

### Bronze Alloy

#### Typical Applications

- Aerospace Components
- Marine hardware
- Thrust washers
- Worm gears
- High strength fasteners
- Heavy duty bushes & bearings
- Pump & Valve components
- Engine components

#### Product Description

BS B23 is mainly used in aerospace engineering but is also used in the marine and chemical sectors due to its excellent resistance to corrosion and erosion in seawater as well as other chloride containing environments. It is another wrought version of the 10/5/5 aluminium bronze and is used when the commercial CA104 is deemed not fit for purpose. BS B23 is also known for its high strength and excellent shock and wear resistance whilst being able to retain its properties at cryogenic temperatures.

#### Weldability

Good.

#### Related material specifications

- DTD197A • CA104 (commercial) • CW307G (commercial)

#### Key features

- Excellent corrosion and erosion resistance
- Good strength & toughness
- Excellent retention of properties at cryogenic temperatures
- Good resistance to shock loading
- High wear & abrasion resistance

#### Availability

Round bar, hexagon, flat bar.

#### Cut to size capability

There are thirty power saws within the Smiths group including a fully automated magazine feed CNC rod blanking line. We can economically cut from one off blanks to the largest production run for immediate or just in time deliveries.

#### Corrosion Resistance

Excellent

#### Machinability

Good / fair.

#### Chemical Composition (weight %)

	Cu	Al	Ni	Fe	Mn	Total Impurities
min	Rem	8.50	4.00	4.00		
max	Rem	11.00	5.50	5.00	0.50	0.50

#### Mechanical Properties

Diameter	6-18mm incl.	>18-80mm incl.	>80-100mm	>100mm (4")
UTS	700 N/mm <sup>2</sup>	700 N/mm <sup>2</sup>	695 N/mm <sup>2</sup>	650 N/mm <sup>2</sup>
0.2% Proof Strength	400 N/mm <sup>2</sup>	385 N/mm <sup>2</sup>	385 N/mm <sup>2</sup>	320 N/mm <sup>2</sup>
0.1% Proof Strength	385 N/mm <sup>2</sup>	385 N/mm <sup>2</sup>	385 N/mm <sup>2</sup>	310 N/mm <sup>2</sup>
Elongation	15%	15%	15%	15%
Hardness	188.268 or 179-255			

#### 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 Biggleswade **01767 604 704**  
 Smiths Birmingham **0121 728 4940**  
 Smiths Bristol **0117 971 2800**  
 Smiths Chelmsford **01245 466 664**  
 Smiths Gateshead **0191 469 5428**  
 Smiths Horsham **01403 261 981**

Smiths Leeds **0113 307 5167**  
 Smiths Manchester **0161 794 8650**  
 Smiths Norwich **01603 789 878**  
 Smiths Nottingham **0115 925 4801**  
 Smiths Redruth **01209 315 512**  
 Smiths Verwood **01202 824 347**  
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#### Quality & Testing:



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