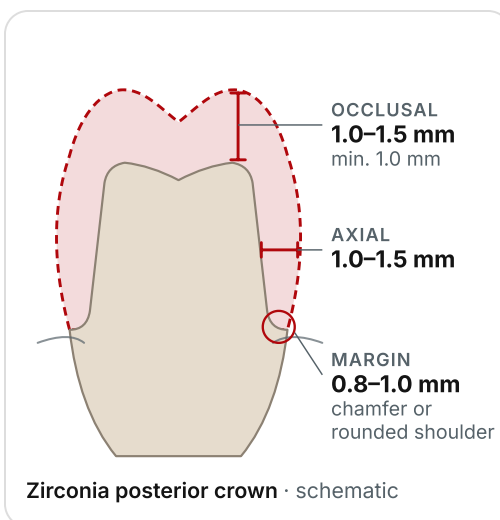
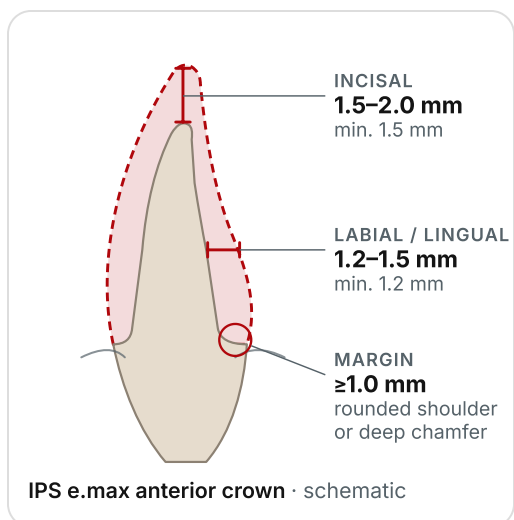


PREP GUIDE

Prep *Guide*

Visual preparation guidelines for zirconia (including Zerapure™), IPS e.max crowns, porcelain and e.max veneers, and inlays & onlays.

1. Zirconia Prep Guide
2. IPS e.max Prep Guide
3. Veneer Prep Guide
4. Inlay & Onlay Prep Guide

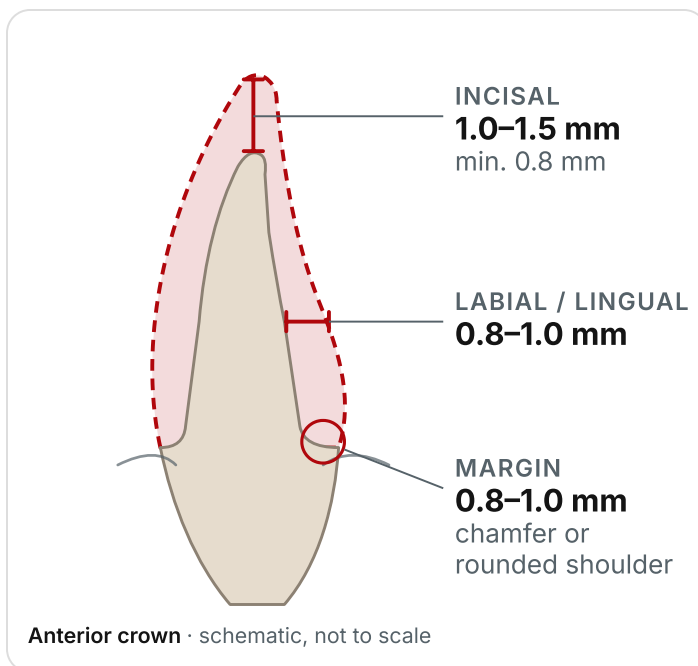
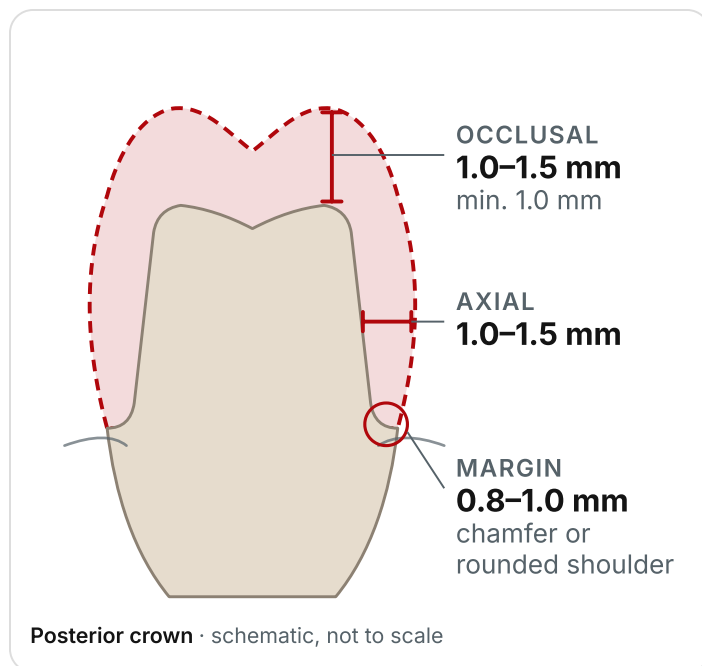


