



Hinrigel

Instructions for use

Thermo-reversible duplicating gel (type 1) for prosthetics acc. to DIN EN ISO 14356

Use of application:

Hinrigel is an elastic duplicating material for use with gypsum models, gypsum and phosphate bound investments. Hinrigel is a reversible hydrocolloid manufactured from high quality, natural ingredients and stabilizing substances. Preservatives protect Hinrigel against fungal attack and guarantee long life when handled correctly.

Hinrigel is used for the production of duplicate models made of gypsum, gypsum bound investment material or phosphate bound investment material. Hinrigel mold surfaces do not need to be treated with any special solution. Hinrigel is very fluid, volume stable and the contours of the duplicate model are sharply defined. The surface of the duplicate model is smooth. Hinrigel is also suitable for producing refractory models for framework castings.

Initial melting:

1. Cut Hinrigel into small pieces and put it into the duplicating unit without adding water.
2. Set the melt temperature on automatic duplicator to 93°C / 199.4°F and the pouring temperature to 50°C / 122°F.
3. If the double boiler method of preparation is used, the mixture must be stirred constantly. Do not bring the mixture to a boil.

Melting temperature: 93°C / 199.4°F

Pouring temperature: 50°C / 122.0°F

Microwave melting:

Hinrigel is usable for the microwave melting process. Heat up Hinrigel at 800 W for approximately 2 minutes (visual control).

Duplicating – general notes

Remelting after first use; Clean Hinrigel carefully under running water. Cut into small pieces and place into automatic duplicating machine or double boiler. Do not add water to gel.

Model preparation

Prepare model in normal fashion using heat resistant preparation and/or block-out waxes. Soak model prior to duplication. Clean model and place in warm (40 – 45°C / 104 – 113°F) water, teeth down, for 30 minutes.

Duplicating

After soaking remove excess water from model using a clean tissue or paper towel. Do not use compressed air. Secure model to metal duplicating flask base and put top into place. Use a metal flask. Duplicating material should be stirred continually during melting and cooling. Pouring temperature to 50°C / 122°F (± 1°C / 1.8°F). Carefully pour duplicating material into one side only of the metal flask. Allow flask to bench cool for 15 minutes before placing in water bath. Water level should be approx. 2 cm and the temperature between 18–25 °C/64.4–77 °F. Allow flask to remain in water bath for approx. 30 minutes.

Note:

If a plastic duplicating flask has been used the setting time should be extended for up to 30% of regular time. After setting, the master model is carefully removed using model tongs. The model should be lifted straight up out of the mold to avoid damaging the duplicating gel. Investment material is then mixed according to the manufacturer suggested ratio and after max. 1 hour poured



at room temperature (20°C – 24°C / 68°F – 75°F) into the clean, dry mold. After the required setting time of 40 minutes, the duplicating material is removed from the flask and then carefully peeled away from the model.

Remelting Hinrigel

Hinrigel may be melted repeatedly. Correct use and storage will prolong its durability. Clean the used Hinrigel material under running water immediately after the models have been removed and keep it in a clean and airtight container. Cut Hinrigel into small pieces and put into the automatic duplicating unit without adding water. To prevent loss of moisture, keep the lid of the automatic duplicating unit closed.

Note:

Hinrigel which has been used for phosphate casting investments must not be used for gypsum or gypsum bound investment materials. **Never mix new Hinrigel with previously melted material!**

Sources of faults and their remedies

Fault: Soft, scaly model surfaces.
Cause: Duplicating mold too moist.
Remedy: Do not duplicate models which are too moist.

Fault: Setting times of duplicating material too long or too short.
Remedy: Observe instructions for use for the duplicating materials.
Cause: Original models were contaminated (alginate + remainders of saliva).
Remedy: Models must be steam-cleaned before duplicating.

Fault: Poor ultimate tensile strength.
Cause: Duplicating material has been contaminated by alum, electrolyte or washing materials.
Remedy: Material is permanently damaged and should be discarded.

Fault: Smeary, soft consistency of Hinrigel.
Cause: Old duplicating material. Material boiled away. Contamination. Foreign substances, e.g. cleansing agents.
Remedy: Material is permanently damaged and should be discarded.

Fault: Viscous duplicating material.
Cause: Proportion of water is evaporated.
Remedy: Add 10–30 ml of tap water (per kg duplicating material).

Recommended melting units: duplicating unit, microwave unit

Change of duplicating materials:

Never mix old and new materials. When changing materials, clean the melting unit completely and fill it with new material. Do not use cleansing solvents.

Shelf life of Hinrigel:

36 months in the unopened original packaging stored at room temperature.

Waste disposal:

The duplicating gel may be disposed together with normal domestic refuse. The empty packaging should be disposed after use according to local regulations.

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