

+ Pekkton® ivory –
Instructions for use.

Pressing technique with
PEKKtherm and PEKKpress

Made with
{Pekkton}®

	Page
1 Product name	3
2 Product description	3
3 General information	3
3.1 Intended use	3
3.2 Disposal	3
4 Instructions for use	3
4.1 Indications	3
4.2 Contraindications	3
4.3 Warnings	3
4.4 Preventive measures	3
4.5 Side effects	3
5 Instructions for use	4
5.1 Preparation	4
5.2 Framework criteria	4
5.3 Model and stump preparation	5
5.4 Production in the pressing process	5
5.4.1 Pressing device	5
5.4.2 Waxing	6
5.4.3 Sprueing	7
5.4.4 Investing	8
5.4.5 Preheating	8
5.4.6 Pressing	11
5.4.7 Divestment and cleaning	12
5.5 Conditioning	13
5.6 Veneering	14
5.6.1 Preparation	14
5.6.2 Veneering concepts	14
5.7 Bond to titanium bases (laboratory)	14
5.8 Try-in and cementation	15
5.8.1 Disinfection	15
5.8.2 Cementation	15
5.9 Handling after integration	15
5.9.1 Cleaning and follow-up	15
5.9.2 Traceability	15
6 Ordering information	16
7 Symbols	17
8 Disclaimer / Validity	17
9 Availability	17
10 Copyright and trademarks	17
11 Further information	18
11.1 Troubleshooting	18
11.2 FAQ's	19
11.3 Acknowledgements	19

Rx only

Medical devices of Cendres+Métaux SA correspond to the Medical Device Directive 93/42/EEC and carry the CE mark. See packaging for details.

1 Product name

Pekkton® ivory (pressing blanks)


2 Product description


Pekkton® ivory is a high performance material (based on PEKK) composed of OXPEKK® IG¹ (Implantable Grade with highest purity) and Oxide for optimization of tint and mechanical properties. Color: whitish.

The material is available to users, among other things, as a pressing blank. The dental technician fabricates crown and bridge frameworks from the pressing blank. The frameworks are then esthetically veneered in the laboratory with bonded pressable crowns, veneering composites, prefabricated acrylic teeth or trays.

3 General information

For the exact specifications of Pekkton® ivory, please refer to the material data sheet and the safety data sheet. You will find the data sheets mentioned free of charge at www.pekkton.com.

 Important information for the specialist / note instructions for use.

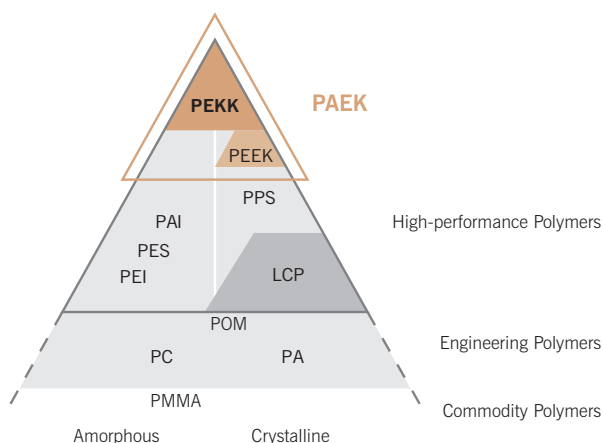
 Warning symbol for increased caution.

3.1 Intended use

Pekkton® ivory is intended for use with fixed (crowns and bridges) and removable dental prostheses.

3.2 Disposal

Pekkton® waste can be disposed of along with normal household garbage.




4 Instructions for use

4.1 Indications

(Pekkton® ivory)

- Definitive supported, veneered and screw-retained crowns and bridges on dental implants, with maximum two pontics. Can be veneered with bonded press crowns, with composites or prefabricated acrylic teeth and veneers.
- Definitive supported, veneered single crowns and bridges with maximum one pontic on natural teeth.
- Unveneered parts e.g. crown margins and backings.
- Unveneered crowns and bridges in the side region for a maximum wearing period of 12 months.
- Removable restoration, e.g. secondary structures via bars and telescopes, transverse connectors, bite guard splints and prosthetic bases.

