

Telio® Lab



Instructions for Use

CE 0123

ivoclar
vivadent®
technical

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Everything (for) provisionals

Telio is a system of compatible materials for temporary restorations

Telio® is a comprehensive, fully integrated product system for temporary restorations designed for dentists, CAD/CAM users and dental technicians. All Telio materials are ideal for the manufacture of conventional and implant-supported temporaries. The materials are compatible with each other and their shades are optimally coordinated.

Telio® CS

For dentists:

Products for the manufacture of a full range of temporaries at chairside.



Telio® CAD

For CAD/CAM users:

Acrylate polymer blocks and Discs for the efficient manufacture of temporary crowns, hybrid abutments and bridges using the CAD/CAM technique.



Telio® Lab

For dental technicians:

Resin for the manufacture of long-term temporaries in the cold technique.





Material

Telio® Lab

Telio® is a PMMA-based two-component powder/liquid system for the cold polymerization in A–D shades. It is used for the fabrication of temporary crowns and bridges.

Telio Lab exhibits excellent polishing properties and thus a resulting smooth surface. Stains and/or layering materials can be used to apply final esthetic optimizations. Relinings, add-ons, emergence profiles and occlusal build-ups can be carried out with Telio Lab (laboratory), Telio® CS C&B (dental practice) or light-curing Ivoclar Vivadent composites in both areas.

Telio Lab can be used in conjunction with different processing techniques:

- Casting technique
- Injection technique
- Casting of temporary veneers for pre-ground artificial teeth

| | | Specification in accordance with FDS | Typical value |
|--|--------------------|--------------------------------------|---------------|
| Flexural strength ¹⁾ | MPa | ≥ 50 | 90.4 |
| Water absorption ¹⁾ | µg/mm ³ | ≤ 40 | 26.2 |
| Solubility ¹⁾ | µg/mm ³ | ≤ 7.5 | 0.87 |

¹⁾ EN ISO 10477:2004

Uses

Telio® Lab

Indications

- Temporary metal-free crowns and bridges with a maximum wear period of 12 months
- Temporary metal-supported crowns and bridges with a maximum wear period of 12 months
- Characterization, repair, supplements and relining of temporaries
- Cementation of Ivoclar Vivadent denture teeth to removable dentures (e.g. model cast dentures)
- Esthetic modification of denture teeth

Contraindications

- Direct intraoral use of unpolymerized material
- The material should not be used if a patient is known to be allergic to any of the ingredients of Telio Lab
- Bruxism
- Long-span bridges without reinforcements for a wear period longer than 12 months
- Occlusal appliances to elevate the vertical dimensions

Important processing restrictions

Failure to observe the following restrictions may compromise the results achieved with Telio Lab:

- Failure to observe the general Telio Lab minimum layer thickness of 1.5 mm
- No evenly supporting framework design
- Long-span bridges without reinforcement
- Insufficient connector dimensions
- Lack of mechanical retentions on the veneering surface of the metal framework, (e.g. SR Micro, SR Macro Retention Beads from Ivoclar Vivadent)
- Staining/layering using materials that are not approved and/or recommended

Composition

- **Telio Lab Cold Liquid / Telio Activator**
Components: Methyl methacrylate, triethylene glycol dimethacrylate (TEGDMA), dimethacrylate and catalyst (<1%)
- **Telio Lab Dentin, Transpa Incisal, Neck and Intensive Powder**
Components: Polymethyl methacrylate, catalyst and pigments (<2 wt.%).
- **Telio Lab Opaquer Powder**
Components: Copolymer, aluminium oxide, barium sulphate and titanium dioxide, catalyst, and pigments (<2% wt.)
- **Telio Lab Opaquer Liquid**
Components: Methyl methacrylate, catalyst (<1 wt.%)
- **SR Connect**
Components: Methyl methacrylate, polymethyl methacrylate, dimethacrylate, and initiators



Side effects

Systemic side effects have not been reported. In individual cases, allergic reactions to PMMA materials have been reported. In rare cases, components of the Telio Lab materials may lead to sensitization. In these cases, the use of the product should be discontinued.

Storage instructions

- Store packages in use at room temperature (2–28 °C/35–82 °F).
- Protect the material from direct sunlight.
- Observe the storage instructions and the date of expiration on the secondary packaging.
- Do not use the products after the indicated expiration date.
- Store out of the reach of children.

