



AMANNGIRRBACH

STAINING TECHNIQUE

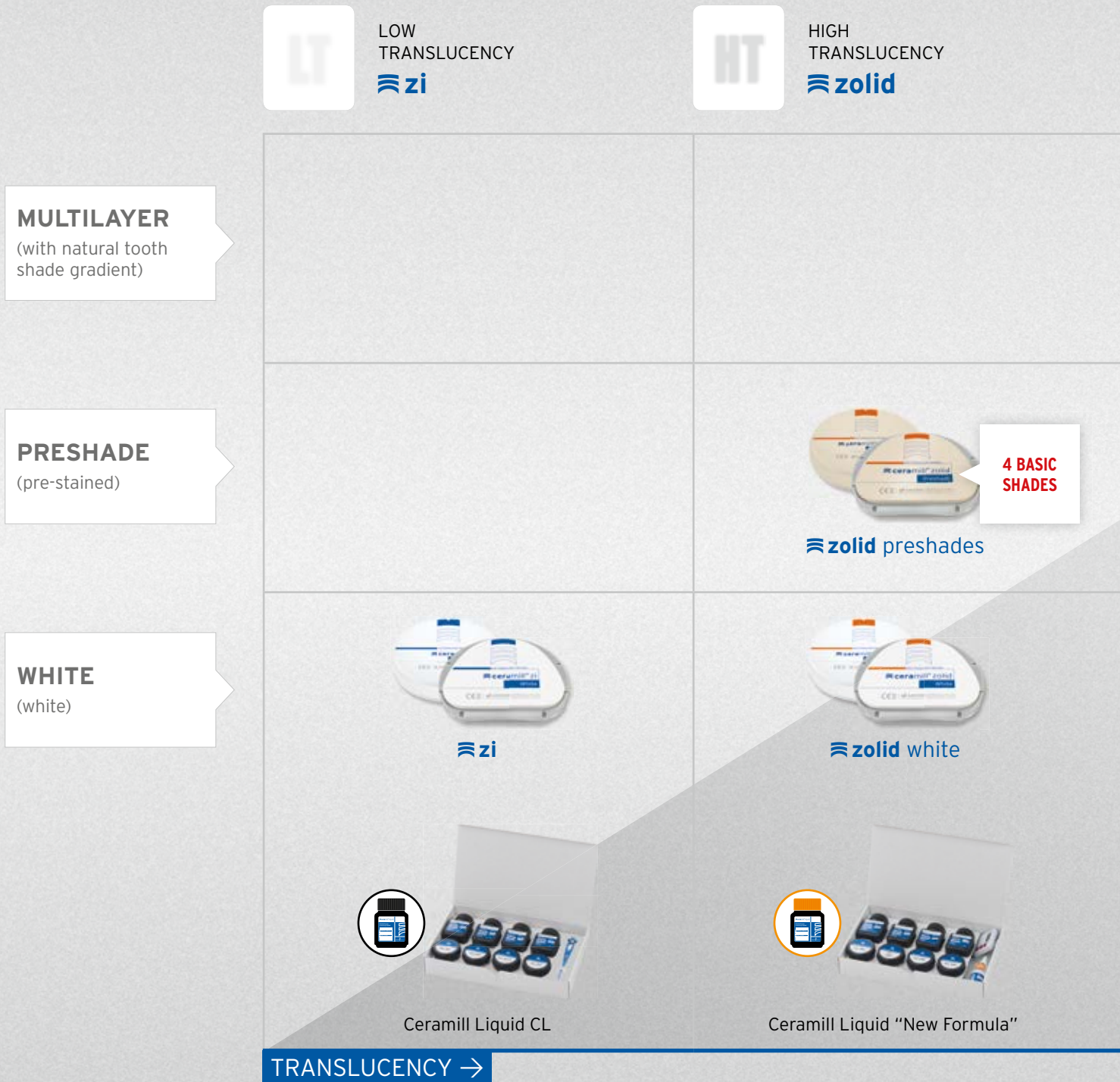
 **zolid**

/// DNA GENERATION



ZIRCONIA FOR ALL REQUIREMENTS

Zirconia is enjoying great popularity thanks to its impressive technical and optical properties. Its versatility and excellent biocompatibility make the high-performance ceramic the first choice for high-quality restorations with high aesthetic requirements. With the zirconia blanks bearing the Zolid brand name Amann Girrbach provides the correct material for every zirconia-based indication to fabricate restorations with long-term stability and natural aesthetics economically and efficiently.