 The responsibility for the use of custom-made products beyond the described indications lies with the dentist.

4.2 Contraindications

(Pekkton® ivory)

- When patients have a known allergy to one or more components of the material.
- Patients with parafunctions e.g. bruxism.
- Crowns and bridges with less than 1.3 mm of occlusal space.
- When the minimum dimensions of the framework cannot be maintained:
 - Minimum circular wall thickness less than 0.6 mm.
 - Minimum occlusal wall thickness less than 0.8 mm.
 - Connector dimensions of front (anterior) bridges less than 12 mm²
 - Connector dimensions of side (posterior) bridges less than 14 mm²
- Bridge structures with more than two pontics or extensions.
- Bridges on natural teeth with more than one pontic or extension.
- Unveneered crowns in the lateral mouth area for use of more than 12 months.
- Unveneered crowns and bridges with a wearing period of more than 12 months.

4.3 Warnings

If patients are allergic to one or more elements of the material, the latter should not be used. In patients with suspected allergy to one or more elements of the materials, this product may only be used following allergological clarification and proof of non-existence of an allergy.

Pekkton® ivory has not been evaluated for safety and compatibility in the MR environment. Pekkton® ivory has not been tested for heating or migration in the MR environment.

For further information, please contact your Cendres + Métaux representative.

4.4 Preventive measures

When grinding the Pekkton® framework, wear protective goggles with a dust mask and use a suction unit.


4.5 Side effects

No known side effects if used as intended.

¹ Pekkton® based on OXPEKK® from OPM, Oxford Performance Materials, USA.

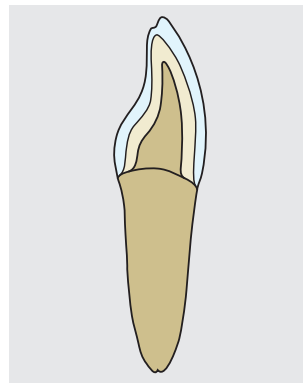
5 Instructions for use

5.1 Preparation

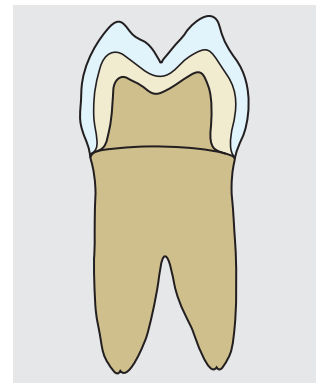
 Any reduction in framework thickness always means a reduction in strength. This aspect must be considered in the preparation, in particular within the occlusal area. The height of the crown die preparation should be at least 4 mm and the angle of convergence should be 4–6°. Eliminate undercuts.

Principally, the preparation technology corresponds to the one of full ceramic reconstructions.

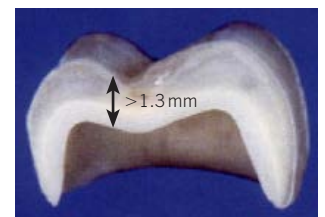
The preparation is based on the concept of reduced, anatomical form. A chamfer preparation in the angle of approx. 10–30° or a shoulder preparation with rounded inside edges is ideal. The width of the chamfer/shoulder is approx. 0.8 mm.



