

COMPLETE INSTRUCTION BOOK §



www.miyoworld.eu







Jensen Dental

Over the last 30 years we've grown from a dental alloy company into a complete provider of quality products, systems, education and technical support for the dental laboratory industry.

We strive for one on one relationships with our customers, through our Dental Technology trained staff who are committed to making you and your dental laboratory more effective, efficient and successful through innovative Jensen products.

Jensen Dental is constantly listening to your insights on how we can improve the products and services we offer, it's very simple, your success is our success.



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Cover photo: MiYO work by Maxim Vorkul



1 MiYO & MiYO pink

liquid ceramic systems





1.1 Product description

Layered esthetics - monolithic effort

Jensen currently offers two MiYO* liquid ceramic systems: MiYO for teeth and MiYO pink for tissue.

Both systems are a unique finishing system made of paste opalescent and fluorescent layer materials for coloring, structuring and glazing. With MiYO you can easily and quickly achieve high aesthetic results, comparable to layered restorations in the same time it would take if you were just staining.

MiYO Color consists of different types of self-glazing colors with varying levels of translucency, each uniquely formulated to replicate nature's own tooth and tissue color and structure, such as incisal translucency, mamelons, crack lines, halos, and gingival tissue.

Over MiYO Color we layer MiYO Structure. With MiYO Structure you can create depth, vitality, and texture found in natural enamel and tissue, in unprecedented thicknesses of 0.1 mm - 0.2 mm. Due to the high stability, individual surface structures can easily be integrated into the paste with a brush.

The low firing temperature does not change the characteristics of the surface, so reliable and aesthetic results are achieved with only one or two fires.

MIYO IS DESIGNED FOR:

- Monolithic Zirconia
- Zircon dioxide
- Lithium Disilicate
- PFZ (eg. InSync Zr)
- PFM (eg. InSvnc MC)
- Press to Zirconia

MIYO PINK IS DESIGNED FOR:

- Monolithic Zirconia
- Zircon dioxide
- Lithium Disilicate
- PFZ (eg. InSync Zr)
- PFM (eg. InSync MC)



MIYO BENEFITS:

- + Reliable results every time
- + Easy handling paste materials
- + Economical and time saving through fast working processes
- + MiYO Color with perfectly adjusted fluorescence and opacity for contrast and depth
- + MiYO Structure unique structure pastes
- + Natural refractive index of MiYO Structure is visible on monolithic crowns from a layer thickness of 0.1 mm
- + High color stability
- + Minimal shrinkage
- + Detailed aesthetic results by controlling shape, surface and structure before the firing cycle





1.2 Technical data

		class	CTE 2x firing (25 - 500°C) [*10 ⁻⁶ K ⁻¹] ± 0,5	CTE 4x firing (25 - 500°C) [*10 ⁻⁶ K ⁻¹] ± 0,5	Tg* 2x / 4x firing [°C] ± 20	Chemical solubility		3 point bend test	
	type					ceramic [µg/cm²]	according to ISO 6872 [µg/cm²]	ceramic [MPa]	according to ISO 6872 [MPa]
MiYO Color	1	1b	7,5	-	490	< 100	< 100	≥ 50	> 50
MiYO Structure	1	1b	7,4	7,4	485	< 100	< 100	≥ 50	> 50

Characteristics tested in accordance with ISO 6872 and ISO 9693.

1.3 Instructions for use

- Do not pour surplus liquid out of the container. Mix it back into a paste.
- Mix MiYO Color, MiYO Structure and Glaze Paste thoroughly with a metal-free spatula before each use.
- The pastes must not come into contact with water.
- Always use a clean and dry brush.
- Store dry between +12°C to +38°C.

^{*} For Tg 2x / 4x less than 500°C, the CTE value [25°C -TG] is specified.



2 MiY0

With MiYO you can achieve high aesthetic results more easily and quickly than ever before.

The MiYO system is composed of 24 MiYO Color, 5 MiYO Structure and 2 MiYO High Temperature Structure materials with different opacity and fluorescence effects.

The low firing temperature does not change the characteristics of the surface, so reliable and aesthetic results are achieved with only one or two fires.







2.1 MiYO system components

TRANSLUCENT

• MiYO Color fluorescent and translucent. As body stain for effects and as value enhancer.

