

Technical Guide



IvoBase[®] system

PMMA denture base
materials and a fully
automated injection
procedure







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IvoBase® system

The IvoBase system consists of a high-quality denture base material and the IvoBase Injector specifically developed for the material. The ideally coordinated system enables the fully automated and shrinkage-compensated polymerization of dentures.

Explanation of the symbols

| Symbol | Note |
|---|----------------------|
|  | Important |
|  | Information |
|  | Tips and tricks |
|  | Instructions for Use |

IvoBase® material

The PMMA-based IvoBase material combines the advantages of heat- and self-curing denture base materials. In terms of its chemistry, IvoBase material is classified as a self-curing polymer. However, the quality of the material is equivalent to and even exceeds that of heat-curing polymers. IvoBase may thus be considered a hybrid material. In addition to the conventional hybrid material, IvoBase is also available as an impact-resistant material version: IvoBase High Impact.

IvoBase shows a low residual monomer content immediately after polymerization. Due to the pressure-heat polymerization, a strong bond to the teeth is established. Moreover, an outstanding occlusal accuracy of fit is achieved with a short processing time in the IvoBase Injector.

The following shades are available:

- IvoBase Hybrid: Pink, Pink-V, Preference, Clear, Pink-V Implant, Preference Implant
- IvoBase High Impact: Pink, Pink-V, Preference, Pink-V Implant, Preference Implant, 34-V



IvoBase® Hybrid

For all removable prosthetic restorations

Areas of application:

- Complete denture prosthetics
- Partial denture prosthetics
- Implant prosthetics
- Relines
- Repairs
- Occlusal splints

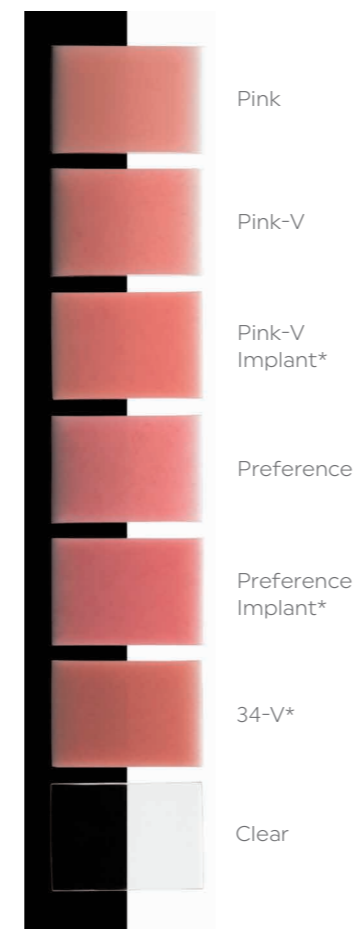
IvoBase® High Impact

For exceptionally high stability requirements

Areas of application:

- Complete denture prosthetics
- Partial denture prosthetics
- Implant prosthetics
- Relines
- Repairs

Shade selection



* with enhanced opacity, ideal for masking structural elements

IvoBase® material accessories



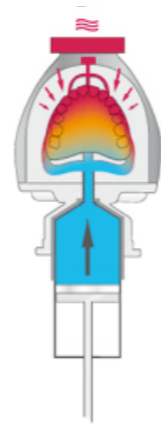


IvoBase® Injector

With the IvoBase Injector, you can benefit from a fully automated injection and polymerization process for special PMMA resin materials which are coordinated with the system.

The chemical polymerization shrinkage of the resin material is fully compensated during the polymerization – due to the patented thermo-management within the flask and the heating element. This enables the fabrication of denture bases featuring excellent occlusal fit and precision. The injector has been especially developed for the IvoBase Material and produces excellent restorations.

The IvoBase Injector can also be used for the tried-and-tested SR Ivocap material. The Injector replaces the polymerization bath and thus offers a clean polymerization process without any steam.



IvoBase® injection programs

| Program No. | Material | Duration | Duration with RMR* |
|-------------|--------------------------|----------|--------------------|
| 1 | IvoBase Hybrid | 35 min. | 45 min. |
| 2 | IvoBase Hight Impact | 50 min. | 60 min. |
| 3 | SR Ivocap High Impact | 55 min. | 65 min. |
| 4 | SR Ivocap Clear | 55 min. | 65 min. |
| 6-20 | Ivoclar Vivadent-Reserve | | |

* With the RMR function (residual monomer reduction) the residual monomer content is reduced to below 1%.

Controlled polymerization shrinkage

The system to compensate the polymerization shrinkage, which has proven its effectiveness over many years, is the same as the one used for the SR Ivocap system.

IvoBase® Flask



Access former 'half'



Access former 'full'



Centring insert



Divesting aid



Please refer to the respective Operating Instructions for more detailed information on the IvoBase Injector and its accessories.