HIGH
TRANSLUCENCY
zolid ht+



SUPER HIGH
TRANSLUCENCY
zolid fx



zolid fx multilayer



zolid ht+ preshades



zolid fx preshades



zolid ht+ white



zolid fx white



Ceramil Liquid "New Formula"






Ceramil Liquid FX

EFFICIENCY →

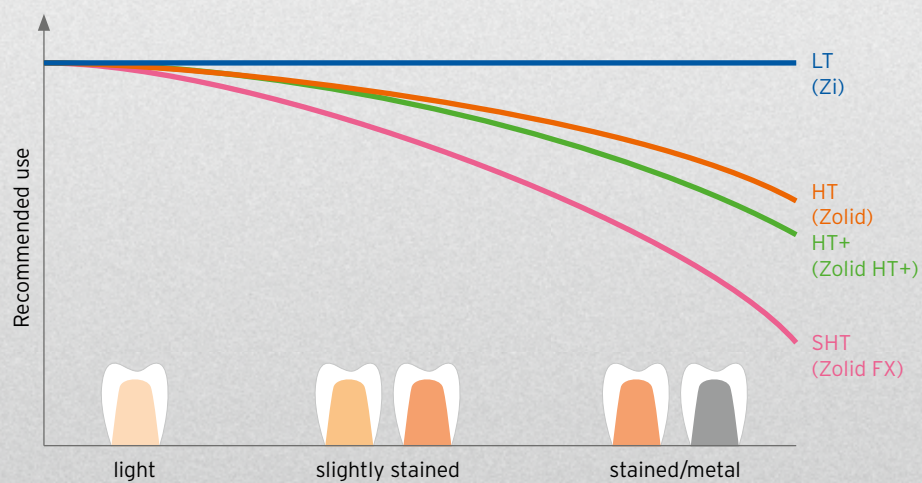
AESTHETIC MANAGEMENT AND PROCESSING

The optimum zirconia for an indication is based on very different factors. Aesthetic requirements, position of the restoration intraorally or the prepared tooth shade decisively influence the choice of material. The more accurately the prepared tooth shade and indication are matched the more predictable and aesthetically precise the result can be achieved.

Prepared tooth shade	Translucency	Product	Processing			
			Brush/immersion technique	Staining technique	Cut-back technique	Build-up technique
Light 	SHT	Zolid FX Multilayer		<input type="radio"/>	<input type="radio"/>	
		Zolid FX Preshades		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
		Zolid FX White	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Light-slightly stained 	HT	Zolid HT+ Preshades		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
		Zolid HT+ White	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
		Zolid Preshades		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
		Zolid White	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Light-stained/metal 	LT	ZI White	<input type="radio"/>			<input type="radio"/>

Indication							
Veneer	Inlay	Onlay	Anterior and posterior crown	3-unit bridge (incl. molar region)	Multi-unit bridge	Hybrid abutment	Hybrid abutment crown
○	○	○	○	○			○
○	○	○	○	○			○
○	○	○	○	○			○
			○	○	○	○	○
			○	○	○	○	○
			○	○	○	○	○
			○	○	○	○	○
			○	○	○	○	○

RECOMMENDED USE OF AMANN GIRRBACH ZIRCONIUM OXIDE IN RELATION TO PREPARED TOOTH SHADE AND DEGREE OF TRANSLUCENCY



ACCURATE SHADE RESULTS. FASTETIX AND AESTHETIX - STAINING WITH LIQUIDS MADE EASY

Amann Girrbach provides tailored solutions for customising zirconia restorations before the sintering process with a wide range of colouring solutions and corresponding processing techniques. A wide range of A-D liquids, shade modifiers and aids such as Ceramill Liquid Eye and Ceramill Dimmer ideally complement the portfolio.

