

# S690QL High Yield Strength Steel

Quality S690 steel available in plate cut to your sizes.

## **S690QL steel plate stockholders and suppliers, delivering to the whole of the UK.**

S690QL S690QL1 is a quenched and tempered high strength steel commonly supplied as plate. With its high yield of minimum 690MPa it offers better strength than standard carbon steel grades. S690 has good forming and welding qualities. This grade offers good impact properties at sub zero temperatures.

### Form of Supply

West Yorkshire Steel are stockholders and suppliers of S690 in plate which can be [flame cut](#) cut to your required sizes.

### Applications

With its high yield and high tensile properties S690 is used for many applications and structures where weight savings are required. Popular in the mining, agricultural and construction industries for applications such as dumper bodies and chassis, lifting equipment, cranes and jaw crushers



Contact our experienced sales team who will assist you with your enquiry.

- Plate

## Typical Analysis

Carbon	0.20% max	Chromium	1.50% max
Manganese	1.70% max	Nickel	2.00% max
Silicon	0.80% max	Molybdenum	0.60% max
Phosphorous	0.02% max	Sulphur	0.01% max

## Forming

Bending and forming is possible using suitably powerful equipment. When bending transversal to the rolling direction it is recommended to form to a maximum of 2 x thickness. For longitudinal to the rolling direction a maximum of 3 x thickness is recommended. S690 is not ideally suited for hot forming over 600°C. Forming at over this temperature can have an effect on the mechanical properties of the steel and re hardening and tempering may be required.

## Welding

With its low carbon content S690 is suitable for welding. Welding areas should be cleaned of any grease and rough edges, pre heating is required. We recommend you contact your welding consumables supplier who should provide you full assistance and information on welding S690 steel.

## Typical Mechanical Properties

Plate Size mm	Tensile N/mm <sup>2</sup>	Yield N/mm <sup>2</sup>	Elongation
Up to 50	58-56	56-54	55-53
50 to 100	58-56	56-54	55-53
over 100	58-56	56-54	55-53

## Typical Impact Properties

Steel Name	Sample Direction	0°C	-20°C	-40°C	-600°C
S690QL	Longitudinal	50J	40J	30J	-
	Transverse	35J	30J	27J	-
S690QL1	Longitudinal	60J	50J	40J	30J
	Transverse	40J	35J	30J	27J

## Certification

S690 high yield strength steel is available with a BS EN 10204 3.1 mill certificate, please request when placing any orders.

## Quality Assured Supply

S690QL/QL1 tool steel is supplied in accordance with our ISO 9001:2015 registration.