Body stain

- Trans Shade A
- Trans Shade B
- Trans Shade C
- Trans Shade D

Value enhancer

- Trans Lumin
- Trans Lumin plus
- Trans Smoke
- Trans Slate

Effect material

- Trans Straw
- Trans Sage
- Trans Lotus
- Trans Clementine
- Trans Storm
- Trans Cobalt
- Trans Sunflower
- Trans Garnet*

- MiYO Color fluorescent with medium opacity, for reproducing the "Halo" effect in the enamel area.
- Halo Spring
- Halo Autumn









MIYO



MAMELON

- · MiYO Color with high opacity and reduced fluorescence.
- Mamelon Wheat
- Mamelon Coral
- Mamelon Pumpkin

COLOR

- MiYO Color markable stains.
 - Snow
 - Linen
- Fissure (powder)



STRUCTURE

- MiYO Structure structure pastes for layering.
- Outstanding high stability.
- Individual design of the surface structure with a brush.
- Natural refractive index of MiYO Structure is visible on monolithic crowns from a layer thickness of 0,1 mm.
- Low firing temperature preserves the surface design.
- No additional glaze firing needed.
- HT Structure high temperature structure pastes for layering. For restorations with large volume.

Available as:

- Structure Window transparent
- Structure Ghost whitish translucent
- Structure Enamel classic enamel 59
- Structure Ice bluish opalescent
- Structure Blush orange-reddish opalescent
- HT Structure Window transparent
- HT Structure Enamel classic enamel 59

GLAZEPASTE

• InSync Glaze Paste Fluor: Due to its unique glass matrix, the desired result is achieved after the first firing.

LIQUIDS

 InSync one-for-all Glaze Liquid universally applicable for the InSync and MiYO system.











2.2 Firing charts

COLOR I STRUCTURE I GLAZE PASTE

FIRING PARAMETER*	start temperature [°C]	dry time [min]	closing time [min]	heat rate [°C / min]	holding time 1 [s]	vacuum start [°C]	final temperature [°C]	vacuum end [°C]	holding time 2 [s]**	opening time [min]
ZrO ₂	400 - 450	3	4	45	30 - 45	580	720	720	30 - 60	1
InSync Zr	400 - 450	3	4	45	30 - 45	580	720	720	30 - 60	1
InSync MC	400 - 450	3	4	45	30 - 45	580	720	720	30 - 60	1
Press to Zirconia	400 - 450	3	4	45	30 - 45	580	720	720	30 - 60	1
Lithium-Disilicate	400 - 450	3	4	45	30 - 45	580	710	710	30 - 60	1

^{*} Valid for Color-, Structure- und Glaze firings, not for HT Structure firing!

These firing temperatures are standard values and may vary depending on the type of furnace and the size (volume) of the restoration. Please note the information on MiYO firing graphs in chapter 2.3!

^{**} Depending on the desired shine, holding time should be 30 - 60 seconds.

HT STRUCTURE

FIRING PARAMETER*	start temperature [°C]	dry time [min]	closing time [min]	heat rate [°C / min]	holding time 1 [s]	vacuum start [°C]	final temperature [°C]	vacuum end [°C]	holding time 2 [s]**	opening time [min]
ZrO ₂	400 - 450	3	4	45	30 - 45	600	775	775	60	1
InSync Zr	400 - 450	3	4	45	30 - 45	600	775	775	60	1

^{*} Valid for HT Structure firing only!

These firing temperatures are standard values and may vary depending on the type of furnace and the size (volume) of the restoration. Please note the information on MiYO firing graphs in chapter 2.3!

^{**} Depending on the desired shine, holding time should be 30 - 60 seconds.

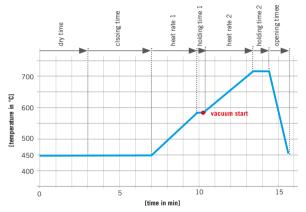


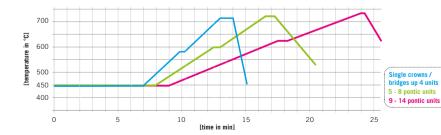


Furnace programming | Firing graphs

JENSEN DENTAL

2.3 Notes to MiYO firing graphs





DRY TIME

- Only MiYO Color / Glaze Paste: 3 min
- With MiYO Structure: 4 min

CLOSING TIME

- Single crowns and bridges up to 4 units: 4 min
- Restorations with large volumes / bridges with more than 4 units:
 5 - 6 min

