

Croform Excel S1 Cobalt Chromium Casting Alloy

Instructions for Use

Croform Excel S1 cobalt chromium alloy is a beryllium and nickel free full and partial denture alloy types 4 and 5 in accordance with EN ISO 22674:2006.

Indications

1. Cobalt chromium skeletal work for partial dentures.
2. Cobalt chromium plates for full or partial dentures.

Contra-Indications

Not to be used for individuals with known sensitivity to alloy constituents (see label).

Composition

Chromium	29%
Silicon	≤0.8%
Carbon	≤0.5%
Molybdenum	5.8%
Minor Constituents	≤0.5%
Iron	≤0.7%
Nickel	≤0.1%
Cobalt	Balance

Waxing & Spruing

Wax up in the normal manner. Sprue using the indirect technique or through the model. A sprue thickness of at least 3 mm is recommended.

Investing

Use a high heat investment, following the manufacturer's instructions. Croform High Precision investment is recommended. Burn out of the investment should be in accordance with the manufacturer's instructions.

Melting & Casting

When a flame is used a multiple orifice torch with 25 psi (1.7 bar) oxygen, 15 psi (1.02 bar) propane should be employed. It is not necessary to use a flux. The ingot will slump and lose shape but should be cast before it begins to spin or form a globule. When an induction casting

machine is used, the manufacturer's instructions should be followed. The casting temperature is 1390°C. Completely clean buttons and sprues may be re-used with an equal weight of new metal.

Devesting, Finishing & Polishing

Devest as normal, sandblasting off any remaining investment. Finish using sintered diamonds, aluminium oxide discs, stones or tungsten trimmers. Electrolytically polish and then finish with rubber wheels and points before polishing.

Typical Physical Properties

Density	8.4g/cm ³
0.2% proof stress	600 megapascals
Modulus of elasticity	200-230 gigapascals
Elongation	>3%
Vickers Hardness	330 - 380
Solidus temperature	1355°C
Liquidus temperature	1390°C
Melting range	1390 - 1440°C

Health & Safety



The metal vapour and dust are harmful to health. Dust extraction and suitable mask should be used.



Refer to Safety Data Sheet.

Storage

Store in a clean dry place.

This product is specifically formulated for use in dentistry.

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