The "Fasthetix" and "Aesthetix" staining concepts describe two different approaches for aesthetic, economic customisation of Zolid DNA blanks.

FASTHETIX - QUICK-STAINING TECHNIQUE

Efficiency and economy are gaining ever-increasing importance today. The "Fasthetix concept" allows preparing aesthetic restorations with a colour gradient in just a few seconds using only a single "Ceramill Liquid new formula" liquid set. The uncomplicated Fasthetix method provides the perfect introduction to the world of Amann Girrbach zirconium oxides.



- _Highly aesthetic, natural appearance in less than 20 seconds**
- _A liquid set for ZI White, Zolid White, Zolid HT+ White and Zolid FX White**
- _High efficiency with guaranteed shade stability**

AESTHETIX - HIGHLY AESTHETIC CUSTOMISATION

In addition to the dentine liquids specifically developed for each translucency stage and special colour shades for customisation, the "Aesthetix concept" offers mature immersion and brush techniques. Diverse yet clearly designed, "Aesthetix" enables every aesthetic requirement to be met. The result is highly aesthetic restorations that are virtually indistinguishable from natural teeth.




- _Premium aesthetic and highest degree of customisation**
- _Material specific liquids for every type of zirconia and perfect shade match**
- _Shade modifier liquids for even greater customisation**



 **zi** white

 **zolid** white

 **zolid** ht+ white

 **zolid** fx white

QUICK-STAINING TECHNIQUE

FASTHETIX - QUICK-STAINING TECHNIQUE USING CERAMILL LIQUIDS

ZI White, Zolid White, Zolid HT+ White, Zolid FX White



FASTHETIX

FASTHETIX BASIC IMMERSION TECHNIQUE

Fill Ceramill Dimmer Liquid in a container. The lightened area can be used as a guide to the filling level.



Immerse the restoration in the Ceramill Dimmer Liquid for approx. 5 seconds (occlusal surface should face downwards). Then dab off the excess liquid.

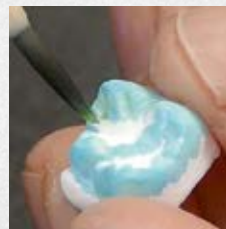


FASTHETIX ADVANCED COMBINATION OF BRUSH AND IMMERSION TECHNIQUE

Mix Ceramill Dimmer Liquid with a few drops of Ceramill Liquid Eye



Apply Ceramill Dimmer Liquid in the occlusal region to customise the lightness area



Immerse the restoration for 10-60 sec. in the required Ceramill Liquid A-D (immersion times see page 9). Then dab off the excess liquid

SINTERING (see page 14)

FINISHING (see page 15)

QUICK-STAINING TECHNIQUE

FASTHETIX - SHADE COMBINATION CHART INCLUDING IMMERSION TIMES (BASIC, ADVANCED)

ZI White, Zolid White, Zolid HT+ White, Zolid FX White



ZI White, Zolid White

VITA tooth shade	Ceramill Liquids "new formula"	Immersion time
A1	A1	10-20 sec.
A2	A2	10-20 sec.
A3	A3	10-20 sec.
A3.5	A3.5	10-20 sec.
A4	A4	10-20 sec.*
B1	B1	10-20 sec.
B2	B2	10-20 sec.
B3	B3	10-20 sec.
B4	B4	10-20 sec.*
C1	C1	10-20 sec.
C2	C2	10-20 sec.
C3	C3	10-20 sec.
C4	C4	10-20 sec.*
D2	D2	10-20 sec.
D3	D3	10-20 sec.
D4	D4	10-20 sec.*