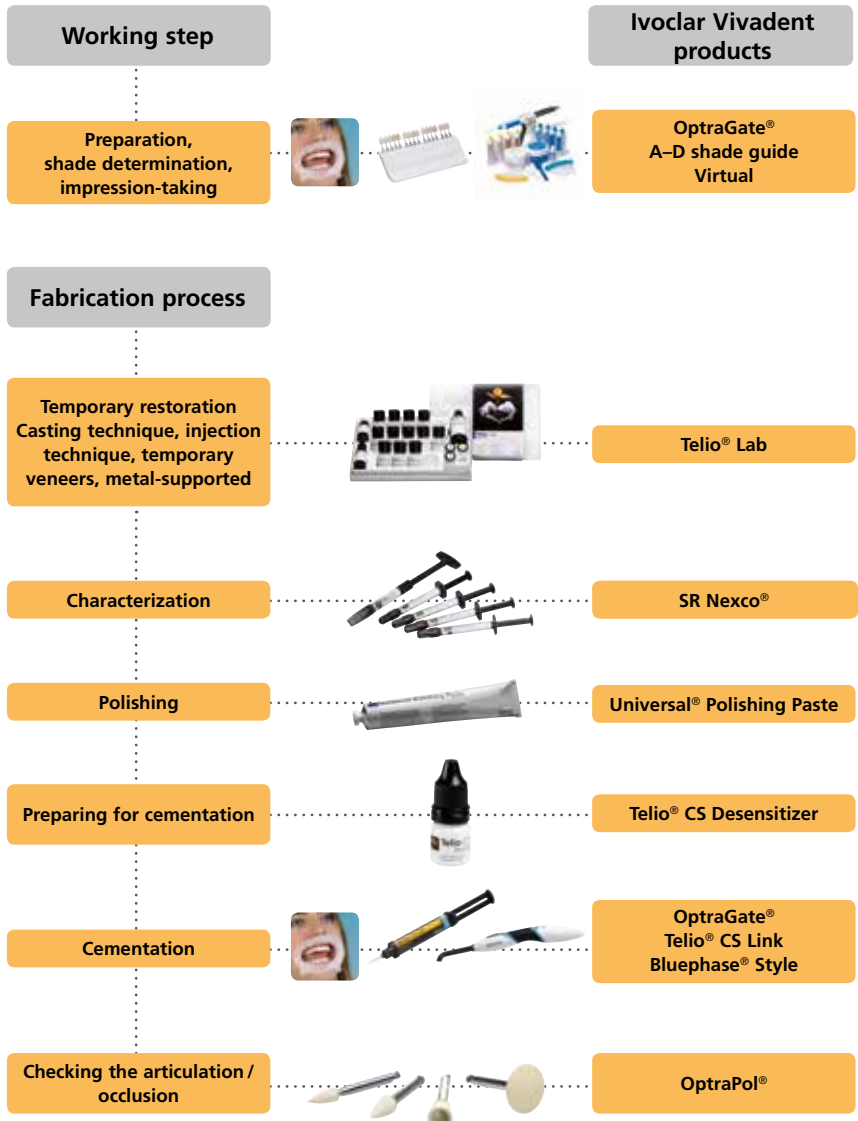
Warning

- Telio Lab Cold Liquid, Telio Activator, Telio Lab Opaquer and SR Connect contain methyl methacrylate (MMA).
- Do not use in case of known allergy to methyl methacrylates.
- MMA is easily flammable and irritating (flash point +10 °C / 50 °F).
- Irritating to eyes, skin and respiratory system.
- Do not inhale in vapours.
- Keep the material away from open fire. Do not smoke.
- Prevent contamination of sewage system.
- Take measures against electrostatic charge.
- Contact of the uncured Telio materials with the skin, mucous membrane or eyes must be avoided. Unpolymerized Telio CS materials may cause slight irritation and may lead to a sensitization against methacrylates. Customary medical gloves do not provide protection against the sensitizing effect of methacrylates.

Conditioning of the Telio products for the adhesive bond

| Basic material | Surface preparation | Bonding agent | Add-on material |
|--|---|---|-----------------|
| Telio® Lab | Blasting (Al ₂ O ₃ type 100) at 1–2 bar pressure or roughening | Telio® Activator or Telio® Lab Cold Liquid | Telio® Lab |
| Telio® Lab | Blasting (Al ₂ O ₃ type 100) with 1–2 bar pressure or roughening | SR Connect® | SR Nexco® |
| Ivoclar Vivadent denture teeth <small>*except Ivoclar Vivadent ceramic teeth</small> | Blasting (Al ₂ O ₃ type 100) at 1–2 bar pressure or roughening | Telio® Activator or Telio® Lab Cold Liquid | Telio® Lab |
| Alloys | Blast with Al ₂ O ₃ according to the instructions of the manufacturer | SR Link® or bonding agent according to the alloy recommendation | Telio® Lab |

Clinical working steps and technical fabrication process





Shade determination

Shade determination of the natural tooth

After tooth cleaning, the tooth shade of the non-prepared tooth and/or the adjacent teeth is determined with the help of a shade guide. Individual characteristics have to be considered when determining the tooth shade. If a crown preparation is planned, for example, the cervical shade should also be determined.

