



COBRAL G

WHITE - BONDING - NON PRECIOUS

Co=63.3%, Cr=21%, Mo=6.5%, Tungsten=6%,
Others<2%=3.2%

- Free from Nickel, Beryllium & Gallium
- Superior polishing characteristics compared to nickel-base alloys
- Recommended for all bonded crowns & bridges
- Superb porcelain restorations

Properties:

MELTING RANGE	1280 - 1350°C.
CASTING TEMPERATURE	1450°C.
DENSITY	8.4 g/cm ³
HARDNESS	275 HV5 - After porcelain firing
MODULUS OF ELASTICITY	197 GPa - After porcelain firing
0.2%PROOF STRESS	540 MPa - After porcelain firing
ULTIMATE TENSILE STRENGTH	666 MPa - After porcelain firing
ELONGATION	18% - After porcelain firing
THERMAL EXPANSION COEFFICIENT	14.3 mm/°K (25-500°C)

Working Procedure:

INVESTMENT

Use a high temperature phosphate bonded carbon free investment. Heat the cylinder to 900°C. Maintain it at this temperature for 30 to 60 minutes according to the size of the cylinder.

MELTING & CASTING

Melt Cobral G in a clean crucible. If melting by induction: cast as soon as the ingots start to sink. If melting by oxy-propane: adjust the flame to a neutral, non carbonising state. Heat the ingots, with a rotary motion of the flame, cast as soon as the melt begins to vibrate under the flame. Let the cylinder air cool to room temperature.

PREPARATION

Use aluminium oxide at 50/60 microns. Ultrasonically clean the parts for 5 to 10 minutes in distilled water.

DEGASSING AND OXIDATION

Heat the unit in the furnace at a temperature of 870°C. Create a vacuum and increase the temperature to 1020°C. Break the vacuum, cool, then the surface will show a slight darkish oxide film to indicate that it is ready for porcelain.

PORCELAIN

For best results, adjust the porcelain furnace temperature rise to around 55°C/minute. For the first opaque layer fire to 40 - 50°C higher than normal (eggshell sheen) this creates an excellent bond between metal and porcelain. Then for subsequent layers fire to normal manufacturer's instructions.

COOLING THE PORCELAIN

On the cool down hold the furnace around 850°C for 4 minutes, or, if the porcelain furnace does not have a hold programme, cool slowly from firing temperature to 850°C over 5 minutes, then lower the platform slowly.

PRE-SOLDERING

Charles Booth 1090°C White.

POST-SOLDERING

Charles Booth 750°C White. Not recommended as very difficult to achieve good joint without damaging porcelain

MANUFACTURED TO FULL DIN & ADA SPECIFICATIONS. MANUFACTURED IN COMPLIANCE WITH BS EN ISO 9693:2000