

BLOG

from the bredent group

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From the bredent bond.lign system:

DTK adhesive for precise bonding of prosthetic restorations now in a new bleach colour

- Two-component adhesive from the bredent bond.lign system is both light-curing and self-curing.
- Adhesive bond for zirconium dioxide, titanium, NEM, lithium disilicate ceramic and BioHPP without mechanical retention
- Bonding of attachment or connecting parts, hybrid abutments and digitally manufactured secondary frameworks possible

The DTK adhesive is a two-component adhesive from the bredent bond.lign system is both light-curing and self-curing , which allows curing of areas inaccessible by light. It is suitable for bonding prosthetic restorations made of metal, zirconium oxide or BioHPP at room temperature. The adhesive bond is achieved with zirconium dioxide, titanium, NEM, lithium disilicate ceramic and BioHPP. Depending on the material, the MKZ-Primer, K-Primer or visio.link from the bredent bond.lign system serves as the bonding agent. The DTK adhesive can be used to bond attachment or connecting parts, hybrid abutments and digitally manufactured secondary frameworks.

Instructions for use by example of an individual zirconium abutment glued on titanium bonding base:

The titanium bonding base is fixed to the model analogue. Before sandblasting, the screw channel is sealed with a foam pellet. Additionally, a protection is applied to the polished edge (transition to the implant interface) to prevent the polished edge from being accidentally struck during sandblasting. The titanium bonding base is sandblasted with 2-3 bar, the zirconium abutment with a maximum of 2 bar and 50-110 µm aluminium oxide. The titanium bonding base and the abutment must not be processed with a steam cleaner or oil-containing compressed air. Just as important is to avoid touching the surface after sandblasting.

The MKZ-Primer from the bredent bond.lign system is applied to the blasted titanium bonding base and the inner surface of the abutment by using a disposable brush. Wait a few seconds until the MKZ-Primer has completely evaporated. The DTK adhesive is automatically mixed with the supplied mixing cannula and applied to the bonding surface of the titanium bonding base and into the inside of the abutment. The abutment is then placed on the Titanium bonding base.

While the DTK adhesive is still soft, the foam pellet is removed from the screw channel by using a microbrush or a barbed broach. Synchronously excess adhesive is removed from the channel. The DTK adhesive is cured on the model analogue. The processing time is approx. 2 minutes at 20 °C room temperature, self-curing takes approx. 6 minutes. Polymerisation can be accelerated with a light-curing device, for example the bre.lux Power Unit 2.

Excess DTK adhesive can be removed. For a smooth surface, the circular surface of the emergence profile is carefully finished with a rubber polisher, e.g. Fibro Plus, with reduced pressure. Overheating must be avoided at this point. For biologically stable fibroblast deposition in the submucosal area, the emergence profile ideally should have a finish roughness of 0.21-0.4 µm.

Hybrid abutments or hybrid abutment crowns must be sterilised prior to clinical use. Abutments bonded with DTK adhesive can be sterilised in the autoclave at 138 °C. The DTK adhesive in combination with the MKZ-Primer offers optimum bond strength for intra- and extraoral applications with opaque materials. Even after ageing, the bonding strength remains at a high level.

In addition to the use with custom zirconium abutments, the DTK adhesive from the bredent bond.lign system is suitable for numerous other areas of application in analogue and digital dental technology.

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About the bredent group

The bredent group is an internationally active, family-owned company headquartered in Senden (Bavaria), Germany. The company has been operating in the dental market since its foundation in 1974 and is now represented in more than 100 markets worldwide. With over 600 employees, it comprises three specialised business divisions: bredent, bredent medical and Dental Concept Systems (DCS).

The company develops, manufactures and distributes individual products and system solutions with a focus on implantology, prosthetic rehabilitation, biomaterials and digital dentistry, as well as comprehensive, tailored treatment concepts "Made in Germany". In doing so, the bredent group supports dentists and dental technicians in producing and maintaining functional, aesthetic and affordable dentures.

The bredent group pursues a holistic approach that focuses on practical and durable applications for modern dentistry and dental technology. The company's activities are based on close collaboration with users and continuous advancement of products, processes and systems to improve long-term treatment success and quality of life for patients.

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