PROCEED MC & Zr

INSTRUCTION FOR USE

1) Device Name

PROCEED MC (Powders & Liquids)
PROCEED Zr (Powders & Liquids)

2) Device Composition / Description

PROCEED product range is composed of bottles of ceramic powder and bottles of liquids.
PROCEED ceramic powders are natural feldspathic ceramics in part based on natural raw materials (feldspar minerals).
Natural feldspars are a mixtures of potassium feldspar ($K_2Al_2Si_6O_{16}$) and sodium feldspar ($Na_2Al_2Si_6O_{16}$).
Potassium feldspar (Leucite) provides hardness, increased thermal expansion and chemical durability.
Potassium feldspar is responsible for the formation of leucite crystals which increase the strength of restoration by absorbing the energy of the propagation of cracks, as a result the propagation of cracks is stopped or slowed down.

Ceramics are composed of 3 major elements:

1. **The glass,** which provide high esthetic (the matrix),
2. **Crystalline particles**, they are the fillers inside the glass increasing the optical and mechanical properties
3. **Filler particles,** it can be pigments, opacifiers that are added to control optical effects as opalescence and fluorescence to mimic natural dentine and enamel.

The PROCEED liquids are composed of water and propylene glycol:

- PROCEED Modeling liquid: water 95-99% - propylene glycol 1-5%
- PROCEED Glaze liquid: water 1-10% - propylene glycol 90-99%

3) Intended use / Indication

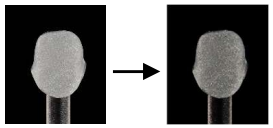
PROCEED MC products are ceramic materials which are suitable to be used for the veneering of precious and non-precious metal substructures for dental restorations in the form of single crowns and multi-unit bridges constructions as well as to produce restorative elements in the front and side teeth area. Also suitable for electroforming copings and for the sintering technique to create inlays, onlays and veneers on refractory dies.
PROCEED ZR products are ceramic materials which are suitable to be used for the veneering of zirconia substructures for dental restorations in the form of single crowns and multi-unit bridges constructions as well as to produce restorative elements in the front and side teeth area.
PROCEED system is a line of specialized ceramics, the range of products can be used to create metal-ceramic (PFM: Porcelain Fused to Metal) and full ceramic restorations (PFZ: Porcelain Fused to Zirconia) for every needed indication using any needed fabrication process and any needed frameworks. Its excellent material properties, biocompatibility and the minimum workload make it as a first choice of materials by dentists and dental technicians.
The medical devices are not intended for immediate use by the patient and can only be processed by qualified personnel (professionals), dental technicians and dentists with suitable equipment, according to the binding instructions for use.

4) Instruction for use

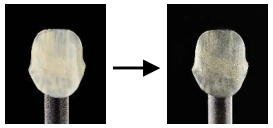
PROCEED MC

About the alloy / metals used:
Precious metal or non-precious metals with a CTE of 13,8 – 14,9 at 25°C - 500°C can be veneered.
CTE > 14,5: Prolonged cooling
CTE < 14,1: The object must be removed rapidly from the firing chamber.

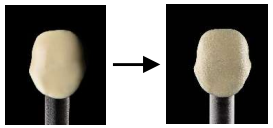
A.Oxidization
Oxidize the metal substructure according to the alloy manufacturer`s instructions.



B. Opaque firing 1:
Apply the paste- or powder opaque provided onto the metallic framework with approx. 75% covering power.
The opaque should slightly shine after firing.



C. Opaque firing 2:
The second opaque firing is opaquely applied and should slightly shine**.**



Technical advice to paste opaque:
- Do not moisten the brush with water.
- Avoid any dilution with water.
- The consistency can be modified slightly with glaze liquid.
- Avoid drying too quickly.

D. Shoulder firing 1 and 2:
1. Isolate the die in the shoulder area. Place the coping, not too tightly fitting, onto the die. Use the Shoulder Porcelain selected to cover the shoulder as far as the preparation border. After gently drying with a hairdryer or in the open firing chamber, the cap can be easily lifted off the die.
2. Supplement the ceramic that has shrunk because of firing, using the selected Shoulder porcelain.