Zolid FX White, Zolid HT+ White

VITA tooth shade	Ceramill Liquids "new formula"	Immersion time*
A1	A2	10-20 sec.
A2	A3	10-20 sec.
A3	A3.5	10-20 sec.
A3.5	A4	10-20 sec.
A4	A4	45-60 sec.
B1	B2	10-20 sec.
B2	B3	10-20 sec.
B3	B4	10-20 sec.
B4	B4	45-60 sec.
C1	C2	10-20 sec.
C2	C3	10-20 sec.
C3	C4	10-20 sec.
C4	C4	45-60 sec.
D2	D3	10-20 sec.
D3	D4	10-20 sec.
D4	D4	45-60 sec.

* Double the immersion time for Zolid HT+ White






 **zi** white

 **zolid** white

 **zolid** ht+ white

 **zolid** fx white

HIGHLY AESTHETIC CUSTOMISATION

AESTHETIX - HIGHLY AESTHETIC CUSTOMISATION USING CERAMILL LIQUIDS

ZI White, Zolid White, Zolid HT+ White, Zolid FX White



AESTHETIX

AESTHETIX BASIC
IMMERSION TECHNIQUE

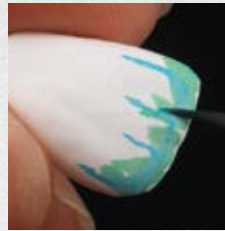
Immerse the restoration in the corresponding Ceramill Liquid. Mixing ratios and immersions times see page 13



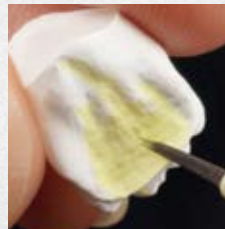
With solid pontics it is recommended to precondition the pontic with dentine shades to avoid differences in shade.

AESTHETIX ADVANCED
BRUSH TECHNIQUE

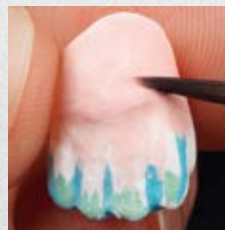
Incisal regions with shade modifiers, e.g. grey/blue for increased depth effect



Fissures and interdental regions in, e.g. brown/orange for increased chroma



Body regions in A-D Liquids












SINTERING (see page 14)

FINISHING (see page 15)





HIGHLY AESTHETIC CUSTOMISATION

AESTHETIX BASIC IMMERSION TECHNIQUE - SHADE COMBINATION CHARTS




MATERIAL		PROCESSING			
Zirconium oxide	Ceramill Liquid	Dentine shade	Framework thickness	Recommended mixing ratio	Immersion time
Zolid FX White 	Ceramill Liquid FX 	A-D Liquids	Independent of wall thickness	90 % A-D Liquids FX + 10 % Dimmer	10 sec.
Zolid White 	Ceramill Liquid "new formula" 	A-D Liquids	Independent of wall thickness	75 % A-D Liquids "new formula" + 25 % Dimmer	10 sec.
Zolid HT+ White 	Ceramill Liquid "new formula" 	A-D Liquids	Independent of wall thickness	100 % A-D Liquids "new formula"	10 sec.*
ZI White 	Ceramill Liquid "new formula" 	A-D Liquids	Independent of wall thickness	100 % A-D Liquids "new formula"	10 sec.
	Ceramill Liquid CL 1-4 	CL1-CL4 Liquids		See instructions for use	See instructions for use

* Doubling the immersion time is recommended for dark shades (A4, B4, C4, D4).