In order to achieve the best possible true-to-nature results, shade determination should be carried out in daylight. Furthermore, the patient should not wear clothes of intensive colours and/or lipstick.



Fabricating the model

Fabricate a master model or a model with detachable segments according to the impression in the usual manner. Generally, a sealant for surface hardening should be applied once the preparation margins are exposed.

Minimum material thicknesses / layer thicknesses

The design of the restoration is key to a successful temporary restoration that also paves the way for the incorporation of the permanent restoration. The more attention given to the design, the better the final results and the clinical success will turn out to be.

The following basic guidelines have to be observed:

- In large preparations and for partially veneered restorations, the excess available space must be compensated by the corresponding dimensions of the stable Telio Lab component and not by the layering material.
- The transition to the layering material must not be located in the area of the functional contact points.

| Framework thickness | Telio® Lab |
|--|-------------------------|
| Minimum wall thickness | |
| occlusal | 1.5 mm |
| circular | 0.8 mm |
| Connector dimensions anterior bridges | |
| with 1 pontic | min. 12 mm ² |
| with 2 pontics | min. 12 mm ² |
| Connector dimensions posterior bridges | |
| with 1 pontic | min. 12 mm ² |
| with 2 pontics | min. 16 mm ² |

Failure to observe the stipulated framework design criteria and minimum thicknesses may result in clinical failures (e.g. fracture of the restoration).

Important

Support the restoration with a framework (metal) in long-span bridges or if space is limited.

Designing the shape with a wax-up and silicone key

The tooth shape and function are designed with the help of a wax-up and secured with a silicone key.



Wax-up



Silicone key

Preparing and isolating the model

- Remove the silicone key from the model once it is set and clean off any wax residue from the model.
- Block out undercuts and cuts between model segments.
- Immerse the model in water for 5 minutes and then dry the model surface. Apply two layers of Separating Fluid for isolation. Wait until the surface is no longer shiny before applying the next layer.

Information

Rough surfaces or undercuts may be isolated or blocked out using the elastic isolating gel SR Ivocron® Separator. Apply SR Ivocron Separator and allow to dry for approximately 5 minutes.

Powder/liquid mixing ratio

| Volume mixing ratio | Weight mixing ratio | Mixing time | Dough time | Casting phase | Plastic phase | Polymerization in the pressure pot 2–6 bar/29–87 psi, 40–50 °C/104–122 °F |
|-----------------------------------|-------------------------------|-------------|------------|---------------|---------------|---|
| 1 part polymer: 1 part monomer | 1 g polymer 0.83 g monomer | 20 s | 2 min. | 2 min. | 3 min. | 15 min. |

Working time at 23°C/73°F approx. 8 minutes.

Important

The working time will be shorter at higher room temperatures. The mixing ratio between the polymer and the monomer also influences the processing time. If the mixing ratio is correctly observed, a relatively flowable consistency is achieved.

- Pour the desired amount of Telio Lab Cold Liquid into a clear mixing beaker.
- Dispense the same amount of powder into a second mixing beaker.
- Subsequently, add the powder to the Cold Liquid and mix without creating air bubbles using a modelling spatula.
- Cover the beaker and allow a dough time of approximately 2 minutes.
- Pour the now well-flowable Telio Lab evenly into the silicone key.
- Once the resin has reached its plastic phase, it can be contoured using an instrument that has been wetted with monomer.



Mixing ratio 1:1



2 minutes dough time

Fabricating temporaries in the casting technique

- Fill the silicone key with mixed and well-flowable Telio Lab Dentin without causing any air bubbles.
- Apply Telio Lab Dentin on the isolated model without air bubbles.
- Place the silicone key on the model in the correct position.
- Once Telio Lab has reached its plastic phase, the material is polymerized under pressure in a water bath for 15 minutes at 2–6 bar / 29–87 psi and a temperature of 40–50 °C / 104–122 °F.



