identified by the designation of the appropriate combination of pin/collar material required (see clause 9).

5 Finishes

Carbon steel pin and collars shall be zinc plated and passivated in accordance with BS 7371-3:1993 Zn5A, except in the region of pin breaker grooves where the zinc plating should have a minimum thickness of $2.5 \mu\text{m}$.

Aluminium alloy pins and collars shall be self finished.

Stainless steel pins shall be self finished.

At the discretion of the supplier stainless steel collars shall either be self finished or zinc plated in accordance with BS 7371-3.

NOTE A variety of finishes other than those specified above are available for special applications by agreement between the purchaser and manufacturer. These are outside the scope of this standard.

6 Dimensions

The dimensions of installed swaged collar grooved rivets shall be as given in Table 2 and Figure 1.

Table 1 — Pin/collar material combinations

Designation	Pin material	Collar material
A	Steel 0.42 % carbon, maximum	Steel 0.1 % carbon, maximum
B	Aluminium alloy BS 1473:1972, grade 6061	Aluminium alloy BS 1473:1972, grade 6061
C	Aluminium alloy BS 1470:1987, grade 2024	Aluminium alloy BS 1473:1972, grade 6061
D	Stainless steel 300 series	Stainless steel 300 series
E	Stainless steel 300 series	Stainless steel 400 series