Preparation design of a anterior tooth




Preparation design of a molar




Minimal occlusal thickness

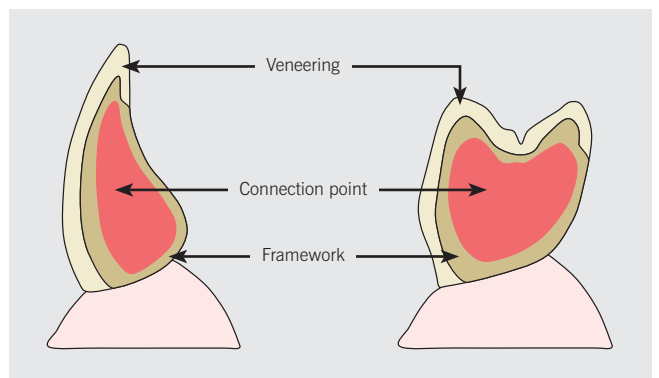
5.2 Framework criteria

 The key for clinical success and a durable restoration in the patient's mouth is compliance with the guidelines for the design of a crown or bridge in Pekkton®. The change from framework to veneering material may not occur in the functional contact area. In there is a lack of space, please respect the maximal possible framework thickness. For an optimal color reproduction, a veneering thickness of 0.5 mm is recommended. The occlusal minimum thickness of a crown should be < 1.3 mm.

Material thickness of the frameworks

Pekkton® ivory	Crown		Bridge	
	Anterior tooth	Posterior tooth	Anterior tooth	Posterior tooth
Design type	Tooth shape-supporting	Cusp supporting	Tooth shape-supporting	Cusp supporting
Minimum wall thickness circular	> 0.6 mm	> 0.6 mm	> 0.6 mm	> 0.6 mm
Minimum wall thickness occlusal	> 0.8 mm	> 0.8 mm	> 0.8 mm	> 0.8 mm
Connector dimensions	–	–	> 12 mm ²	> 14 mm ²

 The stability of the connector surface is increased when the ratio of vertical to horizontal is significantly greater (ratio of approx. 60% to 40%).



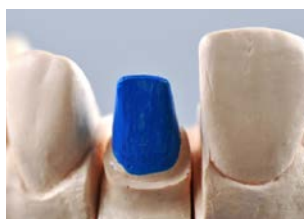
5.3 Model and stump preparation

Careful preparation of the work models is required to obtain a well fitting crown or bridge.

The dies must fit reproducibly and be removable.

It is advisable to apply a sealer to harden the surface and to protect the die.

Two layers of spacer are applied to maximum 1 mm from the preparation margin.



Anterior tooth



Posterior tooth


5.4 Fabrication selon le procédé de pressée

5.4.1 Outils

PEKKtherm

The device makes it easy and safe to stabilize the muffle temperature (out of the preheating furnace) to the pressing temperature, which is 385°–395° C depending on the size of the cylinder. Pekkton® ivory is then melted before the pressing process.


The device is distributed exclusively by Cendres+Metaux SA. The manufacturer is Effegi Brega srl, IT-29010 Sarmato.

 Please follow the included operating instructions from the manufacturer when operating the device.

PEKKpress

This device is used to efficiently and gently inject Pekkton® ivory after the material and muffle have been prepared in the PEKKtherm device.

The device is distributed exclusively by Cendres+Metaux SA. The manufacturer is Effegi Brega srl, IT-29010 Sarmato.

 Please follow the included operating instructions from the manufacturer when operating the device.




PEKKtherm



PEKKpress


5.4.2 Waxing

 Only use wax that can be burned out without leaving a residue.

Design the caps and bridge elements in accordance with the basic principle of the maximum possible framework thickness, as well as the cusps-supported reduced tooth form. Avoid dirt-collecting recesses on the gingival design when modeling the pontics.

A thin garland can be designed circularly or partially on the posterior tooth.

In case of insufficient space, a direct stop can also be prepared.

 For larger bridge work, form the palatal / lingual part in the framework material Pekkton® ivory in favor of a maximum possible framework thickness and do not veneer.

Posterior tooth (molar)



Buccal



Palatal/lingual

Anterior tooth



Labial circular tapered edge design



Palatal/lingual mini edge (garland)



Buccal/labial



Palatal/lingual




After pressing. Conditioned on the model.