General guidelines based on published manufacturer recommendations; contact Advanced Dental Laboratory for case-specific questions.

Advanced Dental Laboratory · 274 Madison Ave, Suite 1701, New York, NY 10016
212.889.8812 · info@adlny.com · adlny.com

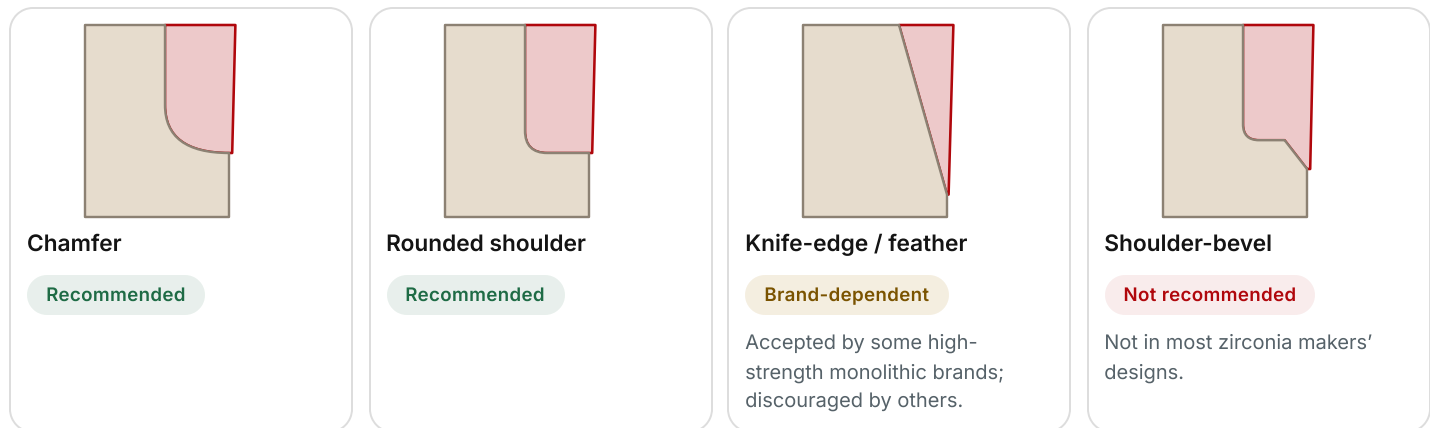
Zirconia Prep Guide

Monolithic and multilayer zirconia, including Zerapure™. Give the material its minimum thickness, keep every edge rounded and finish on a clear chamfer or rounded shoulder.