Practical procedure Complete dentures

IvoBase® system

Investing the model

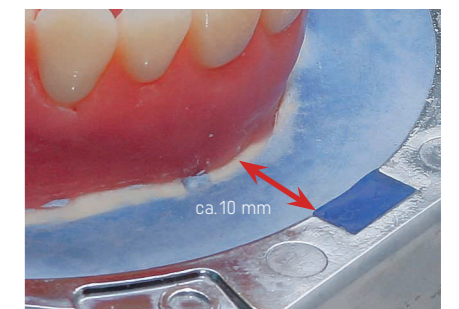
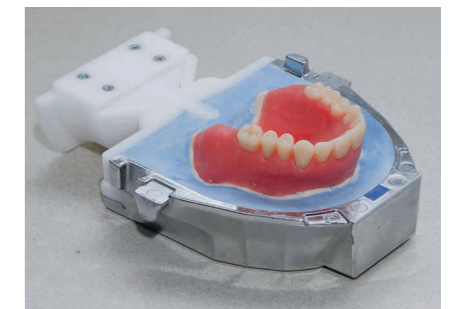
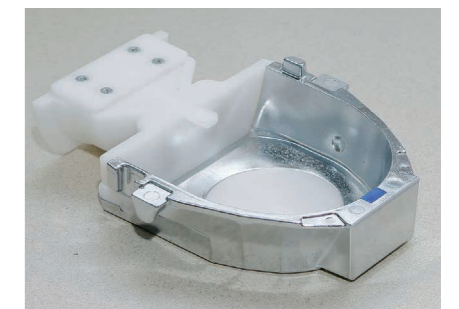
The anatomic contouring should correspond with the future completed dentures to as large an extent as possible. This will help save time during subsequent finishing. After the final examination of the contact points in the articulator, wax the denture body to the model and place it in a water bath for 5–10 minutes. Use the Separating Fluid supplied with the material to subsequently isolate the stone-to-stone surfaces.

The water bath should not exceed a temperature of 25 °C / 77 °F to prevent deformation / loss of occlusion.

To prepare the flask, coat / spray the inner surfaces of the flask halves with a thin layer of petroleum jelly. The two flask halves are identical. Both can be used for model investment and for the counter model. Place the flask lid and the access former 'half' in one of the flask halves.

Do not forget to place the filter wax component in the intended recess in the flask half.

Invest the well-soaked and isolated model in one of the flask halves using conventional Class 3 dental stone. Place the model in the centre of the flask. The distance between the anterior model stop and the flask housing must be approximately 10 millimetres. The gingivo-buccal fold should be at the same height as the flask edge. In particularly high dentures, check the vertical height with the help of the counter flask beforehand. Remove the excess stone so that the stone is flush with the model edge and the flask edge.



The access former 'half' must be invested flush in the stone. If this is not done, stone may chip off during the subsequent investment steps and the flask will become untight.



Placing the injection channels

Once the stone has completely set, replace the access former 'half' with the access former 'full'. You can now press the injection wax component over the conical tip of the access former and to the stone surface. For maxillary complete dentures, place the injection channel by pressing it against the centre of the palatal roof and vestibular to both tubers of the contouring. Make sure that the injection channel is well secured in all areas. The wax components can be additionaly secured with wax.



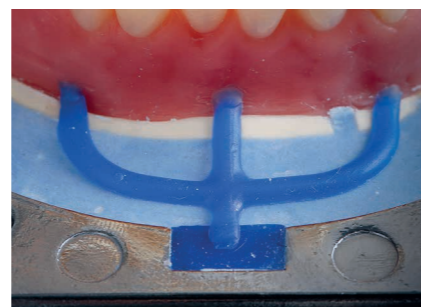
When waxing-up the blue channel to the access former full please ensure that the diameter of the blue wax matches the diameter of the access former.



For mandibular complete dentures, cut off the centre injection channel and place the two outer channels in the lingual area of the retromolar triangle.



In order to aerate the hollow space of the flask during injection, attach aeration channels in the anterior region of all restorations when working with IvoBase. Place the prefabricated wax components in such a way that there is a connection between the wax-up and the filter wax component.

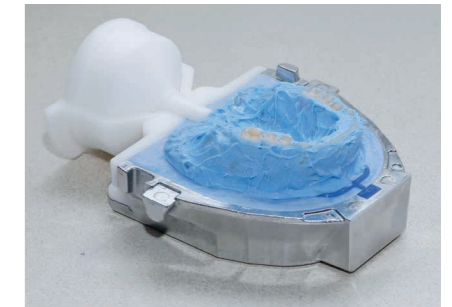


! To ensure the tightness of the flask, the aeration channels must not come into direct contact with the flask housing.

Investing in silicone and casting the counter model

Cover the teeth, as well as the anatomically contoured alveolar area – and the lingual / palatal areas, if necessary – with a flowable to medium-viscosity addition cross-linking silicone. This protects the teeth during divesting and saves a lot of time during finishing.

Apply retentive patterns in the surface of the silicone before it sets to secure the silicone in the stone of the counter model. Make sure that no hollow spaces are created between the silicone and the wax.



! The occlusal surfaces and incisal edges of the denture teeth must remain free of silicone. Use only addition cross-linking silicones.

i The Shore A hardness of the silicone must be at least 65 (e.g. Flexistone Plus).



After that, isolate stone-to-stone contact surfaces with Separating Fluid and allow it to dry.



Now close the two flask halves with the locking clasps using a rotating movement. Make sure that the flask edges are clean. Allow the mixed Class 3 dental stone to flow into the opening of the flask on a shaker until the flask is completely filled. Prevent air bubbles during pouring.



Skim off the excess stone, using e.g. the IvoBase spatula, so that no stone protrudes from the flask opening.




Boiling out the model

Once the stone has set, heat the flask in a water bath at approximately 90 °C / 194 °F for 5–8 minutes. In this way, the wax is soft when the two flask halves are opened. Rough excess can be easily and generously removed with a plaster knife.

Remove the access former 'full'. Now thoroughly boil out the wax residue at the inner surfaces with clean, boiling water.



 Use only clean water without additives, such as wax solvents or cleaning agents. Additives may cause whitish discolouration in the basal area of the denture base and interfere with an optimum bond between the cervical area and the denture base resin.