E. Dentine and enamel build-up:
The labial and occlusal form is first built up with dentine material in the required shade. Once the anatomical form is ready, reduce the incisal and interdental areas of the dentine to create enough space for further layering.

Dentine powder

Missing areas are completed with transparent and enamel porcelains depending on the individual appearance of the crown required. Slightly shiny surface after firing.
Dentine and incisal powders are also used for the palatal build-up.

Transparent powder

Enamel powder

A second dentine firing can be used to make adjustments and to make up for firing shrinkage**.**
The crown should be finished and cleaned again, before adding porcelain.

Shade	A1	A2	A3	A3.5	A4	B1	B2	B3	B4	C1	C2	C3	C4	D2	D3	D4
DENTINE	A1	A2	A3	A3.5	A4	B1	B2	B3	B4	C1	C2	C3	C4	D2	D3	D4
ENAMEL	E2	E2	E3	E3	E4	E1	E3	E3	E3	E4	E3	E3	E4	E4	E3	E3

F. Glaze firing:
The degree of glaze can be matched to the situation in the mouth by means of mechanical polishing.

Frederic Furgier - CDT

PROCEED Zr

PROCEED ZR is an improved feldspar-based zirconium oxide veneering ceramic for use with high strength zirconium frameworks.
The zirconium oxide copings are produced in the CAD/CAM procedure.
Zirconium oxide not only has great strength, but it also meets the highest standards of aesthetics and biocompatibility.

A. Liner firing
The Liner was developed to reduce the high brightness of white zirconium oxide frames. The mixing of the Liner is recommended with modelling liquid. Apply the Liner thinly.

B. Dentine and enamel build-up
The labial and occlusal form is first built up with dentine material in the required shade. Once the anatomical form is ready, reduce the incisal and interdental areas of the dentine to create enough space for further layering.

Dentine powder

Missing areas are completed with transparent and enamel porcelains depending on the individual appearance of the crown required. Slightly shiny surface after firing.
Dentine and incisal powders are also used for the palatal build-up.

Transparent powder

Enamel powder

A second dentine firing can be used to make adjustments and to make up for firing shrinkage**.**
The crown should be finished and cleaned again before adding porcelain.

Shade	A1	A2	A3	A3.5	A4	B1	B2	B3	B4	C1	C2	C3	C4	D2	D3	D4
LINER	L2	L2	L2	L3	L2	L1	L3	L3	L3	L1	L2	L2	L2	L1	L2	L3
DENTINE	A1	A2	A3	A3.5	A4	B1	B2	B3	B4	C1	C2	C3	C4	D2	D3	D4
ENAMEL	E2	E2	E3	E3	E4	E1	E3	E3	E3	E4	E3	E3	E4	E4	E3	E3

C. Glaze firing:
The degree of glaze can be matched to the situation in the mouth by means of mechanical polishing.

Frederic Furgier - CDT

5) Indication for use

1. Crowns
2. Veneers
3. Inlays
4. Onlays
5. Partial crowns
6. Crown or splinted crown on top of an abutment

6) Warning / Contraindication / Precautions

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
Usual precautionary personal measures and protective equipment (mask, gloves) as stipulated in dental clinic and dental laboratory for professionals.
Methods and material for cleaning up: pick up mechanically.
Not allow for large quantities to reach ground water, water course or sewage system, limited to normal professional use.
Undesired effects - Reporting: If you become aware of any kind of undesired effect, reaction or similar events experienced by use of this product, including those not listed in this instruction for use, please report them directly through the relevant vigilance system, by selecting the proper authority of your country accessible through the following link: https://ec.europa.eu/growth/sectors/medical-devices/contacts_en as well as to our internal vigilance system: vigilance@gc.dental.
In this way you will contribute to improve the safety of this product.

