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# PLATINA® m.

## System Ceramic

**Low-fusing metal ceramic, especially adapted to the universal alloys and the press ceramic PLATINApress by Heimerle + Meule**

- **PLATINORM**
- **PLATINOR® M 1**
- **PLATINOR® M 3**
- **PLATINOR® M 4**
- **AUROPLADENT® M**
- **ECONOR® M**
- **ECONOR® MG**
- **ECONOR® ME**
- PLATINA® press

**Instruction for use**

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# Instruction for use

## Material and Indication

PLATINA® m. is a low-fusing 2-phase leucite glass ceramic coloured according to the VITA® colour system.

Matching transparency and fluorescence allow reconstruction of natural teeth as metal-ceramic crowns and bridges using bonding alloys with a CTE-value (25-500 °C): 16,0-16,8 µm/mK as full ceramic restauration as inlays, onlays and crowns.

## Production of the Frame

Cast, finish and oxide according to the processing instructions recommended by the manufacturer of the alloy.

## Opaque Firing

The opaque materials are offered as opaque pastes in material saving cans. If the paste settles, the original consistence can be restored by simple stirring.

1. FIRING CIRCLE (Wash firing):

Apply the first opaque layer with a flat brush which is slightly moistened with opaque liquid (remove excess) onto the thoroughly cleaned or oxidized metal frame respectively, so that complete cover of the metal is achieved with about 70 % layer coverage (do not suck off).

After the opaque layering, put the crown or bridge onto the furnace table and pre-dry for 6 - 8 min at open furnace. Then close the furnace (basic temperature 400 °C) and heat furnace to 820 °C with 55 °C/min and vacuum from 450 °C on.
Holding time: 2 min without vacuum.

2. FIRING CIRCLE:

Apply the second opaque layer to complete coverage.
The second firing circle is performed accordingly to the first firing circle.

## Firing of Shoulder Material

Apply a thin layer of insulation liquid onto the shoulder of the work die. Mix shoulder material with modelling liquid 2 to creamy consistence and apply it. Concentrate the shoulder material applied by gently chequering, suck off surplus liquid and dry well.

1. FIRING CIRCLE:

Put the object onto the furnace table and pre-dry for 4 min at open furnace (basic temperature 400 °C). Then close the furnace and heat furnace to 780 °C (firing temperature) with 45 °C/min and vacuum from 450 °C on.
Holding temperature: 1 min (without vacuum).

After the first firing circle isolate the work die with insulation liquid again and supplement missing ceramic material with the second layer of shoulder material for optimisation of the fitting.

2. FIRING CIRCLE:

The second firing circle is performed accordingly to the first however at a firing temperature of 770 °C.

## Firing of Dentin

Mix ceramic powder (dentin and enamel) with modelling liquid L to creamy consistence, apply it in small portions to the cervical area as well as within the interdental area and concentrate it by gently vibrating. Then apply dentin and enamel analog to the dental layering.

1. FIRING CIRCLE:

Put the crown or bridge to the furnace table and pre-dry for 4 - 6 min at open furnace. Then close the furnace (basic temperature 400 °C) and heat furnace to 770 °C with 45 °C/min. and vacuum from 450 °C.
Holding temperature: 1 min (without vacuum).

2. FIRING CIRCLE:

After the first dentin firing circle, finish and thoroughly clean the objec.

Apply dentin and enamel for the second dentin firing circle thereafter.

The second firing circle is performed accordingly to the first firing circle, with firing temperature of 760 °C, however.
Further dentin firing circles are to be made at a firing temperature of 755 °C.

## Firing of Glaze/Gloss Firing

After eventual finishing , thoroughly clean the crown or bridge. Mix glaze paste with glaze liquid and apply a thin layer.

For colour characterisation the respective paint-colours are applied and fired together with the glaze material.

FIRING WITH GLAZE:

After application of the glaze, put the object onto the furnace table and pre-dry for 4 min at open furnace.

Then close the furnace and heat furnace to 745 - 750 °C with 55 °C/min without vacuum.

Gloss firing without glaze: 750 - 755 °C.

Holding temperature: 1 min

Warning:
Longer inhalation of ceramic dust may cause health risks.

## Alignment of the Shoulder Material

| Dentin | A1 | A2 | A3 | A3,5 | A4 | B1 | B2 | B3 | B4 | C1 | C2 | C3 | C4 | D2 | D3 | D4 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Enamel | 1 | 2 | 2 | 4 | 4 | 1 | 2 | 3 | 4 | 2 | 2 | 3 | 4 | 1 | 2 | 3 |

VITA® is a registered trademark.

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## Firing Chart „PLATINA® mat“

| | | Opaque 1 | Opaque 2 | Shoulder 1 | Shoulder 2 | Dentin 1 | Dentin 2 | Gloss with Glaze | Gloss w/o Glaze |
|---|---|---|---|---|---|---|---|---|---|
| **Basic temperature** | [°C] | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 400 |
| **Closing time** | [min.] | 6 - 8 | 6 - 8 | 4 | 4 | 4 - 6 | 4 - 6 | 4 | 4 |
| **Drying time** | [min.] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Heating rate** | [°C/min.] | 55 | 55 | 45 | 45 | 45 | 45 | 55 | 55 |
| **Vacuum start** | [°C] | 450 | 450 | 450 | 450 | 450 | 450 | 0 | 0 |
| **Vacuum power** | [%] | 95 | 95 | 95 | 95 | 95 | 95 | 0 | 0 |
| **Stop vacuum** | [°C] | 819 | 819 | 779 | 769 | 769 | 759 | 0 | 0 |
| **Hold** | [min.] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Final temperature** | [°C] | 820 | 820 | 780 | 770 | 770 | 760 | 745 - 750 | 750 - 755 |
| **Holding time** | [min.] | 2 | 2 | 1 | 1 | 1 | 1 | 1 | 1 |
| **Internal cooling** | [min.] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Cooling time** | [min.] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