HEAT RATE 1

- Single crowns and bridges up to 4 units: 45°/ min
- 5 8 units: 35°- 40°/ min
- 9 14 units: 20°- 25°/ min

HEAT RATE 2

 Bridges with more than 5 units: max 40°/ min

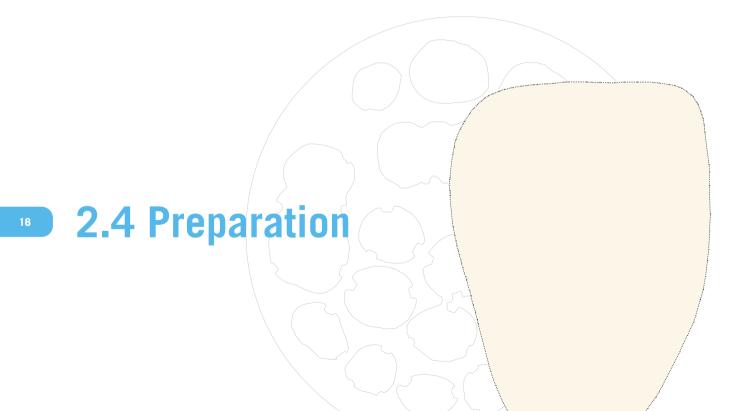
HOLDING TIME 2

- Single crowns and bridges up to 4 units: 1 min
- Reduce holding time 2 for large restorations, since the slow opening phase creates an "afterburning effect".

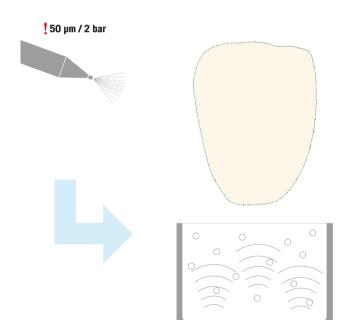
OPENING TIME

 Opening phase according to the manufacturer's instructions for the framework material.











- Prepare the zirconia frameworks after milling according to the manufacturer's instructions.
- Sandblast the sintered surface with ${\rm Al}_2{\rm O}_3$ or glass beads 50 μm and 2 bar pressure.
- Clean with distilled water in an ultrasonic bath.
- Clean carefully with a steam cleaner.

LITHIUM DISILICATE INSYNC ZR I MC PRESS TO ZIRCONIA

- Sandblast the surface with Al₂O₃
 50 μm and 2 bar pressure.
- Clean with distilled water in an ultrasonic bath.
- Clean carefully with a steam cleaner.



2.5 Coloring

Paint with MiYO Color and then glaze, so aesthetic results can be achieved in a very short time with little effort.

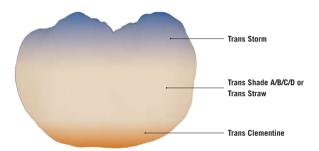
Different types of self-glazing colors with varying levels of translucency, each uniquely formulated allow you to replicate nature's own tooth color and structure, such as incisal translucency, mamelons, crack lines, and halos.

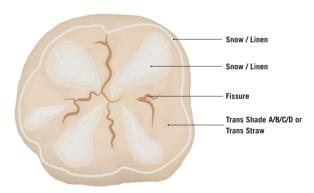
20





2.5.1 MOLAR - pure color





PREPARATION

- Mix MiYO Color thoroughly with a metal free spatula.
- Add a thin layer of Glaze Liquid before you start coloring.

COLORING

- Colorize the entire labial area in three color zones: Trans Shade A/B/C/D or Trans Straw, set occlusal accents with Trans Storm and cervical accents with Trans Clementine.
- Colorize the entire occlusal surface in the desired shade Trans Shade A/B/C/D or Trans Straw.
- Add fissure to the fissure and cusp areas with snow or linen.

FIRING

• Fire with furnace-specific firing parameters.

USED MATERIAL

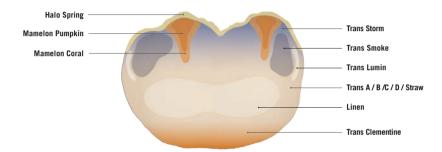
- Trans Shade A, B, C, D / Trans Straw
- Trans Storm
- Trans Clementine
- Fissure
- Snow or Linen
- InSync one-for-all Glaze Liquid

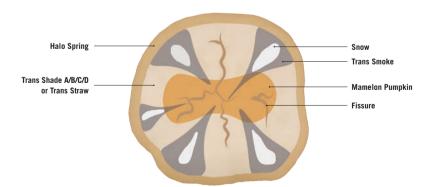






2.5.2 MOLAR - creative color





PREPARATION

- Mix MiYO Color thoroughly with a metal free spatula.
- Add a thin layer of Glaze Liquid before you start coloring.

