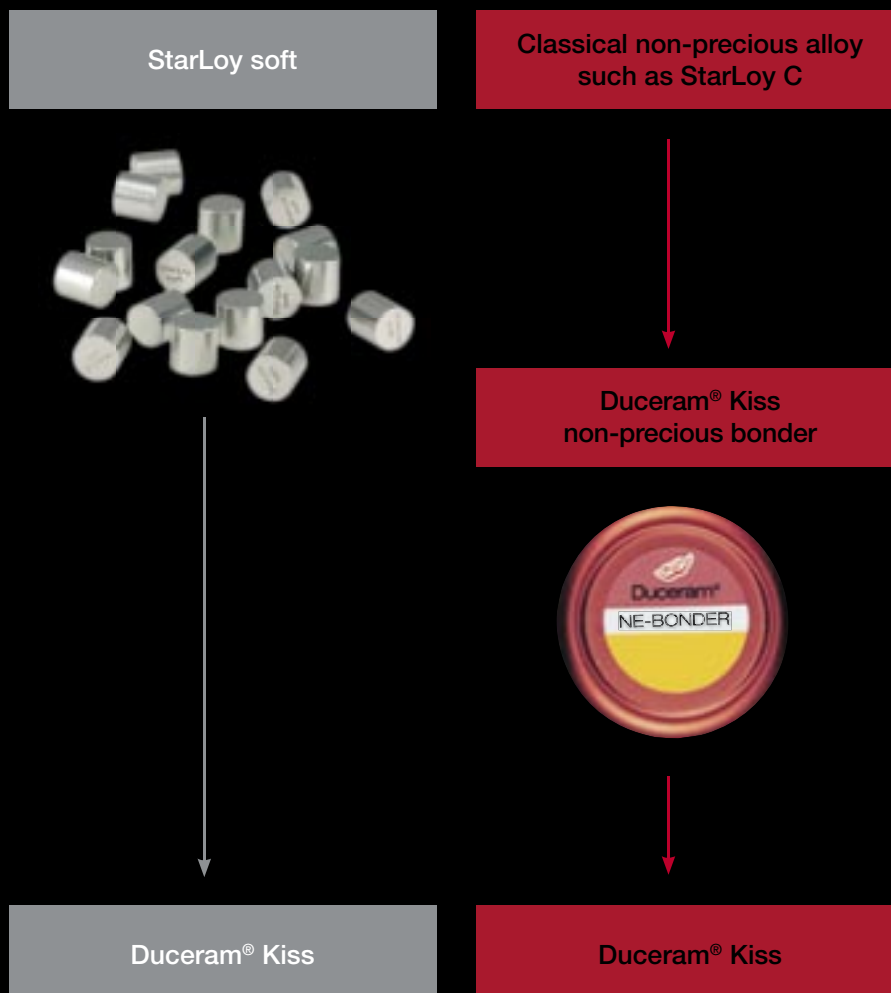


# Guidelines for veneering non-precious alloys consistently with Duceram® Kiss

Due to the difference in behaviour of non-precious alloys compared with precious alloys during firing, please adhere strictly to these guidelines to ensure consistent results when working with non-precious alloys:

- Only use new material and ceramic crucibles when casting non-precious alloys. Avoid sharp angles when preparing the framework. Sandblast the framework with aluminium oxide 250 µm at 3–4 bar.
- Oxide firing is not strictly necessary and serves only as a control measure.
- To avoid discolouration, grind or sandblast any exposed parts of the framework (connectors and full pontics) after every firing and then steam or wash clean.



# Guidelines for veneering non-precious alloys consistently with Duceram® Kiss

Please take note of the special firing settings when using non-precious alloys.

Use Ducera® Liquid B or OCL universal for mixing the non-precious bonder and apply a semi-masking coat of even thickness to the framework. Subsequently fire the bonder at 980 °C, which homogenously sinters the material to the framework, producing an even glaze on its surface. This, in turn, ensures a secure bond between the non-precious alloy and the veneering porcelain.

