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Croform Excel S1
Instructions for Use

DESCRIPTION
NPM - Cobalt-based dental casting alloy, Type 5.

DIMENSION Ø 8 mm x 15 mm

CHEMICAL COMPOSITION - Typical Values

Co%	Cr%	Mo%	Si%	C%	Fe%	Mn%
61,3	30,15	5,5	1	0,65	0,63	0,6

Determination, extent and validity of the chemical composition according to DIN EN 10 204 – 3.1

TYPICAL TECHNICAL DATA - After casting

Yield strength 0,2 %	590 MPa
Elongation	3 %
Tensile strength	790 MPa
E-module	200 GPa
Density	8,25 g / cm^3
Corrosion resistance	< 200 µg / cm^3
Hardness	460 HV 10/30
Melting range (Solidus/Liquidus)	1320 °C / 1380 °C

APPLIED NORM - ED GmbH is certified according to DIN EN ISO 13485:2021 and DIN EN ISO 22674:2016.

INTENDED USE
Croform Excel S1 is a medical device for the manufacturing of cast partial dentures.
Only for professional user (Dental Technician, Dentist).
The intended patient group provides for persons with partially or non-dentate jaws.

INDICATION
For the production of model cast works for removable restorations.

CONTRA-INDICATION
All indications not listed under Indication.
In case of known allergic reactions to any of the ingredients

DESIGN
The design has to be made on an investment model under consideration of the standard rules of designs for partial dentures. The modelation should be done with wax that fire without leaving residues.

SPRUE DESIGN
The sprues should have a diameter of 3.5 mm with a length of 20-30 mm. Massive areas should additional have a melt reservoir (ø 5mm). The cast hopper should be 4mm above the highest point of the partial denture wax design.

MELTING AND CASTING
Croform Excel S1 should be melted in a ceramic crucible. Please do not use graphite crucibles and no flux! Avoid the overheating of the melt. Prevent multiple casts of melt bottoms. The chemical and mechanical properties can only be guaranteed for new material. Melting with open flame (acetylene / oxygen) and inductive melting: Once the cylinders are melted and a so-called shadow falls across the molten metal, before the oxide skin begins to split, start the casting. Maximum temperature for casting: 1480 °C. The preheating temperature of the muffle is approx. 950°C.

DEVESTING
Let the muffle cool down to room temperature (ca. 20°C), do not quench with water. Put the cooled muffle into water to avoid dust generation during the devesting. Sandblast the surface with 250 µm of aluminium oxide with 3-4 bar. Clean the partial denture base with a steam cleaner.

ELABORATION
The framework can be elaborated with standard carbide cutters or aluminium oxide stones and rubbers, look for smooth transitions.

SOLDERING / LASER WELDING
Croform Excel S1 can be soldered with all suitable solder. **Croform Excel S1** parts should not be soldered with gold or palladium solder. **Croform Excel S1** is also ideally suitable for laser-welding.

HANDLING CONDITIONS / SAFETY
Metal dust is harmful to health. Use when grinding and sandblasting dust extraction and respirator with filter FFP3 – DIN EN 149.

RESIDUAL RISKS AND SIDE EFFECTS
If the instructions are observed during the production processes, incompatibilities with non-precious dental alloys are extremely rare. In case of a proven allergy against an ingredient of this alloy, the alloy must not be used for safety reasons. In exceptional cases, electrochemically induced, local irritations have been reported. When different alloy groups are used, galvanic effects might occur. Please inform your dentist regarding the residual risks and side effects.

Any serious incident that involves the product must be reported to the manufacturer and the competent authority in the pertinent country.

DISINFECTION OF THE DENTAL PROSTHESIS BEFORE INSERTION
Workpieces from the dental laboratory must be subjected to immersion or spray disinfection before insertion into the patient's oral cavity and then rinsed under running water.

SINGLE-USE
The chemical and mechanical properties can only be guaranteed for new material.

DISPOSAL INSTRUCTIONS
Please dispose of metal residues and dust in an environmentally friendly manner. Do not allow waste to enter groundwater, water or sewage systems. Contact waste exchanges for recycling. Outer packaging can be disposed of in paper waste.

STORAGE CONDITIONS
Temperature, humidity or light has no effect on the product properties.

Our information and recommendation are based on the state of the art in science and technology and has to be considered correct to the best of our knowledge and experience on this day. The above version shall replace any previous versions.

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