COLORING

- Colorize the labial area as described under pure color in three zones and the occlusal surface.
- Characterize individually with mamelon, halo, effect material and value enhancer.

FIRING



• Fire with furnace-specific firing parameters.

USED MATERIAL

- Trans Shade A, B, C, D / Trans Straw
- Trans Storm
- Trans Clementine

MIYO

- Fissure
- . Snow / Linen



- Halo Spring / Halo Autumn
- Mamelon Coral and Mamelon Pumpkin
- Trans Smoke

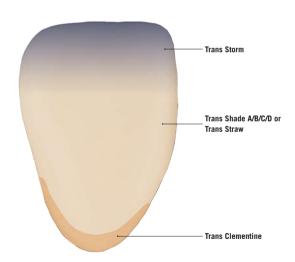


- Trans Lumin
- Linen
- InSync one-for-all Glaze Liquid





2.5.3 ANTERIOR - pure color



PREPARATION

- Mix MiYO Color thoroughly with a metal free spatula.
- Add a thin layer of Glaze Liquid before you start coloring.

COLORING

 Colorize the entire labial area in three color zones: Trans Shade A/B/C/D or Trans Straw, set occlusal accents with Trans Storm and cervical accents with Trans Clementine.

FIRING

• Fire with furnace-specific firing parameters.

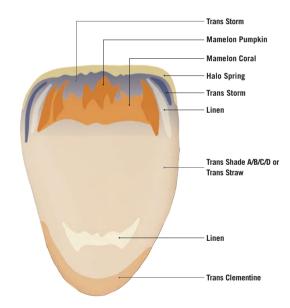
USED MATERIAL

- Trans Shade A, B, C, D / Trans Straw
- Trans Storm
- Trans Clementine
- InSync one-for-all Glaze Liquid





2.5.4 ANTERIOR - creative color



PRFPARATION

- Mix MiYO Color thoroughly with a metal free spatula.
- Add a thin layer of Glaze Liquid before you start coloring.

COLORING

- Colorize the labial area as described under pure color.
- Characterize individually with mamelon, halo, effect material and value enhancer.

FIRING



• Fire with furnace-specific firing parameters.

USED MATERIAL

- Trans Shade A, B, C, D or Trans Straw
- Trans Storm
- Trans Clementine
- Halo Spring / Halo Autumn
- Mamelon Coral and Mamelon Pumpkin
- Trans Storm
- Linen
- InSync one-for-all Glaze Liquid



MIYO





Different shape, color and effect starting from a base



Structuring the surface





From high to low value with MiYO Color Storm and Smoke



2.6 Glaze firing



Glaze paste can be applied to the entire restoration to achieve a uniform surface finish.

PREPARATION

• Stir InSync Glaze Paste with metal-free spatula.

PROCESSING

• Apply InSync Glaze Paste.

FIRING

• Glaze firing with furnace-specific firing parameters.

USED MATERIAL

• InSync Glaze Paste Fluor









2.7 Structuring

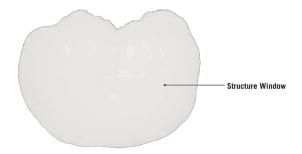
Individual surface structure added with the brush. Create depth, vitality in unprecedented thicknesses of $0.1\ mm$ - $0.2\ mm$.

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2.7.1 MOLAR - pure structure



PREPARATION

- Colorize and fire the crown as described in chapter 2.5
- Mix MiYO Structure thoroughly with a metal free spatula.

PROCESSING

- Apply Structure Window on the entire surface. Structure Window does not change the color scheme.
- Customize individual surface structure with a brush.

FIRING

• Fire with furnace-specific firing parameters.

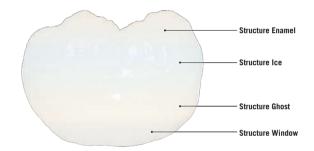
USED MATERIAL

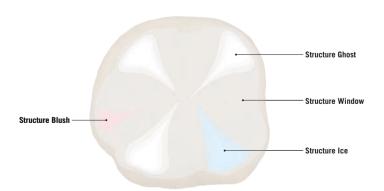
• Structure Window





2.7.2 MOLAR - creative structure





PREPARATION

- Colorize and fire the crown as described in chapter 2.5
- Mix MiYO Structure thoroughly with a metal free spatula.