Preparing for injection


For an optimum bond between the resin teeth and the denture base resin, the cervical areas of the teeth, as well as the basal tooth surfaces must be absolutely free of wax, e.g. clean with the steam jet.

After cleaning, slightly blast the basal tooth surfaces (100 µm Al₂O₃ at 2 bar) or roughen them with a cross-cut tungsten carbide bur.

For further details on the processing of resin teeth, please refer to the instructions of the corresponding tooth manufacturer.



Before isolation, cool the flask halves to below 30 °C / 86 °F using air or clean, cold water. The exact temperature can be checked with the help of the infrared thermometer supplied.

 Measure the temperature at the thickest part (highest heat accumulation).



If the stone has dried out, for example due to overnight storage, the flask halves must be soaked in cold water for 5–10 minutes prior to isolation. Remove stone residue sticking to the heater or sensor surface, the flask edge, the isolation shoulder or the recess for the aeration filter.

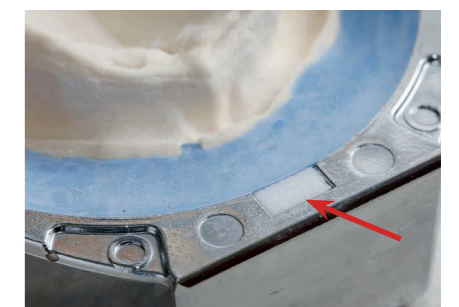
Now isolate the clean surfaces of the stone model with Separating Fluid. Avoid "pooling", e.g. at the gingivo-buccal fold, palatal roof and, in particular, the A-line. After approximately 5 minutes, apply a 2nd isolation layer and allow to dry. Best, vertically erect the flask halves.



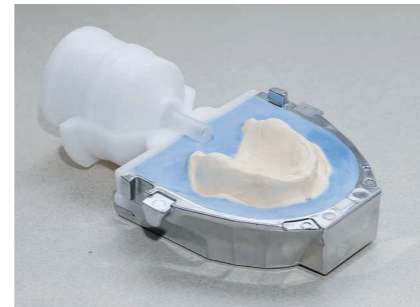
Alternatively, a larger amount of Separating Fluid can be poured over the model. Then rinse under cold water.

Insert the aeration filter flush into the corresponding recess in the flask.

Note: With IvoBase, the air in the anterior region automatically and completely escapes through the aeration filter until the flow of the resin seals the aeration filter and sets. The hollow space is thus aerated in a controlled manner, which also prevents bubbles and porosities from forming in the resin.



Press the IvoBase funnel into the centring insert until it stops and place it in the lower flask half.



During injection, the sealing lip of the funnel is used to seal the hollow space in the flask in the injection direction. Therefore, the funnel must be completely embedded in stone to prevent the resin from escaping the flask.



Now close the two flask halves again with the locking clasps.

! The sealing lip of the funnel may create a narrow gap between the flask halves, which, however, will be closed in the IvoBase Injector by the clasps.



Mixing the material

The operation of the IvoBase Injector is described in detail in the corresponding Operating Instructions. The IvoBase Injector must be brought to stand-by state before the material is mixed.

One capsule is sufficient for the injection of a maxillary or mandibular complete denture.

! The predosed material in the capsule is sufficient for most cases. For particularly large dentures, mix the material from two capsules in a separate mixing container and fill the required quantity into a capsule.

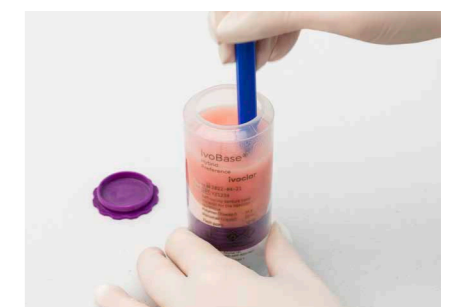
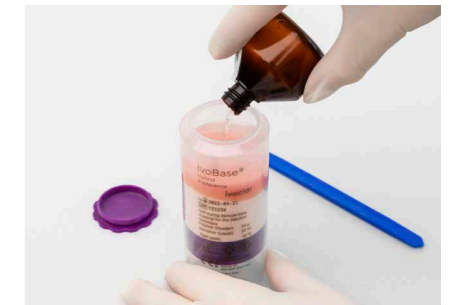
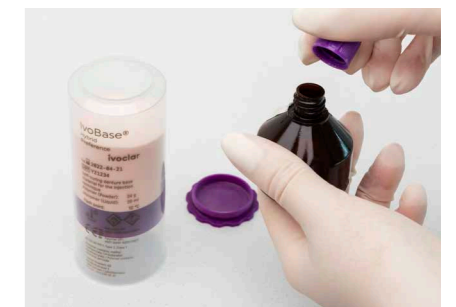
| Contents of the capsule: | Monomer | Polymer |
|--------------------------|---------|---------|
| IvoBase Hybrid | 20 ml | 34 g |
| IvoBase High Impact | 20 ml | 30 g |

A short blast of compressed air between the monomer container and the capsule renders the monomer container easy to remove from the capsule. Remove the capsule lid and the seal of the monomer container with a rotating movement. Now fill the entire monomer into the capsule and mix the monomer and polymer to a homogeneous mixture for approximately 20–30 seconds using a spatula. Make sure that the material is completely mixed.

! No more than 5 minutes should pass between mixing the material and the start of the polymerization program.

Place the open capsule on an even surface and press the centring insert with the flask onto the capsule.