Finished and polished Pekkton® ivory bridge.

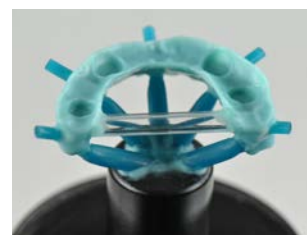
Removable restoration

 Long-term stability depends on the dimensions and design of the restoration. Ideally, the cross-section of a Pekkton® ivory framework should be minimally increased by a factor of 1.5 in contrast to working with metal alloys.

5.4.3 Sprueing


The sprues should be attached in an angle of 5–10°, similar to the indications for press ceramic systems.


 It is essential to avoid sharp edges because when pressing viscous Pekkton® investment material can be entrained. This can prevent inclusions, especially in the marginal zone. Respect the length of the press channel to avoid loss of pressure.



	Single crowns and smaller bridges	Large bridges and removable restoration
Ring system recommendation	Investment ring system Empress (Ivoclar Vivadent, FL-Schaan) Press channel Diameter 12 mm for 2 press Mold Set (Bredent)	for 2 press Mold Set (with metal ring). Manufacturer: Bredent. Available in 3 sizes with corresponding press stamps (ø 16, 20 and 30 mm). Follow manufacturer's instructions.
Diameter of the wax wire	Supply to the object: 3–3.5 mm Ventilation: For bridge elements Air outlets (0.8 – 1 mm) to prevent bubbles.	Supply to the object: 5.0 mm Ventilation: 3.0 mm Support*: 5.0 mm *e.g. burnout plastic tube
Sprue point at the object	Single crown: Aligned with the die. Bridge: Attach to the thickest connection point.	Attach to the thickest connection point.
Sprue angle to investment ring base	In a small angle of approx. 5–10°	–
Press channel	Position centrally in the cylinder	Position as centrally as possible in the cylinder
Design of sprueing points	trumpet shape, without sharp edges and angles	trumpet shape, without sharp edges and angles
Distance to margin of investment ring	5–10 mm	5–10 mm
Distance to margin of investment ring	Min. 10 mm	Min. 10 mm
Distance between various objects	3–5 mm	–
Max. weight compressible	Up to 2 press blanks	18 Gramm

5.4.4 Investing

 Please weigh the wax object including the pressing channel to avoid pressing with too little material. Do not use a debubbler on the wax objects e.g. spray (danger of micro bubbling on the surface).

 Please follow the manufacturer's instructions for use for correct processing of the investment material!

Slowly and carefully fill in the investment material up to the wax margin.


Use a suitable instrument for the fine investment of the cavity (e.g. small brush), so that the humidity will not be withdrawn from the investment material.

A fine probe can also be used. Please make sure that the delicate wax margins are not damaged.

Carefully fill the investment ring up to the margin.


- Allow the investment ring to set without vibration.
- No investing before a weekend
(Danger of drying out or too much humidity through Hygrophor)

5.4.5 Preheating

 Check temperature precision of the burnout furnace regularly. Please follow the manufacturer's work instructions.

After setting of the investment material according to manufacturer' indications, the investment ring is prepared for preheating.


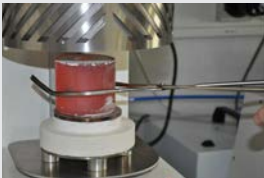

1. Carefully turn and remove the investment gauge.
2. Carefully turn and remove the investment ring base, too.
3. Remove rough spots with a plaster knife or a belt grinder.
4. Please make sure that no investment material enters the press channel.

 The investment ring base should have a 90° angle and be situated flat on the investment ring holder in the pressing furnace.

Definition of wax weight:

1. Put the base of investment ring without wax objects on the balance and calibrate to 0.
2. Fix the wax objects on the base of the investment ring.
3. Put the base of investment ring with the wax objects on the balance.
4. The indicated value corresponds to the wax weight.