Even pouring



Application on the isolation model



Placing the silicone key

Polymerization under pressure in a water bath

(e.g. Ivomat® IP3)

| Pressure (bar/psi) | Time (min) | Temperature (°C/°F) |
|--------------------|------------|---------------------|
| 2–6 | 15 | 40–50 / 104–122 |

Individualizing the incisal area using the cut-back technique

- After polymerization is completed and the restoration has been removed from the silicone key, the incisal area of the Telio Lab restoration is reduced by means of cross-cut burs.
- Check the reduction (cut-back) with the silicone key.
- Blast the surface with Al_2O_3 at 2 bar / 29 psi pressure or roughen it. Clean the restoration surface.
- After that, condition the surface with SR Connect in order to ensure a sound bond between the Telio Lab restoration and SR Nexco Stains.
- SR Connect is cured in a light-polymerization device (e.g. SR Nexco Instructions for Use).
- Only the incisal area is individualized using SR Nexco Stains.

The respective light-curing SR Nexco components are pre-polymerized to ensure that they stay in place and to be able to apply a further layer. However, final polymerization of the entire restoration is always required.

| Device | Manufacturer | SR Nexco Stains | SR Connect | Final polymerization |
|--------------|---------------------|-----------------|------------|----------------------|
| Quick® | Ivoclar Vivadent AG | 20 s Quick | | |
| Lumamat® 100 | Ivoclar Vivadent AG | | P2/11 min | P2/11 min |
| Spectramat® | Ivoclar Vivadent AG | 2 min | 2 min | 5 min |



Checking the cut-back



Application of SR Connect



Individualization with SR Nexco Stains



Dabbing off the inhibition layer

- The inhibition layer is dabbed off using a sponge.
- Now, the reduced and stained restoration is replaced in the silicone key and positioned on the wetted and isolated model.

Casting the Telio® Lab Transpa Incisal materials

- Pour the desired amount of Telio Lab Cold Liquid into a clean mixing beaker.
- Dispense the same amount of powder into a second mixing beaker.
- Subsequently, add the powder to the Cold Liquid and mix without creating air bubbles using a modelling spatula. Cover the beaker, and allow a dough time of approximately 2 minutes.
- Pour the now well-flowable Telio Lab evenly into the silicone key and polymerize.

Finishing and polishing

Finishing

Use (fine) cross-cut tungsten carbide burs to finish Telio Lab.

- Use cross-cut tungsten carbide burs for shape adjustments.
- Overheating of the material must be avoided.
- The restorations are tried in on the dies and carefully finished.
- Check proximal and occlusal contact points.
- Make sure that the minimum thicknesses are maintained even after the minor adjustments.



Removal of excess material

Polishing

Careful polishing is the prerequisite for an optimum esthetic result. Polishing reduces plaque accumulation and the resulting shade disturbances.

- Pay special attention to crown margins, interdental areas, occlusal surfaces and the basal rest area of pontics.
- Manual polishing of the restoration is carried out with rotary instruments and polishing paste.

Pre-polishing

- Smooth out the surface (convex areas) of the natural structures, as well as the marginal ridges with rubber polishers and silicone polishing wheels so that they exhibit an extra lustre after high-gloss polishing.
- Pre-polishing is done with the handpiece/goat hair brushes and fine pumice/Universal Polishing Paste.

High-gloss polishing

- Polish the restoration to a high gloss using goat hair brushes, cotton or leather buffing wheels as well as the Universal Polishing Paste.
- Use low speed and limited pressure for high-gloss polishing. Adjust the pressure with the handpiece, not the polishing motor.
- In order to optimally polish the interdental areas and occlusal surfaces, we recommend modifying the goat hair brushes to become star-shaped so that only the desired areas can be polished due to the smaller size of the brush.
- Depending on the type of high gloss desired, leather buffing wheels can be used to achieve a high shine, while cotton buffers are used to achieve a lesser degree of lustre.



Polishing with a goat hair brush



High-gloss polishing with a wool buffing wheel



Completed temporary restoration

Fabricating temporaries in the injection technique (syringe)

This technique is particularly recommended for long-span restorations. The resin can be quickly and evenly applied into the doubling mould or the silicone key with a customary syringe (available in pharmacies).

Wax-up and silicone doubling

Provide at least two vertical sprues on the wax-up for long-span restorations (e.g. wax wire or 3–4 mm plexiglass pin).

Important

Thoroughly block out all areas between the wax-up and the model so that no doubling silicone may enter the area between the wax-up and the model. Block out cuts between model segments with wax.

- Double the model with the wax-up by means of a doubling mould. It is important that the entire wax-up is embedded in silicone.
- The wax-up is embedded in silicone. Remove the wax wires or plexiglass pins after setting.
- Transparent silicone is particularly useful since it enables better optical control during injection.