PROCESSING

- Apply MiYO Structure individually according to your coloring.
- Integrate nature-identical surface structure with a brush.

FIRING



• Fire with furnace-specific firing parameters.

USED MATERIAL

- Structure Window
- Structure Ghost
- Structure Enamel



- Structure Ice
- Structure Blush



2.7.3 ANTERIOR - pure structure



PREPARATION

- Colorize and fire the crown as described in chapter 2.5
- Mix MiYO Structure thoroughly with a metal free spatula.

PROCESSING

- Apply Structure Window on the entire surface. Structure Window does not change the color scheme.
- Customize individual surface structure with a brush to reproduce natural tooth surface structure.

FIRING

• Fire with furnace-specific firing parameters.

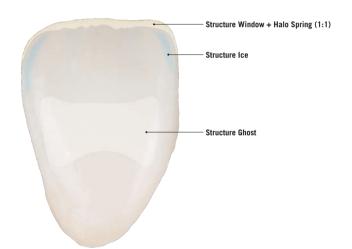
USED MATERIAL

Structure Window





2.7.4 ANTERIOR - creative structure



PREPARATION

- Colorize and fire the crown as described in chapter 2.5
- Mix MiYO Structure thoroughly with a metal free spatula.

PROCESSING

- Apply MiYO Structure individually according to your coloring.
- Customize individual surface structure with a brush to reproduce natural tooth surface structure.
- Mix Structure Window and Halo Spring in a ratio of 1: 1 to achieve orange - reddish incisal effects.
- Structure Ice for bluish or Structure Blush for reddish opalescent light effects.
- Structure Ghost to raise the value.

FIRING



Fire with furnace-specific firing parameters.

USED MATERIAL

Structure Window



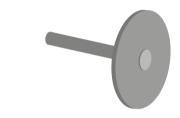
miyo

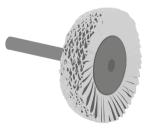
- Structure Ice
- Structure Blush
- Structure Ghost
- Halo Spring



2.8 Finishing

After the glaze firing, the gloss level of the crown can be adjusted with pumice powder at the polishing unit or by hand with the handpiece and diamond polishing paste.





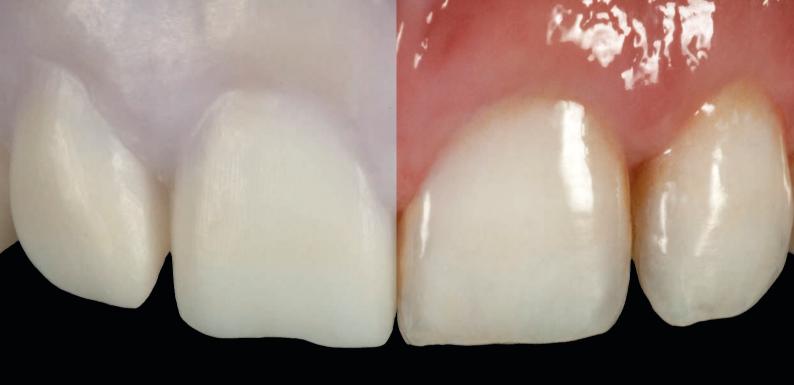
36





3 MiYO pink

The MiYO pink Gingival System gives technicians the unique ability to create the depth, vitality and texture found in natural tissue, in unprecedented thicknesses of 0.1 mm - 0.2 mm. The system is comprised of 14 self-glazing MiYO pink colors and 3 MiYO pink structure materials with different colors and opacity levels.





3.1 MiYO pink system components

GINGIVA TRANSLUCENT

- MiYO Gingiva Color translucent.
- Trans Raspberry
- Trans Copper
- Trans Midnight
- Trans Carnation
- Trans Garnet





GINGIVA COLOR

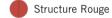
- MiYO Gingiva Color: markable stains.
- Flamingo
- Crimson
- Plum
- Merlot
- Sorbet
- Salmon
- Sable
- Thistle
- Venule (powder)

GINGIVA STRUCTURE

- MiYO Gingiva Structure: structure pastes for layering.
- Outstanding high stability.
- Individual design of the surface structure with a brush.
- Natural refractive index of MiYO Structure is visible on monolithic crowns from a layer thickness of 0,1 mm.
- Low firing temperature preserves the surface design.
- No additional glaze firing needed.