Quick press technology	
Recommended investment material	CM20. Manufacturer Cendres+Metaux SA anaxVEST PM Manufacturer anaxdent
Standby temperature of the preheating furnace	850° C
Holding times in the preheating furnace at 850° C: – Cylinder (100 g) – Cylinder (200 g) – Cylinder (300 g) – Cylinder (400 g)	45 min. 60 min. 75 min. 90 min.
Position der Muffel im Ofen	Opening downwards. Please make sure that the wax burn-out occurs outside of the investment ring, e.g.: – Tip out the investment ring in the direction of the rear wall – Preheat the self-produced, not yet burned out press stamp, or that for the 400 g cylinder, in the furnace heated to 850° C with the ring.
Start PEKKtherm	
Press Heat (blue button) 	PEKKtherm is blocked for 15 minutes. When the Go LED lights up green (audible beep), the device is ready to operate (at 390° C) and ready for program selection.
Use the Stop button to select the program	5 programs are available: 1 = 100 g LED ●○○○ 2 = 200 g LED ●●○○ 3 = 300 g LED ●●●● 4 = 400 g LED ●○○○ 5 = 400 g LED ●●○○
Press the Go button 	The furnace opens, program starts. Put the ring and press stamp in the PEKKtherm immediately. Depending on the program selected, PEKKtherm remains open as follows: 1 = 5 minutes 2 = 10 minutes 3 = 15 minutes 4 = 20 minutes 5 = 20 minutes PEKKtherm then closes automatically and remains closed for 20 minutes to allow the temperature to stabilize. An alarm sounds when the program is done.
Melting Pekkton® ivory 	Press the Go button, furnace opens. Cylinder can now be loaded with the PekktonR ivory press blanks. ⚠ – Max. 10 pcs. (10 grams) at one time! (400 g investment ring) – Take the press stamp for the 400 g ring out of the furnace 10 min. prior to pressing and let it cool on the PEKKtherm device.

Press the Go button



PEKKtherm remains closed for 20 minutes followed by an alarm (beep). Press the Go button, furnace opens.

The melted PekktonR ivory normally has a cream color and has no brown discoloration. The material is ready for the pressing process.

Insert the preheated single-use press stamp, press lightly and put in the PEKKpress press (pressing process, see 5.4.6).

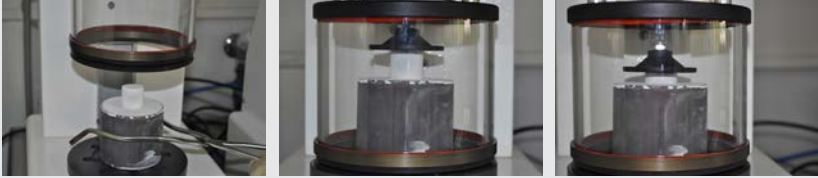

Option (for program 5)
(if more than 10 g are needed)

If more than 10 grams are needed, fill with additional material.

- 1) Audible beep.
- 2) Press the Go button (furnace opens).
- 3) Fill material.
- 4) Press the Go button (furnace closes).
- 5) Wait 15 minutes (no alarm)
- 6) Press the Go button (furnace opens)
- 7) Insert the preheated single-use press stamp, press lightly and put in the PEKKpress press (pressing process, see 5.4.6).


⚠ If PEKKtherm is not operated for one hour and the green Go button is illuminated, PEKKtherm is in Standby mode and automatically switches off.


