

Stainless steel studding

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Stainless steel studding, (also known as all-thread) is a length of bar threaded for its full length. The relevant British Standard is BS EN ISO 3506-1: 1998 "Mechanical properties of corrosion-resistant stainless steel fasteners, Part 1. Bolts, screws and studs"

The designation of material consists of two blocks separated by a hyphen. The first block is a letter showing the type of steel (A = austenitic), and a digit showing the chemical composition. The second block is a value = 1/10th of the tensile strength.

There are two main classifications of stainlessness/strength:

A2-70 indicates austenitic steel, cold worked minimum 700 N/mm² tensile strength

A4-80 indicates austenitic steel, high strength minimum 800 N/mm² tensile strength

A2 is the general grade suitable for most precast work. It should not however be specified for use in areas with high chlorine content such as swimming pools or seawater. In these cases A4-70 should be specified.

A classification of A2-70 is the 'standard'. Whilst A2-80 and A4-80 are theoretically possible, they would be 'special' and should not be specified.

As the studding does not have a head, and may be cut to any length, there is no way of marking to identify grades etc. It is recommended to specify a minimum of A2-70 on all paperwork, and higher if required by the design.

Unless the supply of grade A4-80 material can be guaranteed through the supply chain, calculations should be based on the lower A2-70 grade, even if the higher grade is specified.

The normal thread is an ISO metric coarse thread.