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PROCEED MC & Zr

INSTRUCTION FOR USE

7) Packaging

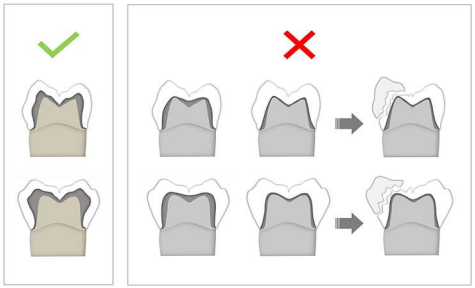
Proceed MC	Syringe, paste opaque 3g
	Bottle, powder 50g,
	Bottle, powder 200g
	Bottle, powder 1kg.
Proceed ZR	Bottle, powder 50g,
	Bottle, powder 200g
	Bottle, powder 1kg.
Modelling Liquid	Bottle, liquid 50ml
	Bottle, liquid 300ml,
Glaze Liquid	Bottle, liquid 25ml
	Bottle, liquid 50ml,
Opaque Liquid	Bottle, liquid 25ml
	Bottle, liquid 50ml,

8) Storage condition

Recommended storage condition for optimal performance store at 4 – 28 C.

9) Substructure thickness

The design of the metal/alloy framework contributes to the longevity and durability of PFM restoration.
A well-designed framework provides a high-quality result, clinical success and patient satisfaction.
The metal framework must reflect the reduced final restoration shape.



10) Manufacturer and importer

• Manufacturer:
KLEMA Dentalprodukte GmbH -
Koblacherstrasse 3a | AT-6812 Meiningen
AUSTRIA (Europe / Made in EU)
• Repackage:
GC India Dental Pvt. Ltd.
Industrial Park, 233 Pashamylaram, Hyderabad, Telangana, India 502307
Tel: +91-8455224844 / Web: www.gcindiadental.com

• Thailand, Distributed by:
ACCORD HENRY SCHEIN®
ACCORD Corporation Ltd.
33/2-8 Soi Rongmuang 4, Rongmuang, Pathumwan, Bangkok 10330
Thailand - Tel: +66-2119 4900 Ext.3205 - Web: www.henryschein-sea.com

11) Firing instructions

PROCEED MC Firing Instructions:

	Preheating temp.	Drying time	Raise of temp.	Vacuum	Final temp.	Holding time	Appearance
Oxide Firing	According to alloy manufacturer's instructions						
NE Bonder	550°C	6 min	80°C/min	Yes	980°C	1 min	Shining
1st Paste Opaque Firing*	550°C	6 min	80°C/min	Yes	940°C	1 min	Shining
1st Powder Opaque Firing*	600°C	2 min	80°C/min	Yes	940°C	1 min	Shining
2nd Paste Opaque Firing	550°C	6 min	80°C/min	Yes	930°C	1 min	Slightly Shining
2nd Powder Opaque Firing	600°C	2 min	80°C/min	Yes	930°C	1 min	Slightly Shining
1st and 2nd Shoulder Firing	550°C	2 min	80°C/min	Yes	940°C	1 min	Slightly shining
1st Dentine Firing	580°C	4 min	55°C/min	Yes	905°C	1 min	Slightly shining
2nd Dentine Firing	580°C	6 min	55°C/min	Yes	895°C	1 min	Slightly shining
Glaze Firing	600°C	2 min	55°C/min	---	910°C	1 min	Shining
Glaze Firing with glaze powder	480°C	2 min	55°C/min	---	850°C	1 min	Shining
Correction Powder Firing	450°C	4 min	45°C/min	Yes	780°C	1 min	Shining

PROCEED Zr Firing Instructions:

	Preheating temp.	Drying time	Raise of temp.	Vacuum	Final temp.	Holding time	Appearance
Shoulder Firing	450°C	4 min	45°C/min	Yes	830°C	1 min	Shining
Liner	450°C	4 min	55°C/min	Yes	800°C	1 min	Slightly shining
Wash Body	450°C	6 min	45°C/min	Yes	810°C	1 min	Slightly shining
1st Dentine Firing	450°C	6 min	45°C/min	Yes	810°C	1 min	Slightly shining
2nd Dentine Firing	450°C	6 min	45°C/min	Yes	800°C	1 min	Slightly shining
Glaze Firing	480°C	2 min	45°C/min	---	820°C	---	Shining
Glaze Firing with glaze powder	480°C	2 min	45°C/min	---	790°C	1 min	Shining
Correction Powder Firing	450°C	4 min	45°C/min	Yes	690°C	1 min	Shining