Preparing and isolating the model

(according to the procedure described on page 11)

First injection (Dentin)

- The model is now replaced in the doubling mould.
- Pour the desired amount of Telio Lab Cold Liquid into a clear mixing beaker.
- Dispense the same amount of powder into a second mixing beaker.
- Subsequently, add the powder to the Cold Liquid and mix without creating air bubbles using a modelling spatula.
- Inject the now well-flowable Telio Lab resin evenly into one of the sprues using a customary syringe (pharmacy).



Filling the syringe with Telio Lab Dentin



1st Injection of Telio Dentin



Polymerization under pressure in a water bath

(according to the procedure described on page 13)

Information

In order to be able to re-use the syringe, we recommend removing the residual Telio Lab material from the syringe using an instrument while the material is still in its plastic phase.

Individualizing the incisal area using the cut-back technique

(according to the procedure described on page 13)

Second injection (Telio® Lab Transpa Incisal)

(Same procedure as used in the first injection, after the incisal cut-back and individualization, if applicable.)

Polymerization under pressure in a water bath

(according to the table on page 13)

Finishing and polishing

(according to the procedure described on page 15)

Fabricating a temporary veneer

(Preparing denture teeth by grinding)

For the fabrication of temporary veneers, acrylic denture teeth (ceramic teeth are not suitable) are ground in such a way that they fit over prepared teeth or abutments.

Grinding and set-up

Grind the denture teeth with cross-cut burs and set them up in wax. Make sure to maintain as much substance as possible when grinding the teeth. Check the shape and function in the articulator.



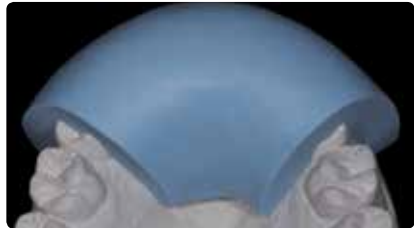
Preparing denture teeth by grinding



Set-up the teeth in wax and carefully contour the transition areas

Designing the silicone key

Prepare a silicone key of the situation as usual.



Silicone key on the set-up

Model preparation and isolation

(according to the procedure described on page 11)

Preparing and conditioning of the ground denture teeth

- Roughen the surface using rough rotary diamonds or blast with type 100 aluminium oxide (2 bar/29 psi) if necessary.
- Place the roughened teeth in the silicone key and secure with a small amount of superglue.
- To condition the denture teeth, wet the roughened surfaces with Telio Lab Cold Liquid and allow a reaction time of min. 2 to max. 4 minutes.



Wetting with Telio Cold Liquid



Pouring Telio Dentin and placing the silicone key

Completion

- Apply Telio Lab Dentin on the isolated model without air bubbles.
- Pour Telio Lab and place the silicone key on the isolated model.
- Once Telio Lab has reached its plastic phase, the material is polymerized under pressure in a water bath for 15 minutes at 2–6 bar / 29–87 psi and a temperature of 40–50 °C / 104–122 °F.

Polymerization under pressure in a water bath

(according to the table on page 13)

Finishing and polishing

(according to the procedure described on page 15)

Metal-supported temporary

With long-span bridges and limited space, it is required to reinforce the temporary restoration with a framework made of a dental alloy.

Fabricating the model

- Fabricate a master model or a model with detachable segments according to the impression in the usual manner.
- Once the model with detachable segments is ready, the preparation is exposed.
- For better control, the preparation margin is marked and sealed.
- A spacer is applied on the preparation as a spacer for the temporary luting cement (Telio CS Link).

Framework design

The framework design is key to a successful metal-supported temporary restoration. The following basic guidelines have to be observed:

- The waxed-up framework reflects the reduced anatomical tooth shape (tooth shape-supporting contouring).
- The minimum wall thickness of 0.3–0.5 mm, depending on the alloy and the instructions of the manufacturer, must be observed at all times.
- Sufficient connector dimensions of the metal framework must also be observed.
- Use the silicone key to check the contouring.



Framework design for an anterior crown

Posterior tooth pontic

Molar crown

Application of retention beads

In addition to the chemical bond with SR Link, a mechanical bond by means of retention beads must be provided. The retention beads are applied following functional and esthetic aspects. Once the sprues have been placed, apply the retention adhesive in a thin layer and allow a reaction time of approximately 20 seconds so that the solvent may evaporate and the retention beads do not sink into it and provide sufficient surface for the mechanical retention.



SR Micro / Macro Retention Beads



Wax-up with retention beads

Important

Mechanical retentions ensure the mechanical bond between the metal and the veneering resin and must be applied.

