



# WESTERN STATES METALS

## PRODUCT SPECIFICATION

### C36000 Brass Free-Machining Brass

C36000 has a 100% machinability rating and withstands exposure to a wide range of water chemistries and is inert to organic liquids and gases. Brass can safely be substituted for leaded steel in the majority of common screw machine products. It's most common fabrication processes are: machining, roll threading, and Knurling. No material of comparable strength machines faster and produces better surface finishes than free-cutting brass.

### Typical Uses

#### Automotive

Fluid connectors, Threaded Inserts for Plastic Molding, Hose Barbs, Couplings, Fittings, Sensor Bodies, Thermostat parts and Profiles

#### Builders Hardware

Lock Bodies, Latches, Hardware, Fittings, Hinges

#### Fasteners

Bolts, Nuts, Screws, Barbs, Cable Glands

#### Other Industrial

Automotive High Speed Screw Machine Parts, Valve Stems, Valve Seats, Fluid Connectors, Nozzles, Unions, Adapters, Pinions, Gears, Faucet Components, Pneumatic Fittings, Gauges

#### Plumbing

Plumbers' Brass Goods, Faucet Stems, Faucet Seats, Plumbing Fittings, Hose Barbs

#### Plastic

Insert Molding Components

### Chemical Composition

	Cu	Fe	Pb	Zn
Min/Max	60.0-63.0		0.35 2.5-3.7	Rem
Nominal		61.5 -		3.1 35.4

NOTE: Cu + (sum of named elements) = 99.5% min.

### Physical Properties

Melting Point - Liquidus.....	1650 F
Melting Point - Solidus.....	1630 F
Density.....	0.307 lb / cu in @ 68 F
Specific Gravity.....	8.5
Electrical Resistivity.....	39.9 ohms-cmil/ft @ 68 F

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Electrical Conductivity .....26% IACS @ 68 F  
 Thermal Conductivity .....67.0 Btu / sq ft / ft / hr / °F @ 68 F  
 Coefficient of Thermal Expansion..... 0000114 per °F from 68 F to 572 F  
 Modulus of Elasticity in Tension.....14000 ksi  
 Modulus of Rigidity.....5300 ksi  
 Machinability .....100%

**Mechanical Requirements (ASTM B-187)**

Temper	Section Size (inches)	Tensile (ksi) min	Yield (ksi) min	Elongation in hd min	Brinell (3000 kg)
H04	0.625	65	30	6	-
H02	3	45	15	20	-

**Specification Equivalent**

ASTM B16, B-249  
 AMS 4610  
 SAE J461, J463  
 MIL-V-18436