## Firing recommendations for classic non-precious alloys such as StarLoy C:

| Firing cycle        | Preheating time  | Drying | Heat rate temp. | Final time | Hold | Vacuum | Temper mento lento | Slow cooling |
|---------------------|--|--------|-----------------|------------|------|--------|--------------------|--------------|
|                     | °C   | min    | °C/min          | °C         | min  | hPa    |                    |              |
| Oxide firing        | Adhere to the exact firing settings for each non-precious alloy. |        |                 |            |      |        |                    |              |
| Bonder              | 575  | 7:00   | 55              | 980        | 2:00 | 50     | –                  | –            |
| Paste opaque        | 575  | 7:00   | 55              | 950        | 2:00 | 50     | –                  | –            |
| Powder opaque       | 575  | 5:00   | 55              | 950        | 2:00 | 50     | –                  | –            |
| Shoulder 1+2        | 575  | 7:00   | 55              | 930        | 1:00 | 50     | –                  | –            |
| Dentine 1           | 575  | 6:00   | 55              | 920        | 1:00 | 50     | 3 min/850 °C       | to 600 °C    |
| Dentine 2           | 575  | 4:00   | 55              | 910        | 1:00 | 50     | 3 min/850 °C       | to 600 °C    |
| Glaze               | 575  | 3:00   | 55              | 890        | 1:00 | –      | 3 min/850 °C       | to 600 °C    |
| Add-on (Final Kiss) | 575  | 4:00   | 55              | 880        | 1:00 | 50     | 3 min/850 °C       | to 600 °C    |
| Final shoulder      | 450  | 4:00   | 55              | 660        | 1:00 | 50     | –                  | –            |

## Firing recommendations for StarLoy soft:

| Firing cycle        | Preheating time            | Drying | Heat rate temp. | Final time | Hold | Vacuum | Temper mento lento | Slow cooling |
|---------------------|----------------------------|--------|-----------------|------------|------|--------|--------------------|--------------|
|                     | °C                         | min    | °C/min          | °C         | min  | hPa    |                    |              |
| Oxide firing        | No oxide firing necessary. |        |                 |            |      |        |                    |              |
| Paste opaque 1      | 575                        | 7:00   | 55              | 980        | 2:00 | 50     | –                  | –            |
| Paste opaque 2      | 575                        | 7:00   | 55              | 950        | 2:00 | 50     | –                  | –            |
| Powder opaque 1     | 575                        | 5:00   | 55              | 980        | 2:00 | 50     | –                  | –            |
| Powder opaque 2     | 575                        | 5:00   | 55              | 950        | 2:00 | 50     | –                  | –            |
| Shoulder 1+2        | 575                        | 7:00   | 55              | 930        | 1:00 | 50     | –                  | –            |
| Dentine 1           | 575                        | 6:00   | 55              | 920        | 1:00 | 50     | 3 min/850 °C       | to 600 °C    |
| Dentine 2           | 575                        | 4:00   | 55              | 910        | 1:00 | 50     | 3 min/850 °C       | to 600 °C    |
| Glaze               | 575                        | 3:00   | 55              | 890        | 1:00 | –      | 3 min/850 °C       | to 600 °C    |
| Add-on (Final Kiss) | 575                        | 4:00   | 55              | 880        | 1:00 | 50     | 3 min/850 °C       | to 600 °C    |
| Final shoulder      | 450                        | 4:00   | 55              | 660        | 1:00 | 50     | –                  | –            |

To relieve stress, cool to base temperature independent of CTE values. In addition, please observe the alloy manufacturer's recommendations. To compensate for the non-precious alloy's poor thermal conductivity, for 6 unit bridges and above we recommend increasing the temperature or the firing time of all dentine firing cycles.

These settings are intended as a reference guide only. Variations in firing results may occur. The firing results are dependent on the furnace output, as well as make and age of the furnace. The reference values must be adapted individually after every firing cycle. We suggest you carry out a trial firing to check the furnace. All settings have been carefully recorded and tested by us, but they are given without liability.