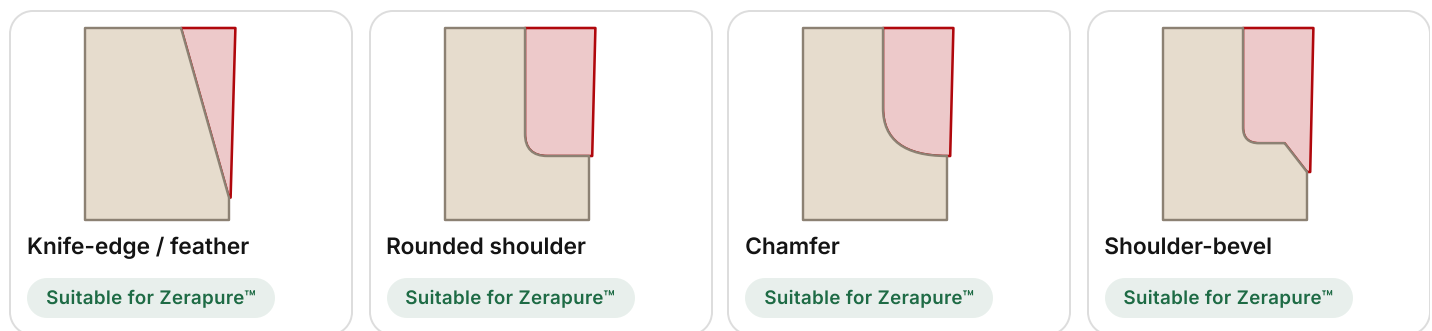


AREA	ANTERIOR	POSTERIOR
Incisal / occlusal reduction	1.0–1.5 mm (min. 0.8 mm)	1.0–1.5 mm (min. 1.0 mm)
Axial reduction	0.8–1.0 mm	1.0–1.5 mm
Margin	Chamfer or rounded shoulder, 0.8–1.0 mm	
Taper	About 4–8° total for conventional or self-adhesive cement	
Prep height	At least 4 mm for conventional cementation	
Edges	Rounded line angles; no sharp edges (edge radius over 0.4 mm)	
Layered zirconia	Add about 1–2 mm for the porcelain layer	
Bridges	No fixed span or connector numbers: design is case-specific. Send the scan for a design review before you prep.	

Margin design

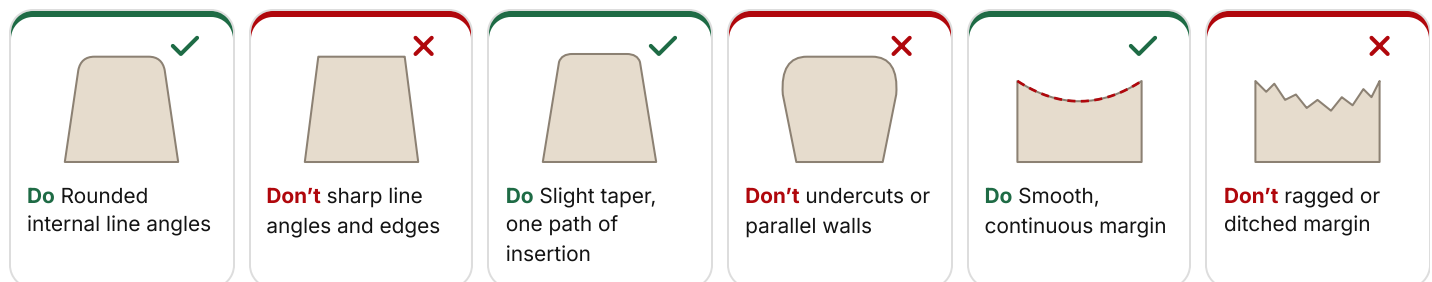


Zerapure™ margins



Zerapure™, our multilayered esthetic zirconia, suits knife-edge, shoulder, chamfer or shoulder-bevel preps; its strong cervical layer tolerates non-ideal preps. For reduction, follow the multilayer zirconia figures above.