AESTHETIX ADVANCED - SHADE COMBINATION CHARTS

MATERIAL		PROCESSING			
Zirconium oxide	Ceramill Liquid	Shade modifier and dentine shade	Framework thickness	Recommended mixing ratio	Number of brush applications
Zolid FX White 	Ceramill Liquid FX 	Orange	Independent of wall thickness	20 % orange + 80 % Dimmer	Individual (e.g. 1-2x)
		Grey		50 % grey + 50 % Dimmer	
		Violet		100 % violet	
		Blue		100 % blue	
		A-D Liquids	0.6 - 0.8 mm	100 % A-D Liquids FX	3x inside + 3x outside*
	1.1 - 1.2 mm	5x inside + 5x outside*			

To be observed for Zolid HT+:
Increase the number of brush applications for A-D liquids by 3 or double respectively.

MATERIAL		PROCESSING			
Zirconium oxide	Ceramill Liquid	Shade modifier and dentine shade	Framework thickness	Recommended mixing ratio	Number of brush applications
Zolid White 	Ceramill Liquid "new formula" 	Orange	Independent of wall thickness	20 % orange + 80 % Dimmer	Individual (e.g. 1-2x)
		Grey		50 % grey + 50 % Dimmer	
		Violet		100 % violet	
Zolid HT+ White 		A-D Liquids	0.6 - 0.8 mm	100 % A-D Liquids new formula	3x inside + 3x outside*
			1.1 - 1.2 mm		5x inside + 5x outside*

After brush application of shade modifier and dentine shade, it is recommend to re-immersion the entire restoration in a Dimmer/dentine mixture to achieve a homogeneous shade gradient from cervical to incisal. The following concentration can be selected as a guideline: shade homogenising: 40%

Zolid FX: 40 % A-D Liquid FX + 60 % Dimmer Liquid

Zolid/Zolid HT+: 30 % A-D Liquid „new formula“ + 70 % Dimmer Liquid

* If crowns are to be immersed after brush application, apply 1 brush cycle fewer

SINTERING

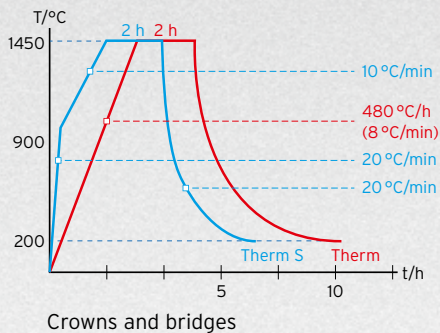
SINTERING OF ZOLID DNA RESTORATIONS

Sintering of zirconia is one of the most important steps in the fabrication of dental restorations. The white body condenses under the influence of high temperatures and the blank achieves its final mechanical (strength) and optical (translucency) properties. The standard, material-protecting sintering temperature of 1450 °C ensures an efficient process. This allows ZI, Zolid, Zolid HT+ or Zolid FX to be sintered together in one furnace.

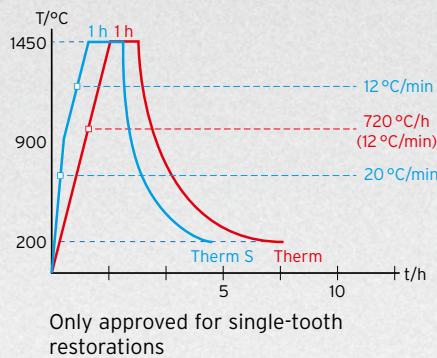
Optimum results are achieved using Ceramill Therm and Thermo S high-temperature furnaces from Amann Girrbach. These are fully matched to the Zolid DNA portfolio and thus achieve the best possible material properties.