## Firing Chart „Austromat 3001“

| | **Firing program – entry order** | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Opaque 1 and 2 | C400 | T180 | T180.L9 | V9 | T055.C820 | V0 | T120 | C0 | L0 | T2 | C400 |
| Shoulder 1 | C400 | T120 | T120.L9 | V9 | T045.C780 | V0 | T60 | C0 | L0 | T2 | C400 |
| Shoulder 2 | C400 | T120 | T120.L9 | V9 | T045.C770 | V0 | T60 | C0 | L0 | T2 | C400 |
| Dentin 1 | C400 | T180 | T180.L9 | V9 | T045.C770 | V0 | T60 | C0 | L0 | T2 | C400 |
| Dentin 2 | C400 | T180 | T180.L9 | V9 | T045.C760 | V0 | T60 | C0 | L0 | T2 | C400 |
| Gloss with Glaze | C400 | T120 | T120.L9 | | T055.C745 - 750 | | T60 | C0 | L0 | T2 | C400 |
| Gloss w/o Glaze | C400 | T120 | T120.L9 | | T055.C750 - 755 | | T60 | C0 | L0 | T2 | C400 |

## Firing Chart „Austromat M“

| | **Start [°C]** | **Drying [min.]** | **↑ [min.]** | **→ [min.]** | **VAC Level** | **↗ [°C/min.]** | **END [°C]** | **→ [min.]** | **(V)** | **↘ 1** | **↘ 2** |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Opaque 1 and 2 | 400 | 2 | 6 | 0 | 9 | 55 | 820 | 2 | | 0 | 0 |
| Shoulder 1 | 400 | 0 | 4 | 0 | 9 | 45 | 780 | 1 | | 0 | 0 |
| Shoulder 2 | 400 | 0 | 4 | 0 | 9 | 45 | 770 | 1 | | 0 | 0 |
| Dentin 1 | 400 | 0 | 4 - 6 | 0 | 9 | 45 | 770 | 1 | | 0 | 0 |
| Dentin 2 | 400 | 0 | 4 - 6 | 0 | 9 | 45 | 760 | 1 | | 0 | 0 |
| Gloss with Glaze | 400 | 0 | 4 | 0 | 0 | 55 | 745 - 750 | 1 | | 0 | 0 |
| Gloss w/o Glaze | 400 | 0 | 4 | 0 | 0 | 55 | 750 - 755 | 1 | | 0 | 0 |

All temperatures indicated are reference values and thus depending from the individual constellation of the furnace used.

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## Firing Chart „Programat P 90“

| | Readiness temperature B [°C] | Increase t ↑ [°C/min.] | Final temperature T [°C] | Closing time S [°C] | Holding time H [min.] | Vacuum start $V_1$ [°C] | Vacuum end $V_2$ [°C] |
|---|---|---|---|---|---|---|---|
| Opaque 1 and 2 | 400 | 55 | 820 | 6 - 8 | 2 | 450 | 819 |
| Shoulder 1 | 400 | 45 | 780 | 4 | 1 | 450 | 779 |
| Shoulder 2 | 400 | 45 | 770 | 4 | 1 | 450 | 769 |
| Dentin 1 | 400 | 45 | 770 | 4 - 6 | 1 | 450 | 769 |
| Dentin 2 | 400 | 45 | 760 | 4 - 6 | 1 | 450 | 759 |
| Gloss w/o Glaze | 400 | 55 | 750 - 755 | 4 | 1 | | |
| Gloss with Glaze | 400 | 55 | 745 - 750 | 4 | 1 | | |

## Firing Chart „Vacumat 2500“

| | Readiness [°C] | Pre-dying time [min.] | Temperature increase [°C/min.] | Final temperature [°C] | Holding time [min.] | Vacuum on at [°C] |
|---|---|---|---|---|---|---|
| Opaque 1 and 2 | 400 | 6 | 55 | 820 | 2 | 450 |
| 1st Shoulder firing circle | 400 | 4 | 45 | 780 | 1 | 450 |
| 2nd Shoulder firing circle | 400 | 4 | 45 | 770 | 1 | 450 |
| 1st Dentin firing circle | 400 | 4 - 6 | 45 | 770 | 1 | 450 |
| 2nd Dentin firing circle | 400 | 4 - 6 | 45 | 760 | 1 | 450 |
| Gloss w/o Glaze | 400 | 4 | 55 | 745 - 750 | 1 | |
| Gloss with Glaze | 400 | 4 | 55 | 750 - 755 | 1 | |

All temperatures indicated are reference values and thus depending from the individual constellation of the furnace used.

**Further firing charts on request.**

Our recommendations and instructions for use are based on our experience. They do not, however, replace professional knowledge and experience of dentists and dental technicians who hold sole responsibility for their decisions to select and process particular alloys. Our customer service is a non-mandatory service not establishing any liability. Warranty and damage claims are limited to the contracted contents of our General Terms and Conditions.

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