Do & don't



Where sources differ

- Minimums depend on the disc. High-strength (3Y) monolithic brands allow as little as 0.5 mm occlusal where space is limited; translucent (4Y/5Y) and multilayer zirconia needs 0.8 mm anterior and 1.0 mm posterior or more.
- Feather or knife-edge margins are accepted by some high-strength monolithic brands, "with caution" by others, and discouraged for translucent zirconia.
- Taper: about 4–8° is the most common recommendation; one maker allows 5–15°.

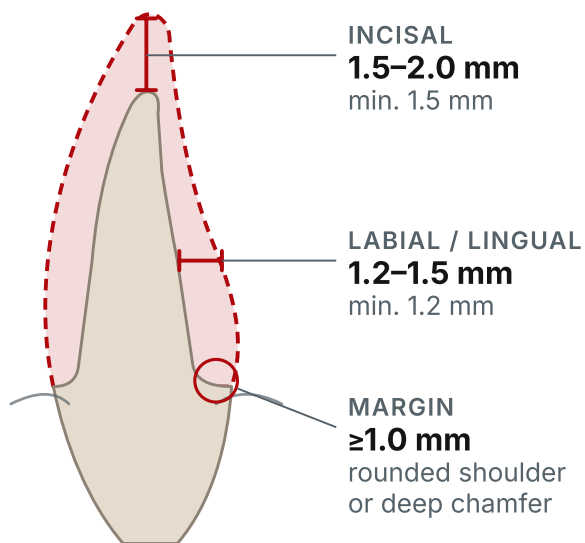
Based on: Ivoclar IPS e.max ZirCAD (Prime, MO/MT), Kuraray Noritake KATANA, 3M Lava Plus, Glidewell BruxZir.

General guidelines based on published manufacturer recommendations; contact Advanced Dental Laboratory for case-specific questions.

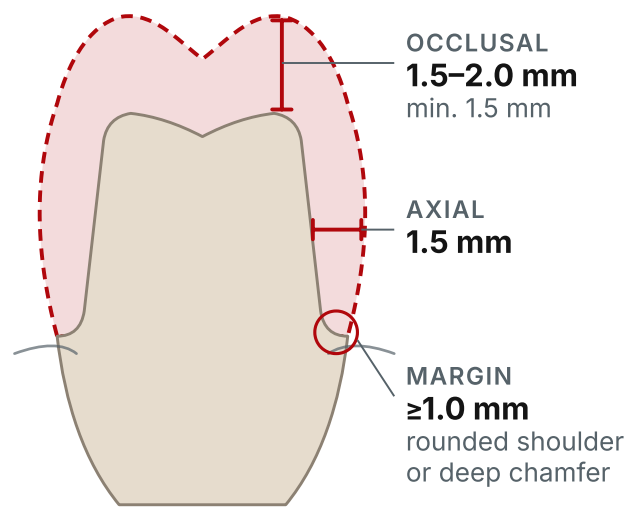
Questions before you prep? Send the scan for a design review: info@adlly.com · 212.889.8812 · adlly.com/send-a-case/

IPS e.max Prep Guide

IPS e.max (lithium disilicate) needs more room than zirconia. Reduce evenly, follow the anatomy, round every edge and finish on a rounded shoulder or deep chamfer.



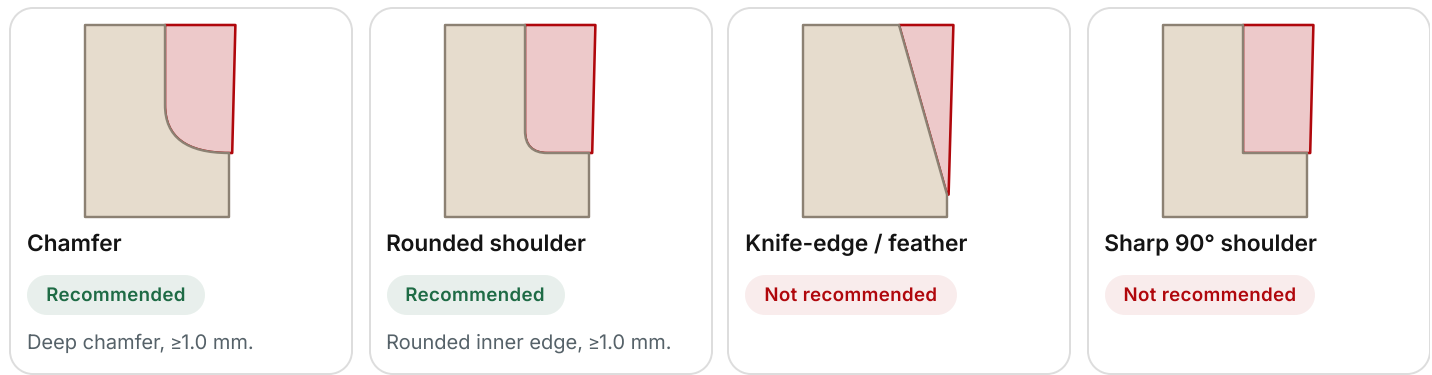
Anterior crown · schematic, not to scale