5.4.6 Pressing

Start PEKKpress	The red LED lamp is illuminated above the green and blue button.
Press the green button	LED lamp turns green. Furnace opens. PEKKpress is ready for program selection.
Set pressure	Pressure regulator is adjustable from 0–6 bar. – Cylinder (100 g) 1.5 bar – Cylinder (200 g) 2.5 bar – Cylinder (300 g) 3.5 bar – Cylinder (400 g) 5.8 bar
The vacuum is deactivated by pressing the blue button.	Large pieces are pressed under vacuum. LED red → vacuum off LED green → vacuum on
Use the red button to select the program	4 programs are available: 1 = 100 g ● ○ ○ 2 = 200 g ● ● ○ 3 = 300 g ● ● ● 4 = 400 g ● ● ● ●
	
Cooling phase after pressing	1 = 10 minutes 2 = 20 minutes 3 = 30 minutes 4 = 40 minutes PEKKpress then opens automatically.
Switch off PEKKpress (green illuminated button).	Device closes automatically.
Cool the investment ring outside of the furnace to room temperature.	

5.4.7 Divestment and cleaning


Using pliers, carefully remove the investment material without damaging the frames.

 Divest as soon as the investment ring is room temperature.

 Do not use tongs to divest larger pieces.




Fine divestment is carried out with abrasive 110 μ m aluminum oxide under pressure of 2 bars.

 Caution: Sandblast for a short period only to prevent damage.




Crown framework after fine divestment.

 The material can be pressed only one time.



5.5 Conditioning

 Cleaning with oil-free compressed air only.
Ceramic stones and old burs can cause clogging, which makes conditioning difficult and may lead to overlaps.

Check the fit and adjust, if necessary.




Cut the sprue by using a cutting wheel.

 When grinding the Pekkton® framework, wear protective goggles with a dust mask and use a suction unit.
The cutting wheels available from Cendres+Métaux SA are ideal for removing surplus material.



Cross-toothed milling is used to finish the framework.


 Speed limit maximum 15,000 rotations/min.
Do not work on the object if the pressure is too high.



Roughen the surface using a diamond milling cutter before sandblasting the framework.



After milling is complete, sandblast the framework with aluminum oxide 110µm under 2 bar pressure and clean well using oil-free compressed air.

 After sandblasting the surface, do not touch the surface with your bare fingers.
Never clean the framework with steam or water.




5.6 Veneering

5.6.1 Preparation

Before veneering, it is imperative that the Pekkton® framework is treated with composite primer.


We recommend the primer visio.link, Cendres+Métaux SA, Order No. 08000570.

 Please follow the manufacturer's instructions.




5.6.2 Veneering concepts

After preparation of the framework as described in Section 5.6.1, Pekkton® ivory can be refined esthetically in different ways. For example, it can be refined by veneering with composites, affixing custom-made pressable ceramic crowns or using prefabricated acrylic teeth and trays.

 As veneering is outside the area of responsibility of Cendres+Métaux SA, it is not further described in these instructions for use. Please follow the manufacturer's instructions for the veneering concept selected.

Information about the veneering concepts is available from our clinical case documentation on our website www.pekkton.com.

 Bridge work: To avoid cracks (and late effects) in the veneering as a result of different modulus of elasticity values for Pekkton® ivory and the veneering material, a separation should be made between the teeth down to the opaque.

5.7 Bond to titanium bases (laboratory)

The following procedure describes the cementation of titanium bases and frameworks of Pekkton® ivory.

In choosing cement, Multilink® Hybrid Abutment (Ivoclar Vivadent) is recommended.

1. The abutment is screwed onto the analog. Seal the screw channel of the titanium abutment and the Pekkton® ivory framework with wax.
2. Carefully sandblast the surface of the titanium abutment with 110µm aluminum oxide and 3 bar pressure.
3. Also carefully sandblast the contact surface on the inside of the framework. 110µm aluminum oxide and 2 bar pressure.
4. Monobond plus is applied to the sandblasted surfaces to silanize them. Application time approx. 60 seconds.
5. Apply visio.link (Manufacturer: Bredent, distribution Cendres+Métaux SA) to the Pekkton® ivory surface with a single-use brush and light cure for 90 seconds (e.g.: Dentacolor XS, Kulzer).
6. Apply the cement to the inner surface of the framework and place on the abutment.
7. Then follow the manufacturer's instructions.

