

Bonding recommendations for VITA CAD/CAM materials

VITA CAD/CAM material	Material class	Type of bonding		
		adhesive	self-adhesive	conventional
VITABLOCS	Silicate ceramic	●	● ¹	✗
VITA ENAMIC	Hybrid ceramic	●	● ¹	✗
VITA SUPRINITY	Zirconia-reinforced lithium silicate ceramic	●	●	○ ²
VITA In-Ceram YZ ³	Zirconia	●	●	●
VITA YZ HT ³	Zirconia	●	●	●

● recommended ○ possible ✗ not possible

Recommended bonding materials:

■ Silicate ceramic

Glass ionomers: not possible

Adhesive: Variolink Veneer (Ivoclar Vivadent), Variolink II (Ivoclar Vivadent), Multilink Automix (Ivoclar Vivadent), Vitique (DMG), NX3 (KerrHawe), Calibra (Dentsply), RelyX Ultimate (3M ESPE), Bifix QM (Voco)
VITA DUO CEMENT (VITA Zahnfabrik), Clearfil Esthetic Cement (Kuraray), DuoCem (Coltène Whaledent),

Self-adhesive: RelyX Unicem (3M ESPE)

■ Hybrid ceramic

Glass ionomers: not possible

Adhesive materials: Variolink Veneer (Ivoclar Vivadent), Variolink II (Ivoclar Vivadent), Multilink Automix (Ivoclar Vivadent), Vitique (DMG), NX3 (KerrHawe), Calibra (Dentsply), RelyX Ultimate (3M ESPE), Bifix QM (Voco)
VITA DUO CEMENT (VITA Zahnfabrik), Clearfil Esthetic Cement (Kuraray), DuoCem (Coltène Whaledent),

Self-adhesive: RelyX Unicem (3M ESPE)

■ Zirconia-reinforced lithium silicate ceramic

Glass ionomers: Ketac CEM (3M ESPE), Vivaglass CEM (Ivoclar Vivadent), GC FujiCem (GC Dental)

Adhesive: Variolink Veneer (Ivoclar Vivadent), Variolink II (Ivoclar Vivadent), Multilink Automix (Ivoclar Vivadent), Vitique (DMG), NX3 (KerrHawe), Calibra (Dentsply), RelyX Ultimate (3M ESPE), Bifix QM (Voco)
VITA DUO CEMENT (VITA Zahnfabrik), Clearfil Esthetic Cement (Kuraray), DuoCem (Coltène Whaledent),

Self-adhesive: RelyX Unicem (3M ESPE)

■ Zirconia³

Glass ionomers: Ketac CEM (3M ESPE), Vivaglass CEM (Ivoclar Vivadent), GC Fuji I (GC Dental)

Adhesive: Variolink II (Ivoclar Vivadent), Multilink Automix (Ivoclar Vivadent), PANA VIA F2.0 (Kuraray),
PANA VIA 21 (Kuraray)

Self-adhesive: RelyX Unicem (3M ESPE), PANA VIA SA (Kuraray)

Please note:

¹ In the case of silicate ceramics and hybrid ceramics, self-adhesive bonding composites may only be used for crowns.

² Conventional bonding materials (Ketac CEM, 3M ESPE, Vivaglass CEM, Ivoclar Vivadent, GC Fuji I, GC Dental) may be used exclusively for crowns on natural teeth. The preparation requires retentive surfaces for conventional bonding and - based on the preparation guidelines - the anatomical shape must be reduced while adhering to the minimum layer thicknesses indicated.

With conventional bonding, the bond is almost exclusively achieved by static friction between the bonding material and the restoration as well as between the bonding material and the preparation. To achieve the required static friction, retentive preparation with a preparation angle of approx. 4-6° and the application of VITA Ceramics Etch to the respective surfaces (for 20 seconds) are required.

³ High-strength oxide ceramics cannot be etched using hydrofluoric acid gel and must be sandblasted with Al₂O₃ (50 µm) at a max. pressure of 2 bar prior to bonding for improved retention. The phosphate monomer contained in the composites will create a chemical bond between the sandblasted oxide ceramic surface and the composite. Adhesive bonding is recommended for short stumps (≤ 4 mm).