Available as:





Structure Frost

GLAZE PASTE

 MiYO Glaze Paste No Fluor: Due to its unique glass matrix, the desired result is achieved after the first firing.

LIQUIDS

 InSync one-for-all Glaze Liquid universally applicable for the InSync and MiYO system.







3.2 Firing chart MiYO pink

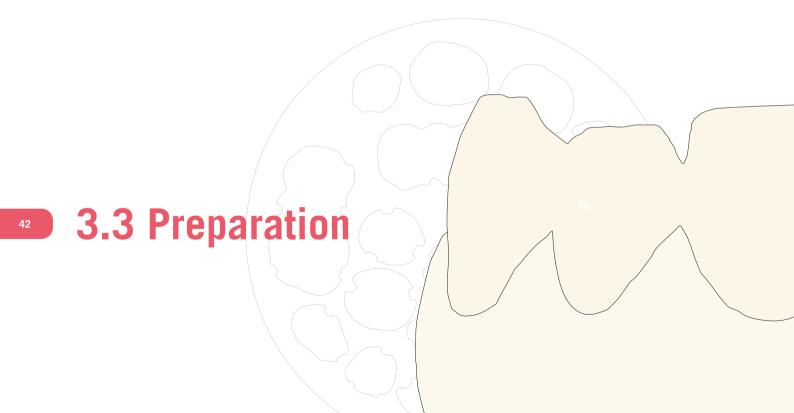
The following firing temperatures are standard values and may vary depending on the type of furnace and the size (volume) of the restoration. Please note the information on MiYO firing graphs in chapter 2.3!

FIRING PARAMETER*	start temperature [°C]	dry time [min]	closing time [min]	heat rate [°C / min]	holding time 1 [s]	vacuum start [°C]	final temperature [°C]	vacuum end [°C]	holding time 2 [s]**	opening time [min]
ZrO ₂	400 - 450	3	4	45	30 - 45	580	720	720	30 - 60	1
InSync Zr	400 - 450	3	4	45	30 - 45	580	720	720	30 - 60	1
InSync MC	400 - 450	3	4	45	30 - 45	580	720	720	30 - 60	1
Press to Zirconia	400 - 450	3	4	45	30 - 45	580	720	720	30 - 60	1
Lithium-Disilicate	400 - 450	3	4	45	30 - 45	580	710	710	30 - 60	1

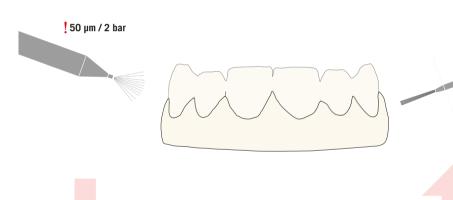
^{*} Valid for all MiYO pink firings.

^{**} Depending on the desired shine, holding time should be 30 - 60 seconds.









ZIRCONIA

- Prepare the zirconia frameworks after milling according to the manufacturer's instructions.
- Sandblast the sintered surface with ${\rm Al_2O_3}$ or glass beads 50 μm and 2 bar pressure.
- Clean with distilled water in an ultrasonic bath.
- Clean carefully with a steam cleaner.

LITHIUM DISILICATE INSYNC ZR

- Sandblast the surface with Al₂O₃
 50 μm and 2 bar pressure.
- Clean with distilled water in an ultrasonic bath.
- Clean carefully with a steam cleaner.





3.4 Coloring

Paint with MiYO pink Color and then glaze, so aesthetic results can be achieved in a very short time with little effort.

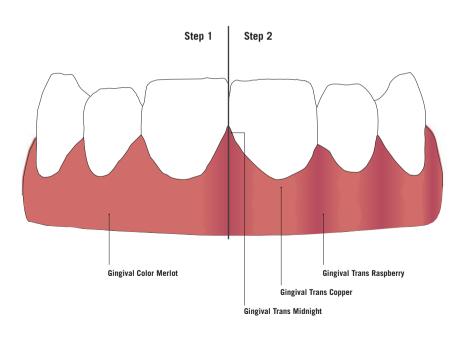
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3.4.1 MiYO pink Color



PREPARTATION

- Mix MiYO pink Color thoroughly with a metal free spatula.
- Add a thin layer of Glaze Liquid before you start coloring.

