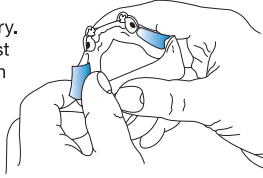


Duplication model according the ERNST HINRICHS-System

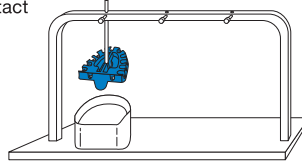
1. Preparing the model and placing spacers

Caution: do not soak the model, only duplicate when dry. Refer to the full list of materials which are incompatible with silicone.



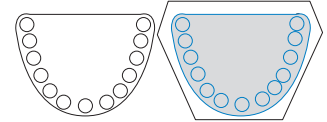
6. Fixation device

Select the appropriate size of stabilizer plate and screw it onto the threaded rod of the fixation device (REF 891001). Ensure that the stabilising plate does not come into contact with the duplicating adhesive tape.



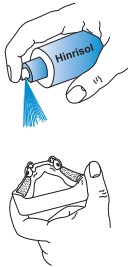
11. Function of the stabilizer plate

Stabilizer plates are used to stabilise the base of the flaskless duplication in order to prevent any deformation when fabricating investment models.



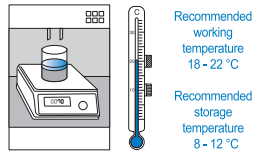
2. Degreasing and cleaning

If required, the prepared model should be cleaned and degreased using Hinrisol (REF 109400) spray before it is duplicated.



7. Dispensing the silicone

Hinrisil Speed, Hinrisil KL and Hinrisil hydro duplicating silicones are suitable for use with the ERNST HINRICHS system. Dispense according to directions and adhere to the instructions for use.

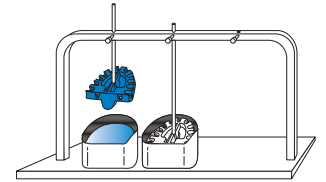


Recommended working temperature 18-22 °C

Recommended storage temperature 8-12 °C

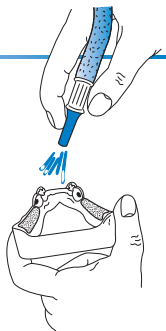
12. Fixation of the stabilizer plate

Lower the stabilizer plate into the silicone until the silicone flows into the retention holes on the side of the plate. The stabilizer plate should not be completely covered by silicone.



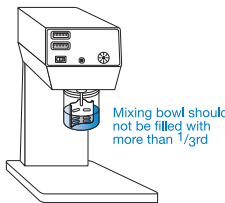
3. Drying

Spray and allow to take effect for 2 minutes. Then dry carefully with compressed air.



8. Mixing the silicone

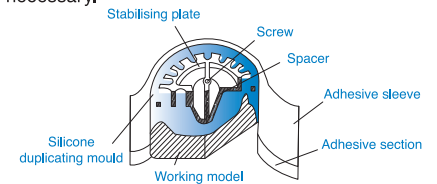
We recommend mixing the duplicating silicone under vacuum for 40 sec.. Alternatively, cure the duplicating silicone under pressure after dispensing it from a 1:1 dispenser unit. When curing under pressure, use a duplicating cross (REF 891002) instead of the fixation device.



Mixing bowl should not be filled with more than 1/3rd

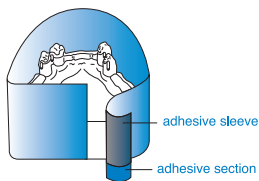
13. Cross-section

Remove the duplicating adhesive tape after curing. Then remove the model, using compressed air if necessary.



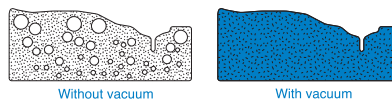
4. Placing the duplicating adhesive tape round the model

Now place the duplicating adhesive tape (REF 891007) round the prepared, cleaned and dried model. Leave a minimum gap of 5 mm between the model and tape.



9. Mixing under vacuum

Mixing under vacuum or curing under pressure ensures that the duplicating material is as homogenous as possible.

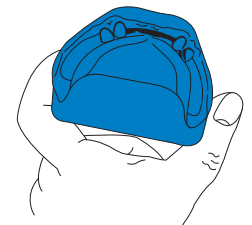


Without vacuum

With vacuum

14. Finishing the silicone duplicating mould

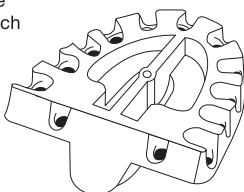
Remove the silicone flash from the sides and check the mould before pouring the investment model.



5. Stabilizer plate for the duplicating mould

Stabilising plates are used for stabilising the duplicating mould which are available in four different sizes.

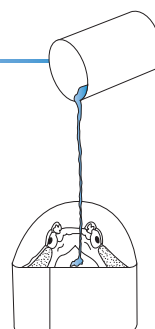
Size 1 - REF 891003
Size 2 - REF 891004
Size 3 - REF 891005
Size 4 - REF 891006



10. Pouring the silicone

After mixing the silicone according to instructions, pour it in a thin stream from a height of 40 - 50 cm.

