



## Technische Informationen Kera<sup>®</sup>-Line Technical Information Kera<sup>®</sup>-Line

## Gebrauchsanweisung Kera<sup>®</sup>-Line Instruction for use Kera<sup>®</sup>-Line



PRODUCT NAME	<b>Kera<sup>®</sup>-Line</b>
DESCRIPTION	Cobalt-based dental alloy for milling, type 4
MEASUREMENTS	Ø 6,4 mm X 1000 mm Ø 8,0 mm X 1000 mm Ø 9,5 mm X 1000 mm Ø 12,0 mm X 1000 mm

### CHEMICAL COMPOSITION (TYPICAL VALUES)

Co %	Cr %	W %	Si %	Mn %	Fe %	Others %
61,65	27,75	8,45	1,61	0,25	0,2	< 0,1

### TYPICAL TECHNICAL DATA

**Yield strength 0,2 %**  
**Elongation**  
**Tensile strength**  
**E-module**  
**Density**  
**Corrosion resistance**  
**Tarnish resistance**  
**CTE (25 – 500 °C)**  
**Hardness**  
**Max. firing temperature**  
**Storage conditions**

**375 MPa**  
**14,7 %**  
**525 MPa**  
**240 GPa**  
**8,55 g/cm<sup>3</sup>**  
**< 200 µg/cm<sup>2</sup>**  
**yes**  
**~ 14,5 x 10<sup>-6</sup> K<sup>-1</sup>**  
**285 HV 10/30**  
**ca. 980 °C**  
**no**

*After ceramic firing*

**Yield strength 0,2 %**  
**Elongation**  
**Tensile strength**  
**E-module**

**375 MPa**  
**14,7 %**  
**525 MPa**  
**240 GPa**

### APPLIED NORM:

DIN EN ISO 22674:2006  
 ED GmbH is certified according to  
 DIN EN ISO 13485:2003 / DIN EN ISO 9001:2008  
 with appendix V MP-guideline 93/42/EWG

### Intended use

**Kera<sup>®</sup>-Line** is a beryllium- and nickel-free non-precious bonding alloy for the production of milled crowns and bridges.

### General guidelines for handling

This instruction for use includes important processing steps and recommendations for **Kera<sup>®</sup>-Line**.

### Indication

Crowns and bridges, one piece abutments.

### Milling

**Kera<sup>®</sup>-Line** is construed for CNC milling machines. Please follow the instructions and parameters of the respective manufacturer of CAM Software and the CNC milling machine.

### CAD

The design should be done with appropriate CAD software. Please consider an anatomically reduced framework design for the veneering with ceramic. The wall thickness should not be less than 0.3 mm. Choose a sufficient connector dimension (6 - 9 mm<sup>2</sup>). Sharp edges and undercuts should be avoided.

### Soldering / Laser welding

We recommend commercially available solders. **Kera<sup>®</sup>-Line** parts should not be soldered with gold or palladium solder. **Kera<sup>®</sup>-Line** is also ideally suitable for laser-welding (**Kera<sup>®</sup>LA-con** from Eisenbacher).

### Preparation before ceramic veneering

The frameworks can be elaborated with standard carbide cutters, look for smooth transitions and avoid overlapping material. Please use the same cutter for one alloy to avoid contamination. The minimum thickness of the prepared coping should not be less than 0.3 mm. It's recommended to sandblast the frames with minimum 125 µm of Aluminium oxide with 3-4 bar and clean with steam cleaner. Oxide firing is not mandatory but can be done as an option for 5 minutes at 980 °C (cleaning firing). The frame needs to be sandblasted again to remove the present oxide layer thoroughly. In the end the cleaning by steam cleaner is mandatory. If you use a ceramic bonder please consider the instruction for use of the manufacturer.

### Handling conditions / Safety

Metal dust is harmful to health. Use when grinding and sandblasting dust extraction and respirator with filter FFP3-EN149.

### Contraindications and side effects

If the instructions are observed during the production processes, incompatibilities with non-precious dental alloys are extremely rare. In case of a proven allergy against an ingredient of this alloy, the alloy must not be used for safety reasons. In exceptional cases, electrochemically induced, local irritations have been reported. When different alloy groups are used, galvanic effects might occur.

### Disposal Instructions

Consult the material safety data sheets or national regulations for disposal.

### Storage conditions

Temperature, humidity or light has no effect on the product properties.

### Quantity

Please consider the label on the package.

*Our information and recommendation are based on the state of the art in science and technology and has to be considered correct to the best of our knowledge and experience on this day. The above version shall replace any previous versions.*