- Sprueing and investing (do not use a debubbler). Process the alloy according to the instructions of the manufacturer.

Surface finishing

- Carefully divest the cast framework and blast with Al_2O_3 according to the instructions of the alloy manufacturer.
- Separate the sprues and finish the framework using cross-cut tungsten carbide burs.
- For esthetic reasons, the retention beads may be reduced by half (equator) so that sufficient retentive surface is still available.
- For an improved bond with the Telio Lab Opaquer, the metal surface is blasted with Al_2O_3 , 100 μm at 2–4 bar/29–58 psi (observe the instructions of the alloy manufacturer).

Metal bond

For the chemical metal bond, the use of SR Link is recommended.

- After blasting, remove blasting medium residue by tapping the framework against the work surface rather than by cleaning with steam or blasting with oily compressed air.
- Start with the application of SR Link immediately. Apply SR Link with a clean disposable brush and allow it to react for 3 minutes.



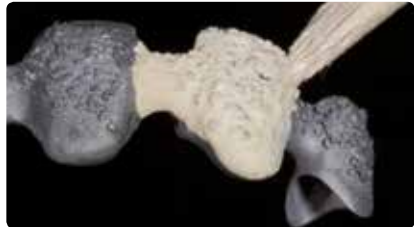
Applying SR Link®

Important

**Do not blast the framework with oily compressed air or steam when using SR Link!
Do not touch the surface once it has been cleaned!**

Telio® Lab Opaquer

Mix Telio Lab Opaquer with Telio Lab Opaquer Liquid to a flowable consistency, cover it, and let the material rest for approximately 2–3 minutes. Subsequently, apply the material in an evenly covering layer on the surface using a brush. Telio Lab Opaquer requires a drying time of approximately 15 minutes.



Apply an even, covering layer on the bridge framework

Important

Check setting with an instrument before continuing with the next working steps.

The final polymerization of the Telio Lab Opaquer is carried out together with Telio Lab Dentin.

The metal-supported temporary restoration may now be fabricated in the casting, injection or veneering technique:

- Casting technique – see page 13
- Injection technique – see page 16
- Temporary veneer – see page 18

Masking of model cast retentions with Telio Lab Opaquer



Surface conditioning with SR Link

- After finishing the model cast, carefully blast the retention grids with Type 100 Al_2O_3 , at 2–4 bar / 29–58 psi (observe the instructions of the alloy manufacturer).
- Sandblasting cleans the surface and improves the mechanical bond.
- After blasting, remove blasting medium residue by tapping the framework against the work surface rather than by cleaning with steam or blasting with compressed air.
- Start with the application of SR Link immediately. Apply SR Link with a clean disposable brush and allow it to react for 3 minutes.



Blast with Type 100 Al_2O_3 at 2–4 bar / 29–58 psi pressure.



Covering the retention grids

Important

- Do not blast the framework with compressed air or steam when using SR Link!**
- Do not touch the surface once it has been cleaned!**

Applying Telio Lab Opaquer

- Mix Telio Lab Opaquer with Telio Lab Opaquer Liquid to a flowable consistency, cover it, and let the material rest for approximately 2–3 minutes.
- After that, entirely cover the retention beads of the model cast restoration with Telio Opaquer.
- Telio Lab Opaquer requires a drying time of approximately 15 minutes.
- The final polymerization of the Telio Lab Opaquer is carried out together with the polymerization of the denture base resin.

Cut-back technique – Adjustments using SR Nexco

The Telio Lab restorations are reduced in the incisal or occlusal area. The cut-back is then built-up using the light-curing SR Nexco material. The limited application of SR Nexco layering materials permits achieving highly esthetic restoration in an efficient manner.

The cut-back technique is not recommended for:

- Build-up of incisal edges in anterior teeth exposed to high protrusion stress
- Build-up of stress-bearing cusps in posterior teeth

Characterization with light-curing SR Nexco Stains

The SR Nexco materials include light-curing veneering materials in paste form as well as characterization stains.

The targeted grinding of the transition areas to the cut-back regions is the prerequisite for the smooth transition between Telio Lab and the light-curing SR Nexco material.



- As an alternative, the ground surface can be blasted with Al_2O_3 , 100 μm at 1–2 bar /15–29 psi pressure.
- Thoroughly clean with the steam jet and dry with oil-free air. Avoid contamination after cleaning!
- Then, condition the Telio Lab surface using SR Connect. SR Connect is polymerized in a light-polymerization device (see SR Nexco polymerization parameters table on page 25).