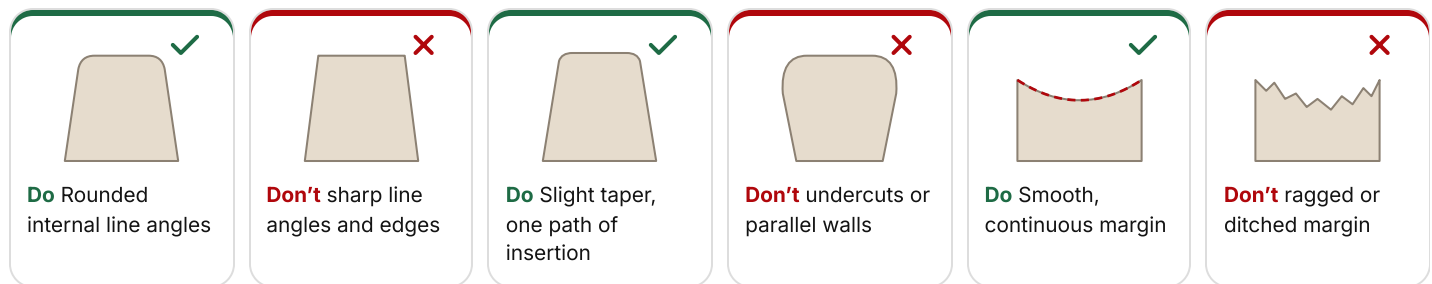
Posterior crown · schematic, not to scale

AREA	ANTERIOR	POSTERIOR
Incisal / occlusal reduction	1.5–2.0 mm (min. 1.5 mm)	1.5–2.0 mm (min. 1.5 mm)
Labial / lingual / axial	1.2–1.5 mm (min. 1.2 mm)	1.5 mm
Margin	Rounded shoulder or deep chamfer, at least 1.0 mm wide, angled 10–30°	
Taper	About 4–8° for conventional cementation	
Edges	No angles or sharp edges; rounded internal line angles	
Cementation	Minimally invasive crowns (1.0 mm) need adhesive cementation. Conventional or self-adhesive cement needs a retentive prep.	
Bridges	No fixed span or connector numbers: design is case-specific. Send the scan for a design review before you prep.	

Margin design



Do & don't



Where sources differ

- Ivoclar's documents differ slightly: an older chairside guide lists 1.0–1.5 mm facial reduction and a newer one 1.2 mm posterior axial. We show the larger figures.
- Feather-edge margins and bevels are not among Ivoclar's recommended designs for e.max crowns.

