



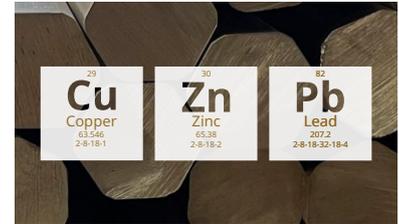
**Adinath**  
Create, Enhance & Sustain

# IS:319 Grade-I:FREE MACHINING BRASS

## Specification Sheet

### DESCRIPTION

IS 319 Free Cutting Grade I is the standard grade across the Indian Subcontinent for Free Machining Brass. It is widely used owing to its suitability for high-speed machining operations and also for the manufacturing of complex parts. The ease of brazing/soldering, high corrosion resistance combined with its good strength, and a machinability rating of 100% makes it an ideal choice of application in a wide range of brass components throughout the industry.



### CHEMICAL COMPOSITION

Element	Cu	Fe	Zn	Pb	Oi
Min (%)	56.00	-	Balance	2.00	-
Max (%)	59.00	0.35		3.50	0.70

Note: Ni includes Co; Cu+ named elements >= 99.5%; Unless otherwise noted, single values represent maximums.

### SHAPE



**SOLID ROUND BARS**  
Size Range :  
Dia 5 mm up to 120 mm



**SOLID HEX BARS**  
Size Range :  
A/F 5 mm up to 100 mm



**SOLID SQUARE BARS**  
Size Range :  
A/F 5 mm up to 90 mm



**SOLID RECTANGLE BARS**  
Size Range :  
A/F 6 x 8 mm up to 100 x 50 mm



**HOLLOW BARS**  
Outer Diameter : In Round & Hex  
Size Range : 24 mm up to 110 mm  
Outer Diameter : In Square  
Size Range : 24 mm up to 90 mm  
Inner Diameter : Round  
Size Range : 12 mm up to 80 mm



**PROFILES & SECTIONS**  
According to customer drawing



**BAR LENGTH**  
Length : Up to 4 Meters  
Delivery Condition : As Extruded or Cold Drawn

**STRAIGHT KNURLING**



**CROSS KNURLING**



Straight Knurling & Cross Knurling will be available upon shape & size Feasibility of Brass Rod

# IS:319 Grade-I:FREE MACHINING BRASS



## MECHANICAL PROPERTIES

Round (Dia)				
Range (mm)	UTS Min (MPA)	PS Min (MPA)	Elongation Min (%)	Hardness (HRB)
Over 6 to 12 Inclusive	405	-	4	68 to 82
Over 12 to 25 Inclusive	395	-	6	66 to 81
Over 25 to 50 Inclusive	355	-	12	61 to 76
Over 50 to 75 Inclusive	325	-	17	52 to 72
Hex (A/F)				
Range (mm)	UTS Min (MPA)	PS Min (MPA)	Elongation Min (%)	Hardness (HRB)
Over 6 to 12 Inclusive	405	-	4	68 to 82
Over 12 to 25 Inclusive	395	-	6	66 to 81
Over 25 to 50 Inclusive	355	-	12	61 to 76
Over 50 to 75 Inclusive	325	-	17	52 to 72
Square (A/F)				
Range (mm)	UTS Min (MPA)	PS Min (MPA)	Elongation Min (%)	Hardness (HRB)
Over 6 to 12 Inclusive	405	-	4	68 to 82
Over 12 to 25 Inclusive	395	-	6	66 to 81
Over 25 to 50 Inclusive	355	-	12	61 to 76
Over 50 to 75 Inclusive	325	-	17	52 to 72
Rectangle				
Range (mm)	UTS Min (MPA)	PS Min (MPA)	Elongation Min (%)	Hardness (HRB)
Over 6 to 12 Inclusive	405	-	4	68 to 82
Over 12 to 25 Inclusive	395	-	6	66 to 81
Over 25 to 50 Inclusive	355	-	12	61 to 76

## PACKING



-  PVC Pipe Packing for Small Diameter Rods.
-  Hessian Cloth Packing.
-  Wooden Box Packing as per Customer requirements.

# IS:319 Grade-I:FREE MACHINING BRASS



## FABRICATION PROPERTIES

Soldering	Brazing	Machinability Rating
Excellent	Good	100

## TYPICAL USES

Product Category	Product
Architecture	Terrazzo Strip.
Automotive	Fluid Connectors, Sensor Bodies, Thermostat Parts, Threaded Inserts for Plastic.
Builders Hardware	Fittings, Hardware, Lock Bodies.
Consumer	Hot Combs (to Straighten Hair).
Fasteners	Bolt, Nuts, Screws.
Industrial	Adapters, Automatic Screw Machine Parts, Faucet Components, Fluid Connectors, Gauges, Gears, Nozzles, Pinions, Pneumatic Fittings, Screw Machine Products, Unions, Valve Seats, Valve Trim.
Plumbing	Faucet Seats, Faucet Stems, Plumbers' Brass Goods, Plumbing Fittings.

## VALUE ADDED SERVICES

AEPL manufactures and supplies Copper Alloys Extruded Bars to Domestic as well as International Markets. Our customer base has a key advantage since our Foundries, Laboratories, Extrusion Mill, Shell Mouldings and CNC Machine shop are all located on a single site, which eliminates waste and allows excellent quality control at each stage. Our ability to reclaim swarf and machined chips allows us to offer competitive pricing for the parts that we either extrude or cast.

### Casting Range



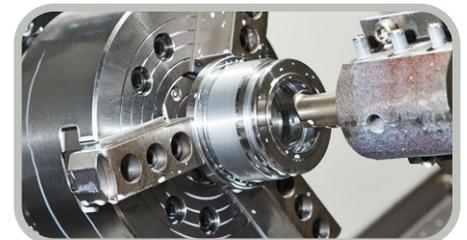
25 Grams to 10 Kgs

### Forging Sizes



50 Grams to 6 Kgs

### Machining Sizes



1 mm to 200 mm

### CONNECT WITH US Adinath Extrusion Pvt. Ltd.

Plot No. 4051-4055,  
Bhagwan Mahavir Swami Marg,  
G.I.D.C., Phase-III, Dared,  
Jamnagar - 361004, Gujarat, India.

+91 7600 55 9243 +91 288 2730868  
sales@adinathextrusion.com,  
marketing@adinathextrusion.com  
www.adinathextrusion.com