5.8 Try-in and cementation

5.8.1 Disinfection

After any fabrication or modification, the prosthetic work must be cleaned and disinfected according to national guidelines. When selecting the disinfectant, it is essential to ensure that:

- It is suitable for cleaning and disinfection of dental prosthetic components.
- It is compatible with the materials of the products to be cleaned and disinfected.
- It has tested efficacy in disinfection.

The prosthetic work must be disinfected before use with a low or intermediate EPA-registered hospital disinfectant. Recommended: Cidex® OPA Solution. Strictly follow manufacturer's instructions.


5.8.2 Cementation


Preparation: (in the laboratory):

- 1) Sandblast the inner surface of the reconstruction with abrasive 110 μ m grit at a pressure of 2 bar.

Prior to cementation:

- 1) Check reconstruction for fit and correct by grinding, if necessary.
- 2) Occlusal precision corrections can be performed after cementation because composite veneering is very easy to polish in the patient's mouth.
- 3) Pretreat the inner surface with composite primer visio.link (Order No. 08000570) to increase the bond.

 Please follow the manufacturer's instructions for the visio.link.

 To increase the bond to Pekkton® ivory, the inner surface can be silicized before application of the composite primer and subsequently silanized.

Cementation:

Method of cementation:	Conventional (glass ionomer cements)	Self-adhesive	Adhesive
Stump	Length of stump > 4 mm Preparation angle: 4–8°	Length of stump > 4 mm Preparation angle: 4–8°	short stump, < 4 mm Preparation angle: > 8°

 Please follow the manufacturer's instructions.

5.9 Handling after integration

5.9.1 Cleaning and follow-up

It is best to clean your teeth and your dentures after every meal. Be careful when using tooth pastes. Do not use agents that are too abrasive. For further information, please contact your Cendres+ Métaux representative.



5.9.2 Traceability

The batch numbers must be documented to ensure traceability.

6 Ordering information

Material	Description	Order No.	Manufacturer
	PEKKtherm	7020 2394	Effegi-Brega
	PEKKpress	7020 2393	Effegi-Brega
	Pektkon® ivory Pressrohling (Core material)	0106 0003 (Packaging of 10 pieces)	Cendres + Métaux SA
	visio.link (PMMA & Composite Primer)	0800 0570	Bredent

7 Symbols

	Date of manufacture
	Manufacturer
	Patient No.
	Catalogue number
	Batch code
	Quantity
	Consult instructions for use
Rx only	Attention: According to US federal law, this product may only be sold by or on behalf of a physician.
	Cendres+Métaux SA products with CE labeling meet the requirements of the Medical Device Directive 93/42/EEC.
	
	Do not re-use
	Non-sterile
	Keep away from sunlight
	Attention (observe accompanying documents)

8 Disclaimer / Validity

The issuing of these instructions for use renders all previous versions invalid.

The manufacturer rejects any liability for damages resulting from non-compliance with these instructions for use.

In case of complaints, please always include the batch number.

Illustrated step-by-step instructions are available on the Cendres+Métaux homepage. www.cmsa.ch/dental

The product must be used exclusively by skilled persons.

9 Availability

Country-specific differences in product range are possible.

10 Copyright and trademarks

Pektkon® Ivory is a registered trademark of Cendres+Métaux Holding SA, Biel/Bienne, Switzerland.

Reprints or publication – even excerpts – require the written permission of the publisher.

