BOCRAFT E

HARD
WHITE - BONDING - SILVER FREE - GOLD/PALLADIUM
Pd=31%, Au=54%, Cu=4%, In=10%, Others=1%

- Medium gold content (54%), high precious metal containing prestige white bonding alloy
- Contains no silver for problem free bonding
- High strength with excellent clinical performance

Properties:

MELTING RANGE	1100 - 1195°C. Cast at 1295°C
DENSITY	13.6 g/cm^3
HARDNESS	274 HV2.5 - After porcelain firing
MODULUS OF ELASTICITY	88 GPa - After porcelain firing
0.2%PROOF STRESS	555 MPa - After porcelain firing
ELONGATION	22% - After porcelain firing
THERMAL EXPANSION COEFFICIENT	E13.8 µm/m/°K (20 - 500°C)

Working Procedure:

PRE-HEATING AND INVESTMENT
Use only high quality phosphate bonded carbon free investment. Hold for 45 minutes at 900°C.

CASTING
Cast at 1295°C, using a ceramic carbon free crucible. If torch melting ensure that there is no carbon in the flame, i.e. the flame should not show a yellow coloration. IMPORTANT: DO NOT SEVERELY QUENCH THIS ALLOY. Allow to slow cool before breaking out of the investment.

FINISHING & CLEANING
Use only aluminium oxide stones, carbide burrs or ceramic bonded stones.
Boil in distilled water and steam clean or 5 minutes in distilled water in an ultrasonic cleaner.

DEGASSING AND OXIDATION
If vacuum degassing - not essential - hold the unit at 960°C for 3 minutes prior to oxidising. As a rule, oxidise for 2 minutes in air at the same firing temperature that is to be used for the first layer of opaque - usually around 960°C. The oxidation layer is usually light grey in colour and uniform over the surface of the restoration. If the colour is patchy, then air blast the oxide away and re-oxidise.
The use of a diluted washcoat of opaque fired at least 20°C above the porcelain manufacturer's recommended temperature will produce optimised bonding. Subsequent applications of porcelain can then be applied safely and confidently as per the porcelain manufacturer's instructions. With its low expansion - about 14.2 µm/m/°K (20 - 500°C) - slow cooling after each porcelain firing is not necessary. If in doubt refer to the porcelain manufacturer's recommendations.

SOLDERING
The melting range of Bocraft E requires the use of the Charles Booth 1030°C White solder to produce good pre-porcelain joints with easy and safe soldering; post porcelain use Charles Booth 750°C white. Use a low aggressive flux when soldering to ensure no etching of existing porcelain.

PRODUCED TO NHS/MDD REQUIREMENTS AND COMPLIES WITH ISO 9693:2000