

Inlays

Preparation

Shoulder margin
Rounded internal line angles
1.0 mm isthmus width
1.0 mm- to 1.5-mm- wide gingival floor
1.0 mm- depth at isthmus

Material Options:
IPS e.max Lithium Disilicate

CEMENTATION (must be adhesively cemented)

Recommended
Variolink Esthetic
Multilink Automix

Other:
Adhesive Resin Cements

Contraindication:
Temporary Cements
Self-Adhesive Cements
Glass Ionomer Cements
Resin Modified Glass Ionomer

Onlays

Preparation

1.0-mm to 1.5-mm wide gingival floor
Shoulder margin
Occlusal reduction of 1.5 mm

Material Options:
IPS e.max Lithium Disilicate

CEMENTATION (must be adhesively cemented)

Recommended
Variolink Esthetic
Multilink Automix

Other:
Adhesive Resin Cements

Contraindication:
Temporary Cements
Self-Adhesive Cements
Glass Ionomer Cements
Resin Modified Glass Ionomer

Veneers

Preparation

0.7 mm incisal reduction
Shoulder margin
Depth cuts of 0.6 mm*

Material Options:
IPS e.max Lithium Disilicate

CEMENTATION (must be adhesively cemented)

Recommended
Variolink Esthetic

Other:
Adhesive Resin Cements

Contraindication:
Temporary Cements
Self-Adhesive Cements
Glass Ionomer Cements
Resin Modified Glass Ionomer

Anterior Bridge

Preparation

Rounded internal line angles
Modified shoulder margin
1.0 mm reduction at the gingival margin
1.5-mm axial reduction
1.5 mm incisal reduction

Material Options: IPS e.max Lithium Disilicate, IPS e.max CAD-on, IPS e.max ZirCAD

CEMENTATION

<p>Retentive Preparation</p> <p>Recommended Variolink Esthetic Multilink Automix SpeedCEM Plus</p> <p>Other: Adhesive Resin Cements Self-Adhesive Cements Glass Ionomer Cements Resin Modified Glass Ionomer</p> <p>Contraindication: Temporary Cements</p>	<p>Non-Retentive Preparation</p> <p>Recommended Variolink Esthetic Multilink Automix</p> <p>Other: Adhesive Resin Cements</p> <p>Contraindication: Self-Adhesive Cements Glass Ionomer Cements Resin Modified Glass Ionomer Temporary Cements</p>
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Posterior Crowns

Preparation

Rounded internal line angles
Occlusal material thickness of at least 1.0 mm*
At least 1.0 mm axial reduction
Modified shoulder or deep chamfer of at least 1.0 mm
Taper between 4° and 8°
Material thickness at least 1.5 mm
1.5 mm axial reduction
Modified shoulder or deep chamfer of at least 1.0 mm
Coronal length at least 4.0 mm

Material Options: IPS e.max Lithium Disilicate, IPS e.max ZirCAD

CEMENTATION

<p>Retentive Preparation</p> <p>Recommended Variolink Esthetic Multilink Automix SpeedCEM Plus</p> <p>Other: Adhesive Resin Cements Self-Adhesive Cements Glass Ionomer Cements Resin Modified Glass Ionomer</p> <p>Contraindication: Temporary Cements</p>	<p>Non-Retentive Preparation</p> <p>Recommended Variolink Esthetic Multilink Automix</p> <p>Other: Adhesive Resin Cements</p> <p>Contraindication: Self-Adhesive Cements Glass Ionomer Cements Resin Modified Glass Ionomer Temporary Cements</p>
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Anterior Crowns

Preparation

Shoulder margin
1.0 mm reduction at gingival margin
Modified shoulder margin
1.0 mm to 1.5 mm facial reduction
1.0 mm lingual contact clearance
1.0-1.5-mm incisal reduction
Rounded internal line angles
Football-shaped finishing bur for lingual reduction

Material Options: IPS e.max Lithium Disilicate, IPS e.max ZirCAD

CEMENTATION

<p>Retentive Preparation</p> <p>Recommended Variolink Esthetic Multilink Automix SpeedCEM Plus</p> <p>Other: Adhesive Resin Cements Self-Adhesive Cements Glass Ionomer Cements Resin Modified Glass Ionomer</p> <p>Contraindication: Temporary Cements</p>	<p>Non-Retentive Preparation</p> <p>Recommended Variolink Esthetic Multilink Automix</p> <p>Other: Adhesive Resin Cements</p> <p>Contraindication: Self-Adhesive Cements Glass Ionomer Cements Resin Modified Glass Ionomer Temporary Cements</p>
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Posterior Bridge

Preparation

1.5-mm to occlusal reduction
Rounded internal line angles
1.5-mm reduction at the gingival margin