! Do not tilt the capsule with the flask any more to prevent the still liquid material from flowing out. When the flask is lifted, the capsule must be located securely in the centring insert.



Injection and polymerization


Open the door of the IvoBase Injector and place the prepared flask with the capsule into the polymerization chamber via the flask holder until it stops. The flask perceptibly snapping into place indicates the correct position.

For optimum results with IvoBase Hybrid and IvoBase High Impact, the IvoBase Injector is equipped with polymerization programs especially designed for the respective materials – P1 for Hybrid, P2 for High Impact. To further reduce the residual monomer content to below 1% the optional RMR key can be activated.


Select the corresponding program and confirm with the Start key. The fully-automated injection process begins. The remaining process time is indicated in the display.



At the end of the program, an acoustic signal sounds. Use the thermal glove to remove the hot flask from the Injector by holding it by the isolation shoulder. The Injector is ready for the next polymerization immediately after the flask is removed.

 The flask may still be very hot when removed from the Injector. Burn hazard!

Cool the flask under cold running water for 15–25 minutes (water temperature <15 °C / 59 °F). As an alternative, cooling may also take place in the Injector (e.g. over night).

 If the flask is not sufficiently cooled and is opened too soon, deformation of the dentures may occur, which results in inaccuracy of fit.

Divesting / finishing

Remove the locking clasps and place the flask under a dental press with the divesting aid positioned between the stone and the press table. Load the divesting aid with slight pressure using the dental press. The upper flask half may now be levered up by sliding a plaster knife into the gap between the two flask halves. Remove the flask from the press, turn it around and repeat the procedure.




Remove the stone core with the capsule and separate the capsule at the injection channel using a separating disk, bur, or saw. Divest the denture from the stone core as usual with stone tongs.

 Do not use a hammer for divestment since it may damage the dentures.

Do not remove the dentures from the model when checking the occlusion in the articulator. Due to the coordinated system components and the shrinkage-compensating polymerization process, there is no increase in vertical dimensions.

The polymerized IvoBase material is finished as usual with cross-cut tungsten carbide burs, sandpaper, and polishing media. The Ivoclar Universal Polishing Paste is recommended for high-gloss polishing.

 Avoid excess heat development when finishing denture base resin with rotary instruments (warping / deformation of the denture base).



Practical procedure

Partial dentures

Basically, the procedure for completing partial dentures with IvoBase is the same as that for complete dentures. For certain details, however, there are a number of peculiarities that should be observed and that are described below.

Investing the model

! It is recommended to complete the dentures with IvoBase on a working model (duplicate model). In this way, damage to the master model is eliminated.

After the final check, prepare the wax-up for completion with the model cast framework. Pay particular attention to the correct fit of the model cast framework. Now wax the denture body to the model and place it in a water bath for 5–10 minutes. Use the Separating Fluid supplied with the material to subsequently isolate the stone-to-stone surfaces.

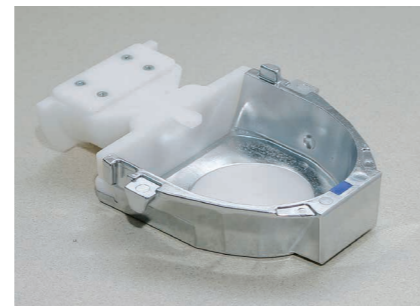
To prepare the flask, coat / spray the inner surfaces of the flask halves with a thin layer of petroleum jelly. The two flask halves are identical. Both can be used for model investment and for the counter model. Place the flask lid and the access former 'half' in one of the flask halves.

! Do not forget to place the filter wax component in the intended recess in the flask half.

Invest the well-soaked and isolated model in one of the flask halves using conventional Class 3 dental stone. Place the model in the centre of the flask. The distance between the anterior model stop and the flask housing must be approximately 10 millimetres. The gingivo-buccal fold should be at the same height as the flask edge. For particularly high dentures, check the vertical height with the help of the counter flask beforehand.

Remove the excess stone so that the stone is flush with the edge of the denture saddle and the flask edge. The areas of the residual dentition should be generously covered with, e.g. silicone (Shore A hardness >65) or stone, so that no undercuts are present and the two flask halves can be easily separated later on. Block out abutment teeth with retention elements up to the equator of the retention elements so that the model cast framework can still be removed from the model after investment.

! The access former 'half' must be invested flush in the stone. If this is not done, stone may chip off during the subsequent investment steps and the flask will become untight.



Placing the injection channels

Once the stone has completely set, replace the access former 'half' with the access former 'full'. You can now press the injection wax component over the conical tip of the access former and to the stone surface. Provide the individual denture saddles with an injection channel each at the dorsal ends.

In order to aerate the hollow space of the denture saddles during injection, attach aeration channels in the anterior margin of the saddle. If necessary, the prefabricated wax components have to be extended with channel-like wax so that a connection between the wax-up and the filter wax component can be achieved.

Investing in silicone and casting the counter model

Cover the denture teeth as well as the anatomically contoured alveolar area with a flowable to medium-viscosity addition cross-linking silicone. This protects the teeth during divesting and saves a lot of time during finishing. It is also recommended to cover the abutment teeth above the retention elements with silicone. Apply retentive patterns in the surface of the silicone before it sets to secure the silicone in the stone of the counter model. Make sure that no hollow spaces are created between the silicone and the wax.

! The occlusal surfaces and incisal edges of the denture teeth must remain free of silicone. Use only addition cross-linking silicones.

! The Shore A hardness of the silicone must be at least 65 (e.g. Flexistone Plus).