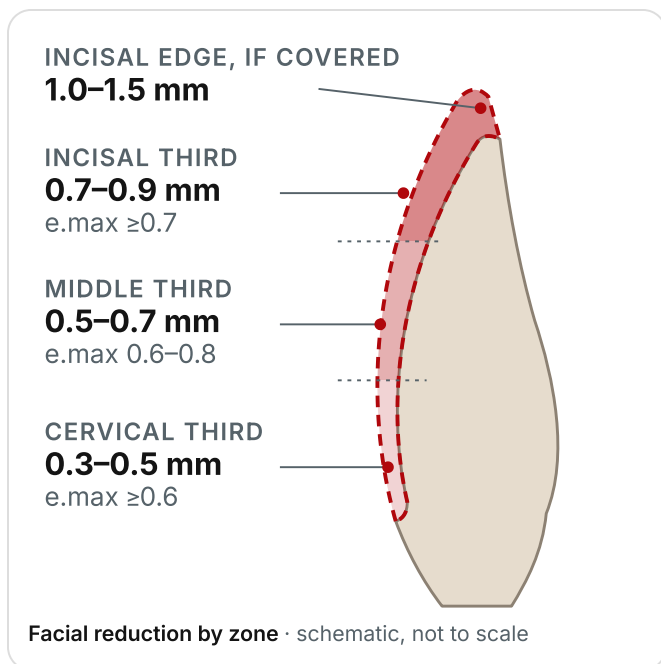
Based on: Ivoclar IPS e.max CAD instructions for use (labside and chairside), Ivoclar chairside preparation guides for IPS e.max.

General guidelines based on published manufacturer recommendations; contact Advanced Dental Laboratory for case-specific questions.

Questions before you prep? Send the scan for a design review: info@adlmy.com · 212.889.8812 · adlmy.com/send-a-case/

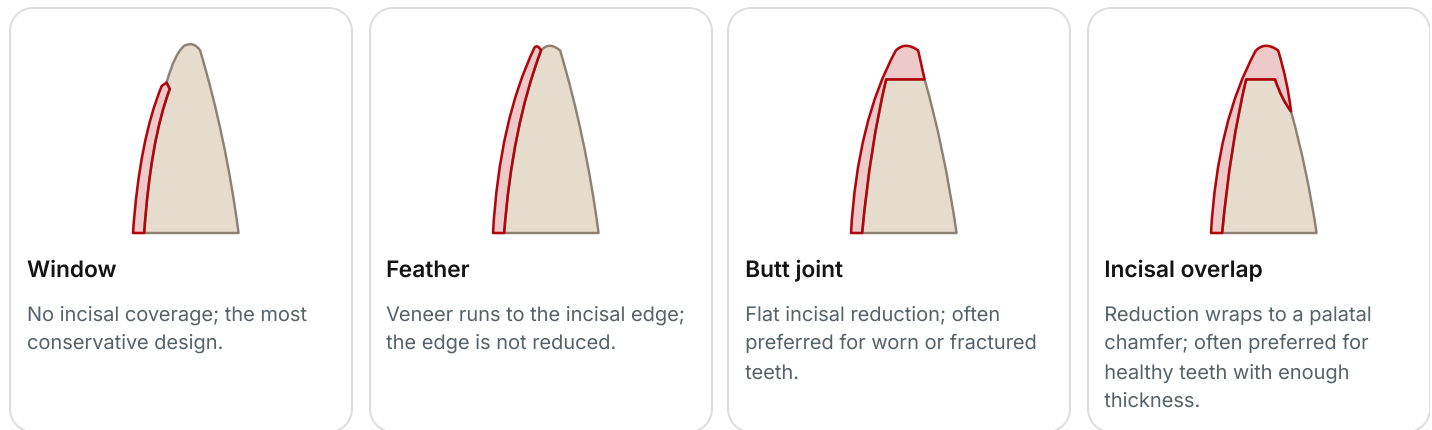
Veneer Prep Guide

Let the final result drive the reduction: prep through a wax-up or mock-up, stay in enamel wherever you can and reduce more toward the incisal edge, where enamel is thickest.