The respective light-curing SR Nexco components are pre-polymerized to ensure that they stay in place and to be able to apply a further layer. However, final polymerization of the entire restoration is always required.

SR Nexco® polymerization parameters

| Device | Manufacturer | Oqaquer | Dentin | Liner, Incisal, Effect, Margin | Gingiva | Stains | SR Connect | Final polymerisation |
|-------------------|---------------------|----------------------|---------------------|--------------------------------|---------------------|---------------------|---------------------|-------------------------|
| Quick Lumamat 100 | Ivoclar Vivadent AG | 20s Quick Ps/11 min | 20 s Quick | 20 s Quick | 20 s Quick | 20 s Quick | P2/11 min | P2/11 min |
| Spectramat | Ivoclar Vivadent AG | 5 min | 5 min | 2 min | 5 min | 2 min | 2 min | 5 min |
| Labolight LV-III | GC | 5 min | 2 min | 2 min | 5 min | 2 min | 3 min | 5 min |
| Solidilite V | Shofu | 3 min | 1 min | 1 min | 3 min | 1 min | 3 min | 5 min |
| Visio Beta Vario | 3M | 7 min without vacuum | 4 x 20 s Visio Alfa | 4 x 20 s Visio Alfa | 4 x 20 s Visio Alfa | 4 x 20 s Visio Alfa | 4 x 20 s Visio Alfa | 4 x 20 s without vacuum |
| HiLite | Heraeus Kulzer | 180 s | 90 s | 90 s | 90 s | 90 s | 90 s | 180 s |



- Regular maintenance and functional checks of the polymerization appliances are required.
- Devices for tack-curing: Quick (Ivoclar Vivadent AG), HiLite pre (Heraeus Kulzer), Visio Alfa (3M ESPE), Sublite V (Shofu), Steplight SL-I (GC).

The polymerized SR Connect supports the bond between Telio Lab and the light-curing SR Nexco materials. The inhibition layer facilitates the application of the veneering materials.

Protect the inhibition layer from contamination

Then, SR Nexco Stains are applied. Individual characterizations are directly applied on the polymerized SR Connect material on the Telio Lab surface.



Indirect application – e.g. interdental characterization

- SR Nexco Stains are applied under the SR Nexco layers.
- Apply the Stains in very thin layers of max. 0.2 mm with a brush or other suitable instrument.
- After that, light-curing is carried out with a customary curing light (see polymerization parameters on page 25).
- Then the incisal edge is built up using the SR Nexco materials (e.g. SR Nexco Incisal), and the anatomical shape is completed. Do not exceed the maximum layer thickness of 2 mm.





Polymerization

- Remove the completely layered restoration from the model and supplement the contact points with SR Nexco materials, if required. Make sure that good adaptation in the marginal areas is achieved, i.e. at the transition between Telio Lab and the SR Nexco veneer.
- Coat the completely contoured SR Nexco veneer with a generous amount of SR Gel and conduct final light-polymerization.
- After polymerization, remove SR Gel under running water.



The respective light-curing SR Nexco components are pre-polymerized to ensure that they stay in place and to be able to apply a further layer. However, final polymerization of the entire restoration is always required (see SR Nexco polymerization parameters table on page 25).

Polishing

(according to the procedure described on page 15)

Repairs and add-ons of Telio Lab restorations

Repairs, add-ons and relines of Telio® Lab in the laboratory

Telio Lab can be supplemented/repared with Telio Lab.

In case of fractured restorations, proceed as follows:

- Precisely fix fractured components of the restorations and connect with bonding wax or adhesive.
- Fabricate a model and a silicone key
- Wet the fracture area with Telio Lab Cold Liquid or Telio Activator and roughen it with a rotary diamond or blast with Al_2O_3 (100 μm grain size) at 2 bar/29 psi.
- Wet the roughened fracture area with Telio Lab Cold Liquid or Telio Activator and let it react for min. 2 to max. 4 minutes.
- Isolate and water the repair model.
- Correctly fix the fractured components using the silicone key on the model.
- Pour the flowable Telio Lab resin.
- Pressure polymerization (water bath 40–50 °C / 104–122 °F, pressure 2–6 bar / 29–87 psi, 15 min).
- Finishing and polishing.

The procedure is the same for relines and add-ons.

Telio CS C&B or, as an alternative, Ivoclar Vivadent composites are available for repairs, add-ons and reline material in the dental practice.

Incorporation

Possibilities for cementation

All Telio restorations are temporarily incorporated. We recommend conventional eugenol-free temporary cements, such as Telio CS Link.