After that, isolate stone-to-stone contact surfaces with Separating Fluid and allow it to dry.

Now close the two flask halves with the locking clasps using a rotating movement. Make sure that the flask edges are clean. Allow the mixed Class 3 dental stone to flow into the opening of the flask on a shaker until the flask is completely filled. Prevent air bubbles during pouring.

Skim off the excess stone using, e.g. the IvoBase spatula, so that no stone protrudes from the flask opening.

Boiling out the model

Once the stone has set, heat the flask in a water bath at approximately 90 °C / 194 °F for 5–8 minutes. In this way, the wax is soft when the two flask halves are opened. Rough excess can be easily and generously removed with a plaster knife. Remove the access former 'full'. Now thoroughly boil out the wax residue at the inner surfaces with clean, boiling water.

! Use only clean water without additives, such as wax solvents or cleaning agents. Additives may cause whitish discoloration in the basal area of the denture base and interfere with an optimum bond between the cervical area and the denture base resin.



Preparing for injection


For an optimum bond between the resin teeth and the denture base resin, the cervical areas of the teeth, as well as the basal tooth surfaces must be absolutely free of wax, e.g. clean with the steam jet.

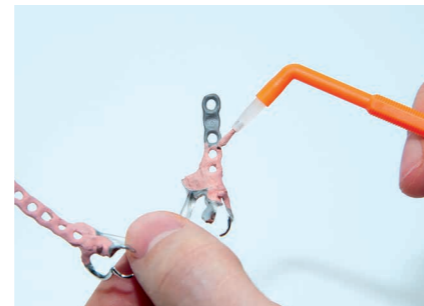
After cleaning, slightly blast the basal tooth surfaces (100 µm Al₂O₃ at 2 bar) or roughen them with a cross-cut tungsten carbide bur.

For further details on the processing of resin teeth, please refer to the instructions of the corresponding tooth manufacturer




Now condition the retentions of the model cast framework for the bond with the Ivobase material. For that purpose, wet the sandblasted surfaces with a metal bonding agent and mask them with a gingiva opaquer. In addition to a reliable bond, this also ensures good esthetics. We recommend using SR Link and SR Nexco Gingiva Opaquer (please observe the respective Instructions for Use).

 Insufficient curing / processing of the opaquer leads to smearing during injection.




Before isolation, cool the flask halves to below 30 °C / 86 °F using air or clean, cold water. The exact temperature can be checked with the help of the infrared thermometer supplied.

 Measure the temperature at the thickest part (highest heat accumulation).



If the stone has dried out, for example due to overnight storage, the flask halves must be soaked in cold water for 5–10 minutes prior to isolation. Remove stone residue sticking to the heater or sensor surface, the flask edge, the isolation shoulder or the recess for the aeration filter. Now isolate the clean surfaces of the stone model with Separating Fluid. Avoid "pooling", e.g. at the gingivo-buccal fold. After approximately 5 minutes, apply a 2nd isolation layer and allow to dry. Best, vertically erect the flask halves.

Insert the aeration filter flush into the corresponding recess in the flask.

 With Ivobase, the air in the anterior region automatically and completely escapes through the aeration filter until the flow of the resin seals the aeration filter and sets. The hollow space is thus aerated in a controlled manner, which also prevents bubbles and porosities from forming in the resin.




Now, place the model cast framework on the model. To check the correct position, the two flask halves may be combined by hand. To somewhat secure the framework, apply a small amount of auto-curing polymer on the retention so that an attachment to the alveolar ridge is created.



Press the Ivobase funnel into the centring insert until it stops and place it in the lower flask half. During injection, the sealing lip of the funnel is used to seal the hollow space in the flask in the injection direction. Therefore, the funnel must be completely embedded in stone to prevent the resin from escaping the flask.



Now close the two flask halves again with the locking clasps.

 The sealing lip of the funnel may create a narrow gap between the flask halves, which, however, will be closed in the Ivobase Injector by the clasps.



The further procedure corresponds to that for complete dentures described in the previous chapter.

The result



Implant-retained dentures / bar attachments

Starting situation

Once the tertiary structure with the underlying securing element has been completed, the wax-up can be carried out in the articulator in the usual manner.



Investing the model

The denture body is waxed to the model and placed in a water bath for 5–10 minutes. Use the Separating Fluid supplied with the material to subsequently isolate the stone-to-stone surfaces.

! The water bath should not exceed a temperature of 25 °C / 77 °F to prevent deformation / loss of occlusion.

To prepare the flask, coat / spray the inner surfaces of the flask halves with a thin layer of petroleum jelly. Place the flask lid and the access former 'half' in one of the two flask halves.

! Do not forget to place the filter wax component in the intended recess in the flask half.

Invest the well-soaked and isolated model in the prepared flask half using conventional Class 3 dental stone. Place the model in the centre of the flask. The distance between the anterior model stop and the flask housing must be approximately 10 millimetres. The gingivo-buccal fold should be at the same height as the flask edge. For particularly high dentures, check the vertical height with the help of the counter flask beforehand. Remove the excess stone so that the stone is flush with the model edge and the flask edge.