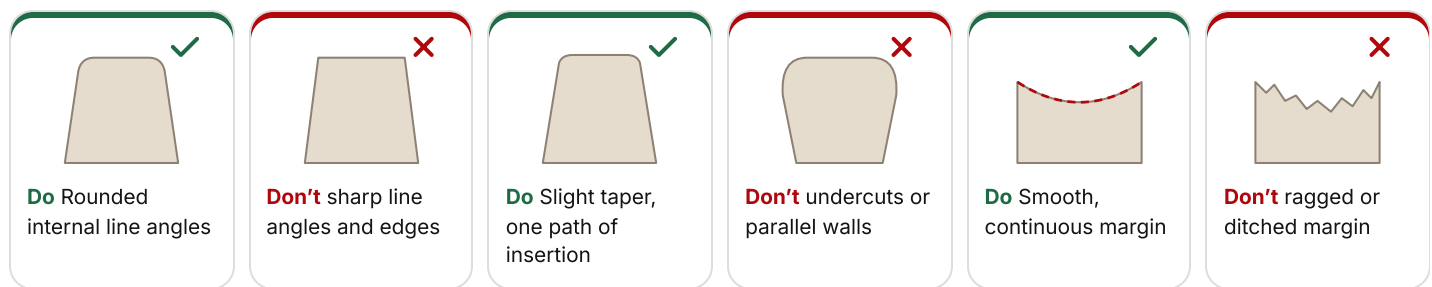


ZONE	FELDSPATHIC (MINIMAL)	IPS E.MAX PRESS
Cervical third	0.3–0.5 mm	At least 0.6 mm
Middle third	0.5–0.7 mm	0.6–0.8 mm
Incisal third	0.7–0.9 mm	At least 0.7 mm
Incisal edge, if covered	1.0–1.5 mm; about 1.5 mm for incisal effects	
Margin	Light chamfer, in enamel wherever possible	
Incisal margins	Away from static and dynamic contacts	
Start from	A diagnostic wax-up or mock-up; prep through it with depth cuts	

Incisal design options



Do & don't



Where sources differ

- Average labial enamel is only about 0.3–0.5 mm thick at the gingival third, which is why cervical reduction is the thinnest.
- Bigger shade changes need more room: one widely used protocol goes to 0.5 / 0.7 / 0.9 mm for one to two shades and 0.8 / 1.0 / 1.2 mm for two to three.
- Ivoclar lists 0.4 mm cervical and 0.5 mm incisal for its thin e.max veneers.
- Zone values come from clinical literature and Ivoclar's e.max minimums rather than a single manufacturer document.

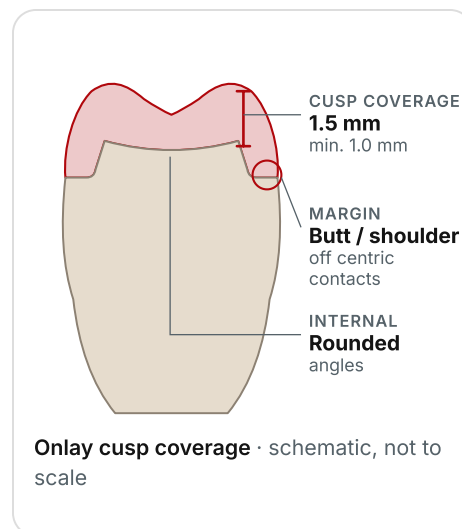
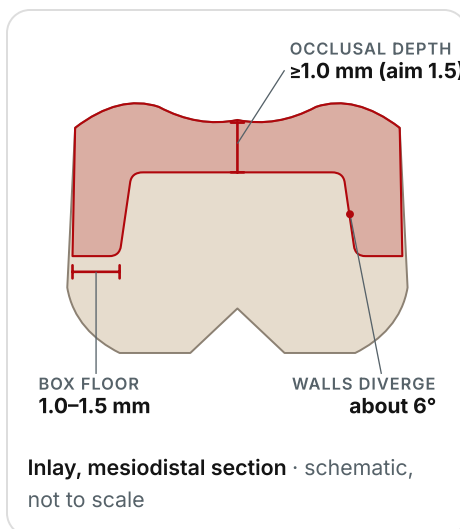
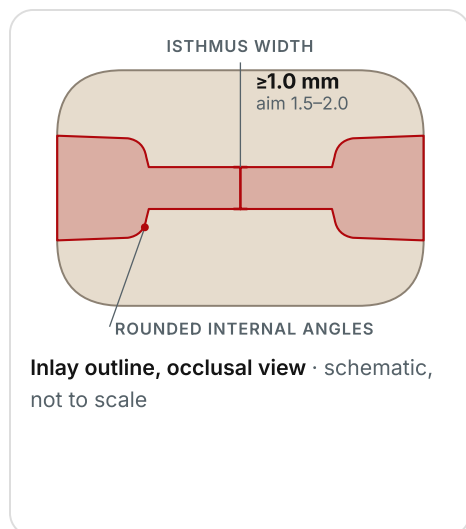
Based on: Ivoclar IPS e.max instructions for use and chairside guides; Winter (Inside Dentistry, 2013); Sisler (J Cosmetic Dent, AACD); Magne & Magne; reviews of veneer incisal designs.