11 Further information**11.1 Troubleshooting**

Problem	Cause	Solution
Workpiece not pressed out	<ul style="list-style-type: none"> – Investment ring has not been preheated to recommended temperature. – Investment ring too cold. – Duration of transport from the preheating furnace to the pressing furnace is too long. – Pressing furnace is too cold. – Insufficient material used. 	<ul style="list-style-type: none"> – Check program and final temperature. – Check calibration of the furnace. – Perform furnace change as quickly as possible. – Silver test. – Weigh press items before pressing.
Investment ring burst/broken	<ul style="list-style-type: none"> – Investment ring too cold. – Plunger is not properly inserted. – Dissimilar press items. – Minimum distance from the investment ring wall not maintained or too many items in too small an investment ring mold. 	<ul style="list-style-type: none"> – Check program and final temperature. – Make sure the plunger is not positioned at an angle in the investment ring channel. – Invest roughly same-size items (especially in the 100g ring). – Take sufficient investment ring wall thickness into account. – Comply with the values stated.
Framework broke during divestment	<ul style="list-style-type: none"> – The divestment pliers got too close to the item, the margin. 	<ul style="list-style-type: none"> – Only divest roughly with the pliers, sandblast the rest.
Margins no longer fit properly after divestment	<ul style="list-style-type: none"> – Sandblasting pressure is too high. – Microbubbles. – Investment material residues on the inner surfaces. 	<ul style="list-style-type: none"> – Set max. pressure to 2 bar. – Fit carefully with a precision bur, then sandblast at 2 bar and 110μm.
Veneer becomes detached from the framework (insufficient adhesion)	<ul style="list-style-type: none"> – Surface not properly prepared for bonding. – Primer not used. – Grease on the surface. – Moisture between the framework and the veneering material. 	<ul style="list-style-type: none"> – Prepare surface according to instructions. – Always use primer. – After sandblasting, never touch the surface with your fingers. – Do not clean the framework with water or steam.
Error message from the pressing furnace	Strictly follow the furnace manufacturer's operating instructions!	

11 FAQ

1 Can material be reused?

No. Too much effort would be involved in cleaning the material properly. Risk of impurity inclusions.

2 What composite veneering materials can I use?

Pekkton® ivory was successfully tested with various veneering composites, including SR Nexco (Ivoclar Vivadent), Gradia (GC), Ceramage (Shofu), VitaVM LC (Vita Zahnfabrik), Anaxblend and Anaxflow (Anaxdent), S.LAY (WEGOLD Edelmetalle) and Signum (Heraeus Kulzer).

3 If a bridge doesn't fit, can it be separated and rejoined?

No, this is not possible.

4 What is the situation regarding the formation of biofilm?

Results always depend on surface roughness. If surface quality is comparable, biofilm formation on high-performance polymers is less than on metal alloys, but slightly more than on ceramics.

5 What is the shrinkage of Pekkton® ivory?

≈ 1.3 % (volume).

6 How good is the precision?

The precision of single crowns is between 20µm and 50µm so it meets the clinical requirements of 50µm to 120µm maximum. However, precision always depends on how accurately the dental technician works.

7 What are the advantages over base metal restorations?

- Aesthetic, no black margins
- Metal-free
- No release of ions
- No taste of metal
- Non-conductive
- Corrosion-resistant
- Higher biocompatibility
- Less tool wear
- Easier polishing (5–10 times faster)
- Clean work (no dirt)
- Density 8 times lower
- Virtually insoluble

8 Regarding bridges, how many units are possible?

State of development today: With Pekkton® ivory, screw-retained bridges on implants (bonded to titanium bases) with maximum two pontics in the anterior and posterior region can be fabricated. Bridges on natural teeth with maximum one pontic.

9 Can the material be burred? When will bur blanks be available?

Pekkton® ivory is ideal for burring. The material is much quicker to machine than metals or ceramics so bur tool life can be considerably prolonged.

Pekkton® ivory is available as a milling rondel with 98.5 mm diameter groove for CAD/CAM technology. Please note the information about availability and specification on our website www.pekkton.com

11.3 Acknowledgments

We would like to thank Mr. Marc Cristou, Mr. Laboratoire Cristou (FR-Paris), Mr. Phil Reddington, Mr. Lee Mullins and BDT Beever Dental Technology (GB-Leeds) for their valuable input and suggestions in creating this instruction manual.