SINTER PROGRAMME

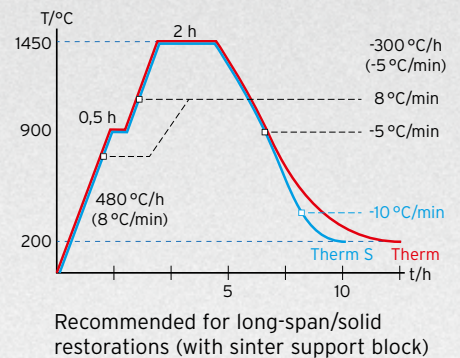
SINTER PROGRAMME 1 STANDARD



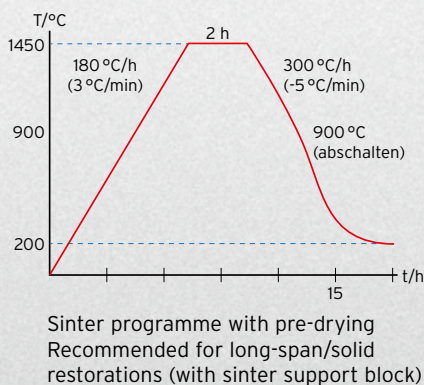
SINTER PROGRAMME 2 SHORT CYCLE



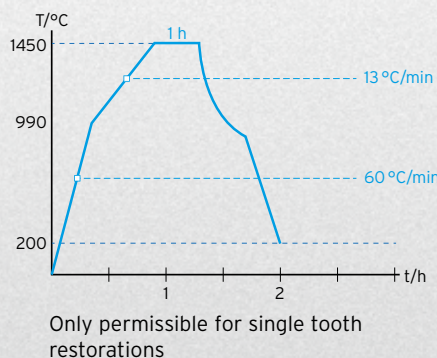
SINTER PROGRAMME 3 WITH SLOW COOLING CYCLE



SINTER PROGRAMME 4 WITH PRE-DRYING



SINTER PROGRAMME 5 SPEED SINGLE UNITS (THERM S)



