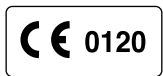


*Noritake*

# SCREENING PORCELAIN

—Technical Instructions—

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N01\_2012.3.OK

Screening Porcelain is to be used in combination with Noritake Super Porcelain EX-3 to make all-ceramic restorations, porcelain laminate veneers and jacket crowns as well as porcelain inlays and onlays.



Before



After



Before



After

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Restorations fabricated by: **Hitoshi Aoshima**  
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## B. Morphological Improvement

1. Use Body Porcelain for the first layer. Apply it in a very thin layer. Then, bake it according to the Body Porcelain Baking Schedule.
2. Build up and bake the second stage. Apply Body Porcelain on the gingival 2/3. Build-up with Enamel Porcelain over the Body. If desired, overlay everything with the Translucent. Then bake it using the same schedule.

## PORCELAIN JACKET CROWNS: Procedures for Fabrication

1. Perform the first application.

Condition of Preparation	Recommended Porcelain
Preparation has a desirable color	Opacious Body
Preparation is discolored or has a gold core	1part Screening Porcelain to 1part Body porcelain
Preparation has a dark metal core	Screening Porcelain

Select the desired porcelain using the table above. Apply a very thin layer of porcelain and bake it using the Body Porcelain Baking Schedule.

2. Perform the second application.

Apply a second layer of the same porcelain that you use in the first application. The thickness should be 0.3mm. Bake it using the same schedule.

3. Apply the Body and Enamel Porcelain.

Build up the Body Porcelain to the final size of the tooth. Then, cut back and make the mamelons. Build up the Enamel and, if desired, the Translucent. Bake it using the same schedule.

4. Do the final finishing.

Perform the final morphological corrections and glaze it according to the Glazing Schedule.

II .Complementary Color Technique:

To improve shade with high translucency

Briefly, the Complementary Color Technique for restoring discolored teeth with porcelain laminate veneers involves building up a veneer of body porcelain that has the opposite color on the Munsell Hue wheel from the (discolored) preparation. After the veneer is inserted, the two colors offset each other and the net result is a tooth without dramatically reduced chroma. The translucency may be quite good, but high value is nearly impossible to achieve. See K. Yamada "Porcelain Laminate Veneers for Discolored Teeth Using Complementary Colors," *The International Journal of Prosthodontics*, Quintessence, No.6 May/June 1993. This article was selected for Moseby's Yearbook 1993.

The procedures are similar to those for Screening Porcelain Technique.

Use the chart below as a guide when choosing the shade of the body build-up.

Degree of Discoloration	Color of Preparation	Recommended Porcelain
Moderate Discoloration	Brown	M Brown
	Reddish Gray	M Reddish Gray
Severe Discoloration	Brown (Fig 5)	S Brown
	Reddish Gray (Fig 6)	S Reddish Gray



Fig 5



Fig 6

1. Selected the Body Porcelain according to the above. The first application must be very thin. Bake it using the Body Porcelain Baking Schedule.
2. In the second application use the same porcelain as the first. The thickness is 0.3 mm in the cervical area and is tapered down to nothing in the area that is within 1.0-1.5 mm from the incisal edge. Bake it using the same schedule.
3. In the third application, apply the Body, Enamel and, if desired, the Translucent Porcelain. Bake it, using the same schedule.
4. Perform the morphological corrections and glaze it according to the Glazing Schedule.

1. Screening Colors 10g.

A <sub>1</sub> G	A <sub>2</sub> G	A <sub>3</sub> G
B <sub>1</sub> G	B <sub>2</sub> G	B <sub>3</sub> G
C <sub>1</sub> G	C <sub>2</sub> G	
	D <sub>2</sub> G	D <sub>3</sub> G

2. Screening Modifiers 10g.

White	Orange	GIL
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GIL:Apply to the area of one third from the incisal.

3. Complementary Colors 10g.

M Brown	M Reddish Gray
S Brown	S Reddish Gray



- Screening Porcelain Kit contains:
- 10 Screening Colors, 10g each.
  - 3 Screening Modifiers, 10g each.
  - 4 Complementary Colors, 10g each.
  - 1 Forming Liquid 20ml.
  - 1 Color Table.
  - 1 Technical Instruction.

**A. Shade Improvement**

There are two methods for fabricating porcelain laminate veneers for restoring discolored teeth : the screening porcelain technique and the complementary color technique.

**1.) Screening porcelain technique :**

To improve the shade with increased value

Mix the Body and Screening Porcelain according to the chart below.

Degree of Discoloration	Recommended Mixing Ratio
Slightly Discolored	1 part Screening Porcelain to 2 parts Body Porcelain
Moderately Discolored	1 part Screening Porcelain to 1 part Body Porcelain
Severely Discolored	Pure Screening Porcelain

1. Build up with the Body Porcelain selected according to the above chart. The first layer must be very thin. Bake it using the Body Porcelain Baking Schedule on page 4.
2. Use the same mixture to build up the second layer. Apply with a thickness of 0.2 mm in the cervical area. Taper the thickness down to nothing, leaving the area within 1.0-1.5 mm of the incisal edge without a second layer.
3. Bake it using the Body Porcelain Baking Schedule.
4. In the third application, apply the Body, Enamel and, if desired, Translucent Porcelain, and bake it using the same schedule.
5. Perform the morphological corrections. Adjust the occlusion and make the morphological corrections. Carefully trim the excess porcelain at the margin, using a diamond silicon wheel. Clean it ultrasonically.
6. Glaze the porcelain. Use the Glazing Schedule on page 4.

7. Make the final adjustments. Adjust the veneers to get a good fit on the solid model (Fig 1,2). Check the fit at the margin especially carefully. Use a silicon wheel to remove the excess porcelain at the margin. Using an articulator, adjust the occlusion for protrusion and lateral exclusion. If addition porcelain is needed, use the low fusing repair porcelain, Noritake Addmate and the separator, Noritake Addmate Porcelain Separator (Fig 3,4).



Fig 1



Fig 2



Fig 3



Fig 4

**BAKING SCHEDULES**

**BODY PORCELAIN**

Dry-out Time	Low Temp	High Temp	Heat Rate	Hold Time	Vacuum Level	Cooling Time
10min.	600°C	950°C	45°C/min.	0min.	72cm Hg	10min.
10min.	1112°F	1742°F	81°F/min.	0min.	29inches Hg	10min.

**GLAZING**

Dry-out Time	Low Temp	High Temp	Heat Rate	Hold Time	Vacuum	Cooling Time
10min.	600°C	950°C*	40°C/min.	If necessary	Off	10min.
10min.	1112°F	1742°F*	72°F/min.	If necessary	Off	10min.

\*If you use glazing powder and/or stain reduce high temperature by 10-15 °C(18-27 °F)