

### Engineering Steel

#### Applications

- Nuts
- Bolts
- Studs
- Hydraulic fittings
- Precision machined components

#### Product Description

EN1A is a free cutting mild engineering steel which is suitable for high production use in both automatic lathes and CNC machines, and is available in both leaded (+Pb) and non-leaded. Used specifically in the production of repetition turned parts, EN1A is an ideal material for the production of fittings including nuts, bolts and studs, especially if intricate drilling and machining ops are required. The material is supplied in the untreated and cold finished condition. EN1A can also be supplied with added lead content for enhanced machinability.

#### Weldability

Moderate.

#### Key features:

- Ideal for repetitively turned components
- Used in intricate drilling & machining operations
- Can be case hardened for improved wear resistance
- Superior finish
- Reasonable strength and ductility

#### Machinability

Excellent machinability

#### Availability

Round bar, flat bar, square bar, hexagon and sheet

#### Related material specifications

BS970: 1955	EN1A
BS970/PD970:	230M07
1970 onwards	
European	9SMn28, BS En 11SMn30
Werkstoff No.	1.0715
US SAE (AISI)	1213, 1215

#### Chemical Composition (weight %)

	C	S	Mn	S	P	Pb (where specified)
min.			0.90	0.25		0.15
max.	0.15	0.40	1.30	0.35	0.07	0.35

#### Mechanical Properties (cold drawn condition)

<b>Max Stress</b>	370-480 n/mm <sup>2</sup> Min	dependent on ruling section
<b>Yield Stress</b>	240-400 n/mm <sup>2</sup> Min	dependent on ruling section
<b>0.2% Proof Stress</b>	225-360 n/mm <sup>2</sup> Min	dependent on ruling section
<b>Elongation</b>	6-10% Min	dependent on ruling section

### Technical Assistance

Our knowledgeable staff backed up by our resident team of qualified metallurgists and engineers, will be pleased to assist further on any technical topic.

#### UK Service Centres:

Smiths Belfast	02895 908 897	Smiths Leeds	0113 307 5167
Smiths Biggleswade	01767 604 704	Smiths Manchester	0161 794 8650
Smiths Birmingham	0121 728 4940	Smiths Norwich	01603 789 878
Smiths Bristol	0117 971 2800	Smiths Nottingham	0115 925 4801
Smiths Chelmsford	01245 466 664	Smiths Redruth	01209 315 512
Smiths Gateshead	0191 469 5428	Smiths Verwood	01202 824 347
Smiths Horsham	01403 261 981	Main Office	0845 527 3331

#### Quality & Testing:



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