SPEED SINTER CYCLE 2 H




Ceramill Therm


Ceramill Therm S





STAINING
TECHNIQUE

 **zolid** ht+ preshade

 **zolid** fx preshade

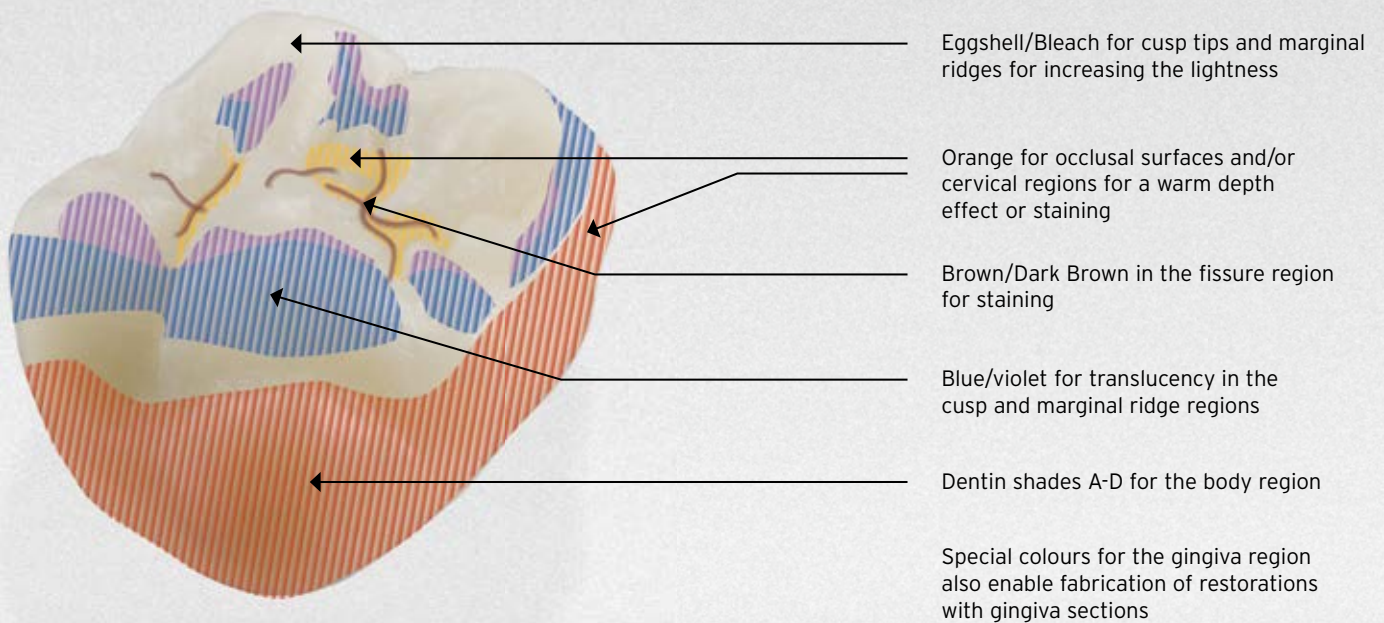
 **zolid** preshade

FINALISING WITH STAINS

FINAL CUSTOMIZATION USING STAINS AND GLAZE PORCELAINS.

The restorations from Zolid DNA blanks can be finalised aesthetically after sintering with the stains and glazing materials of the Ceramill Stain & Glaze kit. Accentuating highlights is sufficient for restorations of white blanks or work made from Zolid HT+ Preshades or Zolid FX Multilayer in the 16 VITA shades infiltrated with liquids. Pre-stained, monochrome restorations in the basic shades made of Zolid Preshades or Zolid FX Preshades are finalised after sintering with the Ceramill Stain & Glaze to achieve the final tooth shade.

EXEMPLARY STAIN SCHEMA WITH CERAMILL STAINS:



Ceramill Stain & Glaze is a set comprising stains and glaze porcelain for the final aesthetic appearance

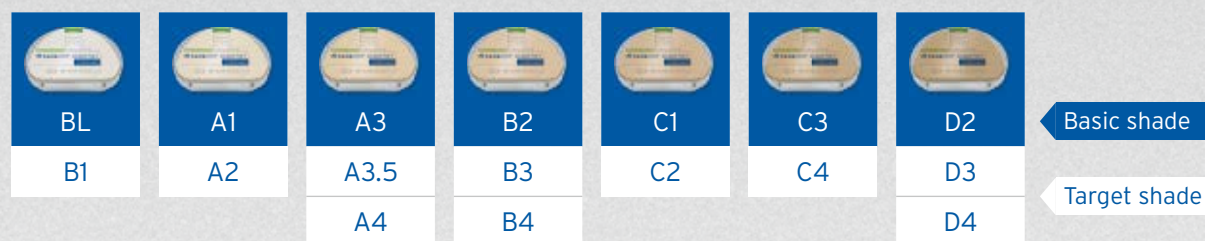


Zolid DNA Preshades: Zolid Preshades, Zolid HT+ Preshades and Zolid FX Preshades

LESS IS MORE! MAXIMUM FLEXIBILITY AND SHADE VARIETY DUE TO INTELLIGENT STAINING CONCEPT

The reason being, that the range of 16 Zolid HT+ Preshade blanks allows achieving all VITA tooth shades with only 7 blanks of base shades (BL, A1, A3, B2, C1, C3, D2) with the Ceramill Stain & Glaze stains by applying a sophisticated stain technique. This results in customised solutions which are both economical and offer unlimited flexibility depending on requirements and needs.