COLORING

- Step 1: Adjusting the base color with MiYO pink Gingival Color.
- Step 2: Design of papilla and alveolar areas as well as blood vessels with MiYO pink Gingival Translucent. To do this, apply Trans Raspberry, Copper or Midnight to the unfired MiYO pink Gingival Color (base shade).

FIRING

Fire with furnace-specific firing parameters.

USED MATERIAL

- Gingival Color Merlot
- Gingival Trans Raspberry





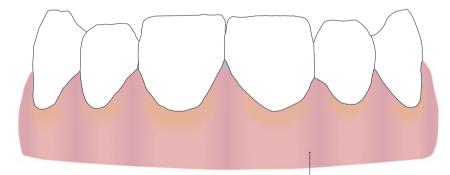
• InSync one-for-all Glaze Liquid







3.5 Glaze firing



MiYO Glaze Paste No Fluor Glaze paste can be applied to the entire restoration to achieve a uniform surface finish.

PREPARATION

• Stir MiYO Glaze Paste with metal-free spatula.

PROCESSING

• Apply MiYO Glaze Paste.

FIRING

• Glaze firing with furnace-specific firing parameters.

USED MATERIAL

• MiYO Glaze Paste No Fluor









3.6 Structuring

Individual surface structure added with the brush. Create depth, vitality in unprecedented thicknesses of $0.1\ mm$ - $0.2\ mm$.

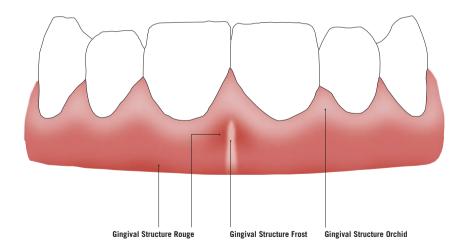
50







3.6.1 MiYO pink Structure



PREPARATION

- . Colorize and fire the tissue as described in chapter 3.4
- Mix MiYO pink Structure thoroughly with a metal free spatula.

PROCESSING

- Apply Gingival Structure Orchid, Rouge or Frost.
- Customize individual surface structure with a brush.

FIRING



• Fire with furnace-specific firing parameters.

USED MATERIAL

- Gingival Structure Orchid
- Gingival Structure Frost



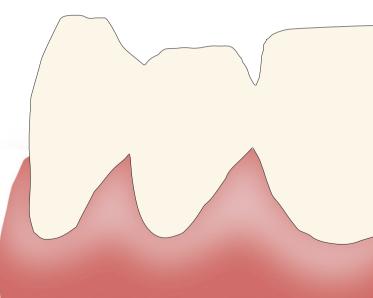






3.7 Finishing

After the glaze firing, the gloss level of the crown can be adjusted with pumice powder at the polishing unit or by hand with the handpiece and diamond polishing paste.



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55 4 Notes



PROCESSING TECHNICAL WARNINGS



Intended for dental use only. The application may only be carried out by trained specialist personnel.

When preparing ceramic restorations (grinding, polishing), dusts and splinters can occur. Protect eyes and avoid inhaling dust.



Using a suction device or wearing a protective mask and goggles is recommended. Avoid contact with skin, mucous membranes and eyes.



Use caution when handling at high temperature as there is a risk of severe burns, so use gloves if necessary.

Due to the different construction methods and brands of ceramic furnaces on the market, there are sometimes different firing temperatures internally.

These temperature variations in different brands of furnaces must be taken into account and clarified by the customer and it his/hers own responsibility.

The specified firing temperatures provided in this MiYO Instruction Manual are only guideline values.

Do not pour surplus liquid out of the containers. Mix MiYO Color, MiYO Structure and Glaze Paste thoroughly with a metal-free spatula before each use. The pastes must not come into contact with water. Always use a clean and dry brush.

The purity and cleanness of the brush or spatula must be carefully observed as any externally applied contamination can adversely affect the firing result. Risk of contamination.

For frameworks please follow the recommendations of the respective material manufacturer. The recommendations and notes in the corresponding instructions for use, must be observed.

NEGLIGENT PRODUCT USE

The combination with materials outside of the described product system or with materials from other manufacturers is not allowed.

MiYO products will not be held responsible for any clinical problem cases in general by introduction of other materials into MiYO.

STORAGE

Dry between +12°C to +38°C.

DISCLAIMER

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