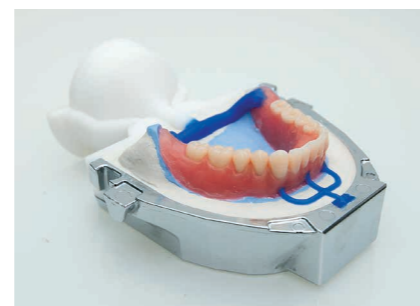
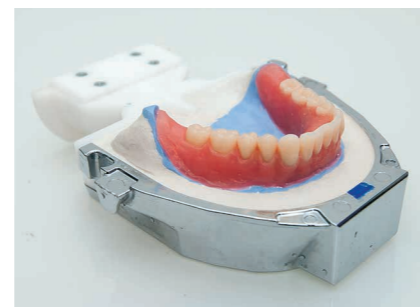
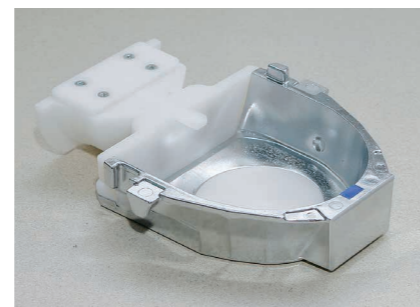
! The access former 'half' must be invested flush in the stone. If this is not done, stone may chip off during the subsequent investment steps and the flask will become untight.

Placing the injection channels

Once the stone has completely set, replace the access former 'half' with the access former 'full'. You can now press the injection wax component over the conical tip of the access former and to the stone surface. Place the injection channels in the same way as described in the chapter on complete dentures.

In order to aerate the hollow space of the flask during injection, attach aeration channels in the anterior region. Place the prefabricated wax components in such a way that there is a connection between the wax-up and the filter wax component.

! To ensure the tightness of the flask, the aeration channels must not come into direct contact with the flask housing.



Investing in silicone and casting the counter model

Cover the teeth as well as the anatomically contoured alveolar area – and the lingual / palatal areas, if necessary – with a flowable to medium-viscosity addition cross-linking silicone. Apply retentive patterns in the surface of the silicone before it sets to secure the silicone in the stone of the counter model. Make sure that no hollow spaces are created between the silicone and the wax.

! The occlusal surfaces and incisal edges of the denture teeth must remain free of silicone. Use only addition cross-linking silicones.

! The Shore A hardness of the silicone must be at least 65 (e.g. Flexistone Plus).

After that, isolate stone-to-stone contact surfaces with Separating Fluid and allow it to dry. Now close the two flask halves with the locking clasps using a rotating movement. Make sure that the flask edges are clean. Allow the mixed Class 3 dental stone to flow into the opening of the flask on a shaker until the flask is completely filled. Prevent air bubbles during pouring.

Skim off the excess stone using, e.g. the IvoBase spatula, so that no stone protrudes from the flask opening.

Boiling out the model


Once the stone has set, heat the flask in a water bath at approximately 90 °C / 194 °F for 5–8 minutes. In this way, the wax is soft when the two flask halves are opened. Rough excess can be easily and generously removed with a plaster knife. Remove the access former 'full'. Now thoroughly boil out the wax residue at the inner surfaces with clean, boiling water.

! Use only clean water without additives, such as wax solvents or cleaning agents. Additives may cause whitish discoloration in the basal area of the denture base and interfere with an optimum bond between the cervical area and the denture base resin.




Preparing for injection

For an optimum bond between the resin teeth and the denture base resin, the cervical areas of the teeth, as well as the basal tooth surfaces must be absolutely free of wax, e.g. clean with the steam jet. After cleaning, slightly blast the basal tooth surfaces (100 µm Al₂O₃ at 2 bar) or roughen them with a cross-cut tungsten carbide bur.

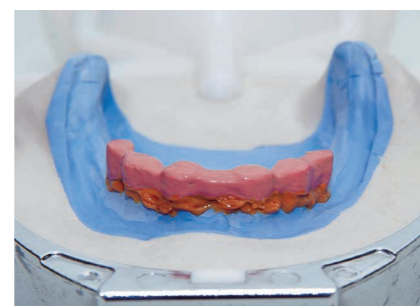
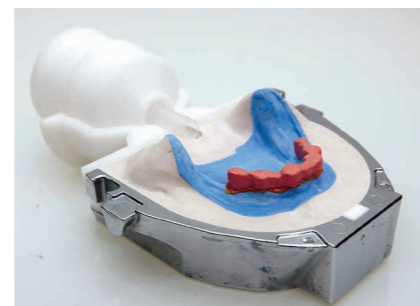
 For further details on the processing of resin teeth, please refer to the instructions of the corresponding tooth manufacturer.

Now condition the tertiary structure for the bond with the IvoBase material. For that purpose, wet the sandblasted surfaces with a metal bonding agent and mask them with a gingiva opaquer. In addition to a reliable bond, this also ensures good esthetics.


We recommend using SR Link and SR Nexco Gingiva Opaquer (please observe the respective Instructions for Use).

 Insufficient curing / processing of the opaquer leads to smearing during injection.

To prevent denture base resin to flow between the metal constructions and into undercuts in the abutment teeth or implants during injection, these areas have to be blocked out. A flowable addition cross-linking silicone is suitable for this purpose. At the same time, the tertiary structure is secured in the correct position.



Allow the flask halves to cool to below 30 °C / 86 °F. The exact temperature can be checked with the help of the infrared thermometer supplied.

 Measure the temperature at the thickest part (highest heat accumulation).


Now isolate the clean surface of the stone model with Separating Fluid. Avoid "pooling", e.g. at the gingivo-buccal fold, palatal roof and, in particular, the A-line. After approximately 5 minutes, apply a 2nd isolation layer and allow to dry. Best, vertically erect the flask halves.

Insert the aeration filter flush into the corresponding recess in the flask.