12) Color chart

GC PROCEED MC Colour Chart

V-Shade		A1	A2	A3	A3.5	A4	B1	B2	B3	B4	C1	C2	C3	C4	D2	D3	D4
Paste / Powder Opaque	16	OA1	OA2	OA3	OA3.5	OA4	OB1	OB2	OB3	OB4	OC1	OC2	OC3	OC4	OD2	OD3	OD4
Paste / Powder Opaque	1	Opaque Bleach															
Opaque Dentine	16	ODA1	ODA2	ODA3	AOD3.5	ODA4	ODB1	ODB2	ODB3	ODB4	ODC1	ODC2	ODC3	ODC4	ODD2	ODD3	ODD4
Dentine	16	DA1	DA2	AD3	DA3.5	DA4	DB1	DB2	DB3	DB4	DC1	DC2	CD3	DC4	DD2	DD3	DD4
Transparent Clear Fluorescent	1	CL-F															
Enamel	4	E2	E2	E3	E3	E4	E1	E3	E3	E3	E4	E3	E3	E4	E4	E3	E3
Dentine Bleach	3	BD1						BD2							BD3		
Enamel Bleach	1	BL-E															
Dentine Modifier	4	DM1-Sun					DM2-Terracota					DM3-Sand				DM4-Havana	
Transparent	2	TN neutral									TO opal						
Effect Transparent	5	ET1-blue				ET2-white			ET3-Light Red			ET4- yellow				ET5-grey	
Effect Enamel	4	E5-grey					E6-yellow soft				E7-orange				E8-yellow		
Opal Enamel	2	OE1- Blue									OE2 - Orange						
Neck Transparent	5	NT1 - Neutral					NT2 - Light yellow				NT3 - Orange				NT4 - Yellow		NT5 - Brown
Shoulder Transparent	7	S-1		S-2		S-3		S-4		S-5		S-6		S-7			
Shoulder Opaque	3	S-8					S-9						S-10				
Gingiva	2	G1 - Dark pink									G2						
Correction	1	COR															
Glaze	1	GL															

GC PROCEED Zr Colour Chart

V-Shade		A1	A2	A3	A3.5	A4	B1	B2	B3	B4	C1	C2	C3	C4	D2	D3	D4
Liner	5	L2	L2	L2	L3	L2	L1	L3	L3	L3	L1	L2	L2	L2	L1	L2	L3
Liner		L4 Bleach									L5 Gingiva						
Dentine	16	DA1	DA2	AD3	DA3.5	DA4	DB1	DB2	DB3	DB4	DC1	DC2	CD3	DC4	DD2	DD3	DD4
Transparent Clear Fluorescent	1	CL-F															
Enamel	4	E2	E2	E3	E3	E4	E1	E3	E3	E3	E4	E3	E3	E4	E4	E3	E3
Dentine Bleach	3	BD1						BD2							BD3		
Enamel Bleach	1	BL-E															
Dentine Modifier	4	DM1-Sun					DM2-Terracota					DM3-Sand				DM4-Havana	
Transparent	2	TN neutral									TO opal						
Effect Transparent	5	ET1-blue				ET2-white			ET3-rosa			ET4- yellow				ET5-grey	
Effect Enamel	4	E5-grey					E6-yellow soft				E7-orange				E8-yellow		
Opal Enamel	2	OE1									OE2						
Neck Transparent	5	NT1				NT2			NT3			NT4				NT5	
Shoulder Transparent	7	S-1		S-2		S-3		S-4		S-5		S-6		S-7			
Shoulder Opaque	3	S-8					S-9						S-10				
Gingiva	2	G1									G2						
Correction	1	COR															
Glaze	1	GL															

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