16 FROM 7 - MIXING TABLE FOR ACHIEVING THE 16 VITA SHADES



TARGET SHADE	BASIS	1. STAIN FIRING Apply dentin shade for the body region	2. STAIN FIRING Apply dentin shade for the body region	Apply effect stain for the incisal region
Bleach	Bleach	—	—	Violet + Blue
A1	A1	—	—	Violet + Grey
A2	A1	2/3 Dentin A + 1/3 Yellow	—	Violet + Grey
A3	A3	—	—	Violet + Grey
A3.5	A3	1/2 Dentin A + 1/2 Yellow	—	Violet + Grey
A4	A3	2/3 Dentin A + 1/3 Grey	2/3 Dentin A + 1/3 Grey ¹	Grey
B1	Bleach	1/2 Violet + 1/2 Yellow	1/2 Violet + 1/2 Yellow ¹	Violet + Grey
B2	B2	—	—	Grey
B3	B2	2/3 Orange + 1/3 Grey	2/3 Orange + 1/3 Grey ¹	Violet + Grey
B4	B2	1/3 Dentin C + 1/3 Grey + 1/3 Yellow	1/3 Dentin C + 1/3 Grey + 1/3 Yellow	Grey
C1	C1	—	—	Blue + Grey
C2	C1	1/4 Dentin C + 1/4 Yellow + 1/2 Blue	1/2 Dentin C + 1/2 Yellow	Blue + Grey
C3	C3	—	—	Blue + Grey
C4	C3	1/2 Dentin C + 1/2 Grey	1/2 Dentin C + 1/2 Grey ¹	Blue + Grey
D2	D2	—	—	Grey + Eggshell
D3	D2	1/2 Dentin D + 1/2 Grey	Dentin D cervical region ¹	Grey + Eggshell ²
D4	D2	2/3 Yellow + 1/3 Grey	2/3 Yellow + 1/3 Grey	Blue + Grey

¹ Depending on the frame thickness, a second stain firing is recommended

² Apply incisal mixture over half the crown

Tip 1: Prior to applying the stain, wet the surface very thinly with glazing liquid to ensure an even application of the stain.

Tip 2: The intensity of the results can be controlled by mixing the stains with the glazing materials.

FINALISING WITH STAINS

STAIN ASSIGNMENT TABLES FOR ZOLID FX PRESHADES AND ZOLID PRESHADES WITH CERAMILL STAIN & GLAZE

The stain assignment tables show which VITA tooth shades can be achieved with which blanks using the Ceramill stains.



Zolid FX Preshade:

Blank shade	Tooth shade															
	Bleach	A1	A2	A3	A3.5	B1	B2	B3	B4	C1	C2	C3	C4	D1	D2	D3
Zolid FX Preshade Bleach	●	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Zolid FX Preshade A Light	-	●	●	○	-	-	-	-	-	-	-	-	-	-	-	-
Zolid FX Preshade A medium	-	-	●	●	○	-	-	-	-	-	-	-	-	-	-	-
Zolid FX Preshade B Light	-	-	-	-	-	●	●	○	-	-	-	-	-	-	-	-
Zolid FX Preshade C Light	-	-	-	-	-	-	-	-	-	●	●	○	-	-	-	-
Zolid FX Preshade D Light	-	-	-	-	-	-	-	-	-	-	-	-	-	●	●	-



Zolid Preshade:

Blank shade	Tooth shade								
	Bleach	A1	A2	A3	A3.5	B1	B2	B3	
Zolid Preshade 0 (Preshade Bleach)	●	-	-	-	-	-	-	-	-
Zolid Preshade 2 (A light)	-	●	●	○	-	-	-	-	-
Zolid Preshade 3 (A medium)	-	-	●	●	○	-	-	○	-
Zolid Preshade 1 (B light)	-	○	○	-	-	●	●	-	-

● Ideal for this shade ○ Shade can be achieved - unsuitable for this shade







AMANNGIRRBACH

AUSTRIA (HEADQUARTERS)

Amann Girrbach AG
Koblach, Austria
Fon +43 5523 62333-105
austria@amanngirrbach.com

GERMANY

Amann Girrbach GmbH
Pforzheim, Germany
Fon +49 7231 957-100
germany@amanngirrbach.com

NORTH AMERICA

Amann Girrbach North America, LP
Charlotte, NC, U.S.A.
Fon +1 704 837 1404
america@amanngirrbach.com

BRASIL

Amann Girrbach Brasil LTDA
Curitiba, Brasil
Fon +55 41 3287 0897
brasil@amanngirrbach.com

ASIA

Amann Girrbach Asia PTE LTD.
Singapore, Asia
Fon +65 6592 5190
singapore@amanngirrbach.com

CHINA

Amann Girrbach China Co., Ltd.
Beijing, China
Fon +86 10 8886 6064
china@amanngirrbach.com