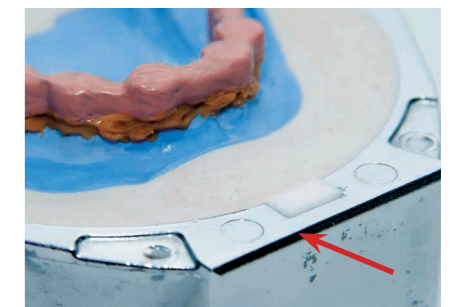
Press the IvoBase funnel into the centring insert until it stops and place it in the lower flask half.

During injection, the sealing lip of the funnel is used to seal the hollow space in the flask in the injection direction. Therefore, the funnel must be completely embedded in stone to prevent the resin from escaping the flask.

Now close the two flask halves again with the locking clasps.

 The sealing lip of the funnel may create a narrow gap between the flask halves, which, however, will be closed in the IvoBase Injector by the clasps.

The further procedure corresponds to that for complete dentures described in the previous chapter.



Practical procedure

Occlusal splints

IvoBase Hybrid Clear is excellently suitable for the fabrication of hard occlusal splints. The procedure for the fabrication of occlusal splints is described below. It is recommended to mark the tooth equator prior to the wax-up. The equator is intended to represent the margin of the hard occlusal splints in the cervical direction.


Starting situation

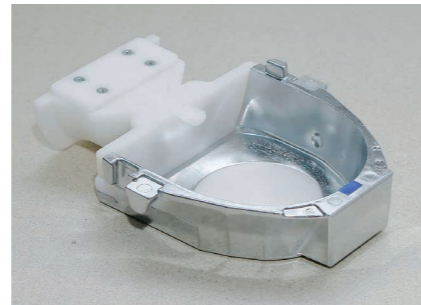
Check the occlusal splint, which is contoured in the same manner, in the articulator and press in the contact points of the opposing jaw. Smooth out tapered areas and sharp edges. Subsequently, place the model in a water bath for 5–10 minutes.



Investing the model


To prepare the flask, coat / spray the inner surfaces of the flask halves with a thin layer of petroleum jelly. The two flask halves are identical. Both can be used for model investment and for the counter model. Place the flask lid and the access former 'half' in one of the two flask halves.

 Do not forget to place the filter wax component in the intended recess in the flask half.



Invest the well-soaked and isolated model in the prepared flask half using conventional Class 3 dental stone. Place the model in the centre of the flask. The distance between the anterior model stop and the flask housing must be approximately 10 millimetres. The gingivo-buccal fold should be roughly at the same height as the flask edge. For particularly high models, check the vertical height with the help of the counter flask beforehand. Block out undercuts at the model with excess stone so that the two flask halves can be easily separated later on. As an alternative, an A-silicone can be used to block out undercuts.

The flask edge must be free of stone residue.


 The access former 'half' must be invested flush in the stone. If this is not done, stone may chip off during the subsequent investment steps and the flask will become untight.

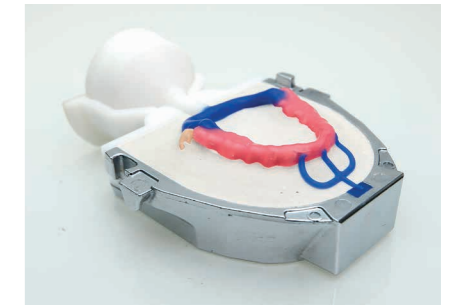


Placing the injection channels

Once the stone has completely set, replace the access former 'half' with the access former 'full'. You can now press the injection wax component over the conical tip of the access former and to the stone surface. Place the injection channels at the dorsal ends of the contouring. Separate the injection channel in the middle. Make sure that the injection channel is well secured in all areas. The wax components can be additionally secured with wax.


In order to aerate the hollow space of the flask during injection, attach aeration channels in the anterior region of all restorations. Place the prefabricated wax components in such a way that there is a connection between the wax-up and the filter wax component.


 To ensure the tightness of the flask, the aeration channels must not come into direct contact with the flask housing.



Investing in silicone and casting the counter model

Cover the wax-up with a flowable to medium-viscosity addition cross-linking silicone. This provides a smooth surface and saves a lot of time during finishing. Apply retentive patterns in the surface of the silicone before it sets to secure the silicone in the stone of the counter model. Make sure that no hollow spaces are created between the silicone and the wax.

 The occlusal surfaces and incisal edges of the denture teeth must remain free of silicone. Use only addition cross-linking silicones.

 The Shore A hardness of the silicone must be at least 65 (e.g. Flexistone Plus).




After that, isolate stone-to-stone contact surfaces with Separating Fluid and allow it to dry.

Now close the two flask halves with the locking clasps using a rotating movement. Make sure that the flask edges are clean. Allow the mixed Class 3 dental stone to flow into the opening of the flask on a shaker until the flask is completely filled. Prevent air bubbles during pouring.

Skim off the excess stone using, e.g. the Ivobase spatula, so that no stone protrudes from the flask opening.



The further procedure corresponds to that for complete dentures described in the previous chapter. The homogeneous properties of the Ivobase material Clear are clearly evidenced during high-gloss polishing.

 The monomer can be dyed with KFO colour concentrates to create beautiful colour effects in the occlusal splint. Given the high accuracy of fit of the occlusal splint it may sit rather tightly on the model. To prevent this occurrence, block out the interproximal areas or apply a third isolation layer prior to injection.