For long-term temporaries (wear period of more than 4 weeks) regular check-ups are required in order to recement the restoration, if required.



What are the special characteristics of Telio® Lab?

- Telio Lab is exclusively processed in the cold technique.
- Telio Lab can be processed in the injection technique (modified flowable phase).

Are the Telio Lab components compatible with other PMMA resin components?

No. The individual components of Telio Lab have been selected in such a way that they result in ideal processing, shade and material properties. Cross-over application of other PMMA resins and Telio Lab components lead to changing processing properties as well as sub-optimal shade and material properties.

Can Telio Lab be used as veneering material for metal-supported long-term temporaries?

Yes. However, the following processing guidelines have to be observed:

- The metal framework must be given a reduced anatomical shape and provided with mechanical retentions.
- Blast the metal surface with Al_2O_3 , grain size 100 μm , at 2–4 bar / 29–58 psi pressure. Then tap off blasting medium residue on the surface. Do not use the steam jet or compressed air.
- Start with the application of SR Link immediately. Apply SR Link with a clean disposable brush and allow it to react for 3 minutes.
- Mix Telio Lab Opaquer with Telio Lab Opaquer Liquid to a flowable consistency, cover it, and let the material rest for approximately 2–3 minutes. Subsequently, cover the entire framework or model cast components with opaquer.
- Check setting with an instrument before continuing with the next working steps.
- In general, the minimum layer thickness of Telio Lab is 1.5 mm!

Can Telio Lab be directly applied in the oral cavity of the patient?

No. Direct intraoral contact with non-polymerized material is contraindicated.

Can Telio Lab be characterized with light-curing stains?

Yes, but only if the stains are covered with another material afterwards. If the stains are on the surface, they will be removed during polishing.

Can Telio Lab be veneered and/or characterized with light-curing materials?

- Telio Lab can be veneered with light-curing veneering materials.
- Occlusal veneers in molars are contraindicated. The layer thickness should not exceed 1.5 mm.

What type of restorations can be fabricated with Telio Lab?

- Temporary application:
Crowns and bridges (metal-free / metal-supported)
- Permanent application:
Supplements to artificial teeth in removable dentures

Can Telio Lab Incisal be used for the individualization of the incisal area of a Telio CAD restoration?

Yes. However, the following processing guidelines have to be observed:

- Blast the ground surface with pure Al_2O_3 , grain size 100 μm and 2 bar / 29 psi pressure, and clean. Apply Telio Lab Cold Liquid by means of a brush and let it react for min. 2 to max. 4 minutes before starting the application of Telio Lab Incisal materials.
- The Telio Lab Incisal materials can be applied by means of the silicone key technique or free layering technique.
- The overall layer thickness of the restoration should not be less than 1.5 mm.

Materials combination table

| Shade | BL3 | A1 | A2 | A3 | A3.5 | A4 | B1 | B2 | B3 | B4 | C1 | C2 | C3 | C4 | D2 | D3 | D4 | |
|-----------------|-------|-----|---------------------------|-------|------|-----|--------|-----|-------------------|-------|-----|-----|-----|-----|-----|-----|-----|--|
| Opaquar | OP0 | OP1 | OP1 | OP2 | OP2 | OP2 | OP1 | OP1 | OP3 | OP3 | OP1 | OP3 | OP3 | OP3 | OP2 | OP2 | OP3 | |
| Dentin | BL3 | A1 | A2 | A3 | A3.5 | A4 | B1 | B2 | B3 | B4 | C1 | C2 | C3 | C4 | D2 | D3 | D4 | |
| Transpa Incisal | T11 | T12 | T12 | T13 | T13 | T13 | T12 | T12 | T12 | T12 | T12 | T12 | T13 | T13 | T12 | T12 | T12 | |
| Neck | *D B1 | N1 | N1 | N2 | N2 | N4 | N1 | N1 | N3 | N3 | N1 | N4 | N4 | N4 | N2 | N2 | N3 | |
| Intensive | | | | white | | | orange | | | brown | | | | | | | | |
| Gingiva | | | Teliolab Opaquar: Gingiva | | | | | | Teliolab: Gingiva | | | | | | | | | |

* use Dentin B1 as Neck



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This material has been developed solely for use in dentistry. Processing should be carried out strictly according to the Instructions for Use. Liability cannot be accepted for damages resulting from failure to observe the Instructions or the stipulated area of use. The user is responsible for testing the material for their suitability and use for any purpose not explicitly stated in the Instructions. These regulations also apply if the materials are mixed or used in conjunction with products of other manufacturers.

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