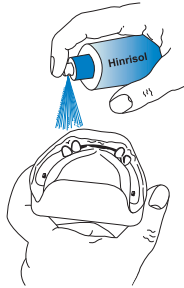
Caution: always pour onto the centre of the model.



The production of the investment model for CoCr according to the ERNST HINRICHS-casting technology

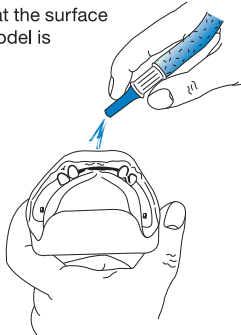
1. Preparing the silicone duplicating mould

Clean and reduce the surface tension of the duplicating silicone with Hinrisol (REF 109400).



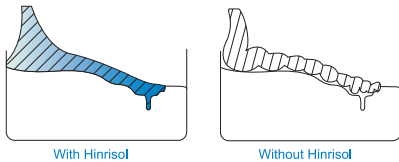
2. Placing the duplicating adhesive tape round the mould

The surface of the silicone should be wetted to ensure that the surface of the investment model is free from blows.



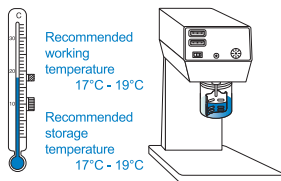
Exception:

It is not necessary to apply wetting agents to Hinrisol hydro duplicating moulds, because this special silicone has unique hydrophilic properties and produces perfect models without applying wetting agent.



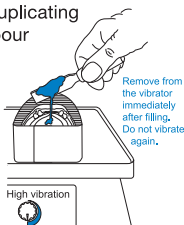
3. Investments for the duplicate model

Mix the investment selected exactly according to the instructions (Hinrivest CoCr, Hinrivest SG). Follow the instructions and advice on storage and working temperatures.



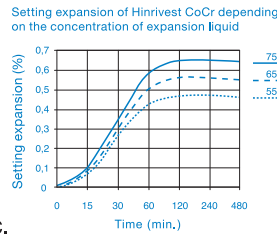
4. Pouring the investment

Place the prepared silicone duplicating mould onto the vibrator and pour the contours using high vibration. It may be helpful to use an instrument when pouring. If required, place the mould under pressure (2.5 – 6.00 bar), following precisely the instructions for using the different investments.



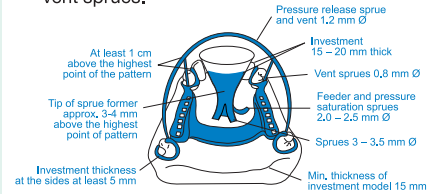
5. Setting expansion

Setting expansion begins after 8 – 12 min, depending on the type of investment used. During expansion, temperatures can reach 85 °C.



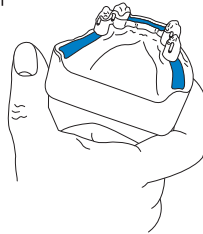
10. Investing diagram

Diagram of model with pressure release and vent sprues.



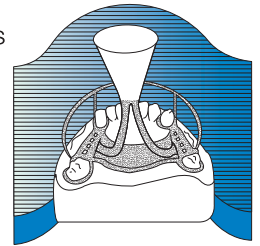
6. Investment duplicate model

The duplicate model can be removed from the duplicating mould approx. 30 min. after pouring.
Caution: ERNST HINRICHS investment models should not be dried in a hot air cabinet or dipped in hardener.



11. Disposable ring tape

Place the ERNST HINRICHS disposable ring tape (REF 892001) around the model prepared for investing. Wetting agent is not required.



7. Applying wax adhesive

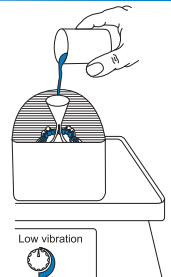
Apply ERNST HINRICHS wax adhesive (REF 892030) 1 – 2 times thinly on areas where preformed wax patterns are to be placed.



12. Investing

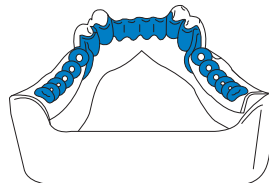
Mix the investment under vacuum according to the instructions and pour using minimum vibration.

Important! Switch off the vibrator immediately after the wax pattern is covered. Do not vibrate again.



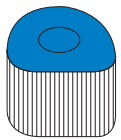
8. Waxing up and attaching sprues

Follow the instructions for attaching sprues in the ERNST HINRICHS-casting technology.



13. Speed or conventional preheating

Subsequent handling of the casting ring depends on the investment used. With speed investments, follow the instructions precisely regarding the time for placing the casting ring in the hot furnace. Conventionally preheated investments are placed in a cold furnace, with the sprue former facing down, at least 60 min, after investing and then preheated according to the preheating parameters in the instructions.



9. Trimming the investment model

The investment model can be trimmed (dry) before the crepe sleeve is placed around it.

Ensure that there is a uniform gap for investment of at least 5 mm between the model and sleeve.