General guidelines based on published manufacturer recommendations; contact Advanced Dental Laboratory for case-specific questions.

Questions before you prep? Send the scan for a design review: info@adlny.com · 212.889.8812 · adlny.com/send-a-case/

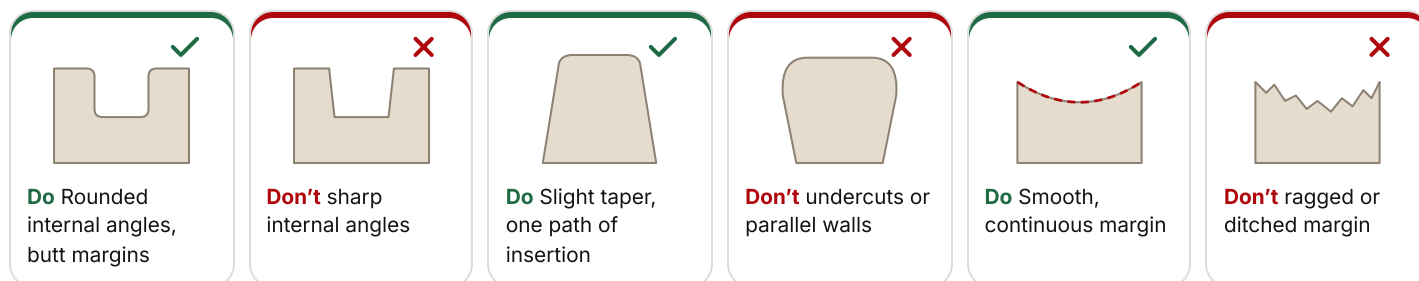
Inlay & Onlay Prep Guide

Values for IPS e.max all-ceramic inlays and onlays. Give the ceramic enough depth and width, flare the walls slightly and keep every internal angle rounded.



AREA	INLAY	ONLAY
Occlusal depth	At least 1.0 mm (aim 1.5 mm)	
Isthmus width	At least 1.0 mm (aim 1.5-2.0 mm)	—
Proximal box floor	1.0-1.5 mm wide	
Cusp coverage	—	1.5 mm (min. 1.0 mm)
Walls	Slightly divergent, about 6°; 100-120° between the proximal walls and the restoration's proximal surfaces	
Internal angles	Rounded	
Margins	Butt or shoulder; no slice-cuts or feather edges; keep margins off centric contacts	

Do & don't



Where sources differ

- Ivoclar's current e.max instructions give 1.0 mm minimum depth and isthmus; its older chairside guide recommends 1.5 mm depth and a 1.5–2.0 mm isthmus. Aim for the larger figures where the tooth allows.
- Cusp coverage: Ivoclar lists at least 1.0 mm in one document and 1.5 mm in another.
- These values are for IPS e.max. For our nano-zirconia reinforced resin option, ask us before you prep.

Based on: Ivoclar IPS e.max CAD instructions for use; Ivoclar chairside preparation guides for IPS e.max (2009, 2016).

General guidelines based on published manufacturer recommendations; contact Advanced Dental Laboratory for case-specific questions.

Questions before you prep? Send the scan for a design review: info@adlny.com · 212.889.8812 · adlny.com/send-a-case/