Material Options: IPS e.max CAD-on, IPS e.max ZirCAD

CEMENTATION

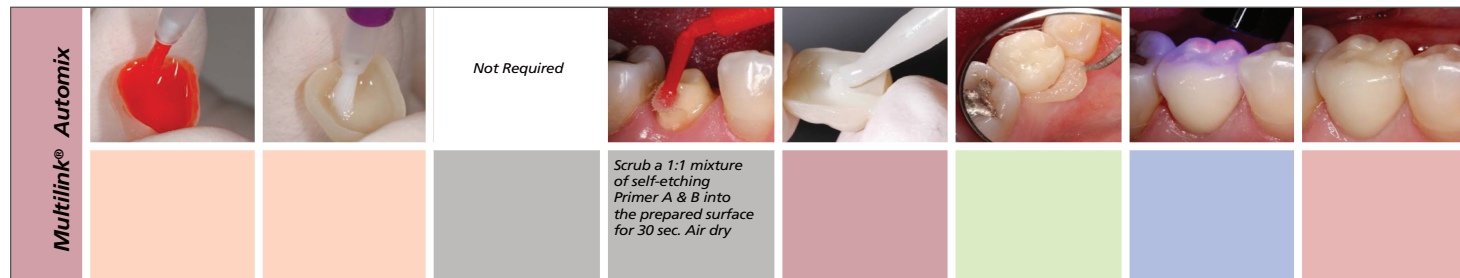
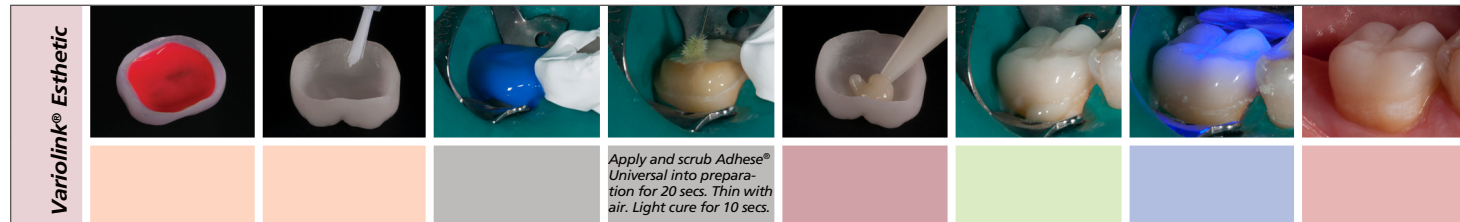
<p>Retentive Preparation</p> <p>Recommended Variolink Esthetic Multilink Automix SpeedCEM Plus</p> <p>Other: Adhesive Resin Cements Self-Adhesive Cements Glass Ionomer Cements Resin Modified Glass Ionomer</p> <p>Contraindication: Temporary Cements</p>	<p>Non-Retentive Preparation</p> <p>Recommended Variolink Esthetic Multilink Automix</p> <p>Other: Adhesive Resin Cements</p> <p>Contraindication: Self-Adhesive Cements Glass Ionomer Cements Resin Modified Glass Ionomer Temporary Cements</p>
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* Requires Adhesive Cementation

Clinical Case Guide

Cement Procedures

	STEP 1		STEP 2		STEP 3	STEP 4	STEP 5	
	IPS e.max Restoration Conditioning		Tooth Conditioning		Cement	Clean Up	Final Cure	Post-Op
	Etching Restoration	Priming Restoration	Etching Tooth	Priming Tooth				View
	Apply IPS Ceramic Etching Gel (5% HF Acid) for 20 sec. to bonding surface of the restoration. Rinse thoroughly and air dry.	Apply Monobond Plus Universal Primer to the bonding surface of the restoration. Allow to react for 60 sec. Completely air dry.	(Optional if using a universal adhesive.) Apply Total Etch 37% Phosphoric Acid etching gel. (15 sec. on dentin, 30 sec. on enamel) Rinse and dry leaving prepared surface moist.	Apply bonding agent to moist preparation	Dispense cement into restoration	After seating, light cure each quarter surface for 2-4 sec. The cement will achieve a gel-like consistency for easy clean-up.	Optional: Utilize Liquid Strip (glycerin gel) along the margins to eliminate oxygen-inhibition layer. Light cure each side on high power for 20 sec.	



Clinical Recommendation

Efficient rotary cutting instruments for high-strength ceramics

- When removing a high-strength ceramic restoration, proper bur selection improves the efficiency of the procedure, reducing the time needed for completion.
- The use of an electric handpiece is preferable due to its superior cutting efficiency and reduced heat generation.
- Regardless of the cutting instrument or the handpiece used, copious water irrigation is paramount when cutting through ceramic materials. Water acts as a lubricant, improves cutting efficiency and prevents heat rise in the restoration and the tooth.

MANUFACTURER	BUR	GRIT SIZE	FOOTBALL SHAPE FOR OCCLUSAL REDUCTION	ROUND SHAPE FOR ENDODONTIC ACCESS	CYLINDER SHAPE FOR CROWN REMOVAL
Komet	ZR Diamond	Coarse 126µm	Excellent (ZR6379.314.023)	Excellent (ZR6801.314.014)	Excellent (ZR6856.314.025)
Brasseler USA	DuraCut	Coarse 151µm	Excellent (6368DC.31.023)	Very good (6801DC.31.023)	Very good (6856DC.31.018)
Dentalree	Crosstech	Coarse 150µm	Excellent (368.031.023)	Very good (801.31.018)	Good (856.31.018)
SS White	Great White Z		Excellent (GWZ 379-023)	Very good (GWZ 801-018)	Good (GWZ 856-018)

Tested at applied testing facility, Ivoclar Vivadent Amherst



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