The result




Practical procedure Characterizing dentures

Denture teeth and denture base materials can be modified and characterized with the help of a light-curing MMA-based conditioner for the combination of light-curing materials with PMMA (hot- or cold-curing polymers and resin teeth) and SR Nexco.

The SR Nexco paste in gingiva shades enables the shade design of true-to-nature gingival areas. These materials can be used to modify and characterize Ivobase dentures even more quickly and more easily. The characterization of denture bases is particularly suitable for partial and complete dentures.

Conditioning the surface

Following cut-back of denture teeth and / or denture base materials grit-blast the surface to be characterized with Al_2O_3 (80–100 μm) at 2 bar. Remove residue material with oil-free air.

 Do not clean the surface with steam!



Apply a thin layer of light-curing MMA-based conditioner and allow it to react for 2–3 min. Then, light-cure in the polymerization device according to the manufacturer's instructions. The inhibited layer must not be destroyed! Subsequently, the SR Nexco veneering material can be applied.



Contouring an esthetic gingiva

SR Nexco Basic Gingiva BG34, Gingiva and Gingiva Intensive pastes can be used for characterizations and adjustments of shape and shade. Differently shaded Gingiva and Intensive Gingiva pastes are available for this purpose.




The Basic Gingiva shade BG34 is ideally coordinated with IvoBase shade 34-V. Additionally, the SR Nexco Stains materials can be used for an intensive characterization. These materials need to be coated with a final layer of Gingiva paste (e.g. G1 or G2).



Before the final polymerization in the polymerization device, apply a covering, but not too thick a layer of SR Gel on the completed contouring. This prevents the formation of an inhibition layer and thus facilitates finishing.




 For information on the polymerization process please refer to the Instructions for Use for SR Nexco.

Polishing / finishing

Remove SR Gel completely under running water or with a steam cleaner. Remove the inhibited layer and finish the surface with cross-cut grinding instruments.

Smoothen the surfaces carefully with rubber polishers or silicone polishing wheels. Use a goat hair brush, cotton buff and Universal Polishing Paste for pre- and high-gloss polishing. Polish at low speed and with light pressure.

 The applied SR Nexco material is more wear resistant than PMMA. This fact must be taken into account during finishing and polishing. If this is not observed, a "step" may develop at the transition areas between SR Nexco and the PMMA resin during polishing, for example.



The result

Practical procedure

Repair / relining

IvoBase can be repaired with itself, as well as with ProBase® Cold self-curing polymer.

Repair / extension with IvoBase® Hybrid / High Impact

Basically, an IvoBase denture can be repaired without investment in the IvoBase flask. The basic procedure is the same as that for repairing with conventional self-curing denture base materials.

Observe the mixing ratio as follows:

| Capsule content | Monomer | Polymer |
|---------------------|---------|---------|
| IvoBase Hybrid | 5 g | 9 g |
| IvoBase High Impact | 5 g | 8 g |

The polymer and monomer must be homogeneously mixed (for approximately 20 seconds).

Please observe the following approximate processing times (at 23 °C / 73 °F room temperature):

- Duration of the dough phase: 30 seconds
- Duration of the pouring phase: 1-2 minutes
- Duration of the modelling phase: 3-5 minutes

The maximum total processing time after mixing is 10 minutes. Polymerize the material in a pressure pot for 20 minutes at 55 °C / 131 °F at 2.5 bar pressure.

Relining with IvoBase® Hybrid / High Impact

The relining of an IvoBase denture may be carried out with or without investment in the IvoBase flask.

a) Relining without investment in the IvoBase flask

The procedure without investment in the IvoBase flask is the same as that for relining with conventional auto-curing denture base materials.

b) Relining with investment in the IvoBase flask

Investment and completion for the relining of a denture is basically the same as for the completion of a waxed-up denture.

Make sure that

- the injection and aeration channels are attached to the impression of the relining;
- the area to be relined must demonstrate a thickness of at least 2 mm.

Repair / extension / relining with ProBase® Cold

The basic procedure is the same as that for repairing with conventional self-curing denture base materials. Please refer to the ProBase Cold Instructions for Use for details.

Practical procedure

Denture care

To keep high-quality dentures in good condition for as long as possible, it is important to use products that help prevent the formation of plaque, bad breath and caries in remaining teeth. Cervitec Gel supports wound healing and soothes the gums as well as irritated oral mucous membrane. The gel contains 0.2% chlorhexidine.

Using the oral care gel

Cervitec Gel can be used as follows, depending of the respective requirements:

- Like a tooth paste with a tooth brush
- Application directly on the gums, oral mucous membranes or the inner aspects of removable restorations
- Application on an interdental brush and cleaning of the space between the teeth or fixed construction elements.

Cervitec Gel is applied as a preventive or a supporting care measure until the symptoms have faded, insofar as no other recommendations exist.



To support the caring effect in the oral cavity, Cervitec Gel should not be rinsed out, spitting out is sufficient.



Well-maintained dentures

For correct denture care, proceed as follows:

- The dentures and the mouth without dentures should be rinsed with water after every meal.
- The dentures should be thoroughly cleaned with a soft denture brush and warm water at least once a day.
- No abrasive cleaning pastes should be used.
- Especially the inner aspects of the dentures which come into contact with the mucous membrane and interdental spaces should be carefully brushed.
- The dentures should be rinsed under running water after brushing.
- The tongue, residual dentition and palate should also be cleaned with a soft brush.
- Finally, the toothless areas are massaged with a brush.

These measures promote the overall oral health and provide for a pleasant, fresh comfort of wear of the dentures.



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Date information prepared: 2024-06

639366 / EN

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