

SOLIDEX[®]

THE ADVANTAGES OF A LIGHT CURING COMPOSITE WITH THE AESTHETICS OF PORCELAIN



**The aesthetics of porcelain · high resistance
opalescence · all crown & bridge restorations
compatible · homogeneous surface density · s**



We are committed to keep high quality standards and to do everything necessary to meet this goal within the company. At the same time, our company's philosophy is:

"Research is our best Product".

Our company's slogan:

"SHOFU Quality with every turn!"

means permanent conformity and improvement of our customer related activities.

Wolfgang van Hall
Managing Director

Resistance to abrasion · easy handling · natural
transparencies · extended shade system · biocom-
patible · short curing times · logical shade system

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THE ADVANTAGES OF A LIGHT CURING COMPOSITE WITH THE AESTHETICS OF PORCELAIN

Restoring teeth to enable them to function correctly by fitting natural looking restorations is an important health issue.

To ensure that the aesthetics of the restorations meet the expectations of patients, dentists and dental technicians, it is important to use materials manufactured using the latest composite technology and which have performed satisfactorily in clinical practice.

SOLIDEX is a light curing, ceramic-filled micro-hybrid composite system, which meets these physical and aesthetic requirements.

The specially designed filler particles enable this light curing crown and bridge material to transmit light like porcelain.

Therefore, the special composition and natural shades of SOLIDEX provide for outstanding physical properties and combine exceptionally high resistance to abrasion with well-balanced elasticity.

With these advantages, SOLIDEX is excellent for fabricating crowns and bridges, implant-supported restorations, inlays/onlays and fixed/removable restorations.

Virtually unlimited aesthetics can be achieved with the SOLIDEX system as it includes logically matched opaque pastes, cervical and body materials, various stains, versatile opalescent enamel materials and effect modifiers which are usually supplied with porcelain systems only.

This enables SOLIDEX restorations to appear natural in all lighting conditions.

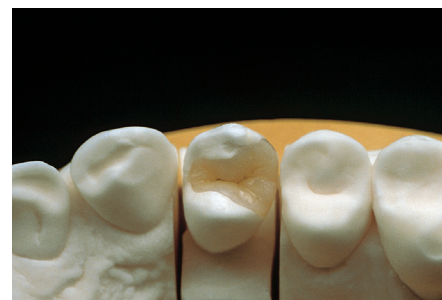
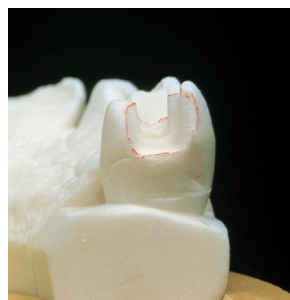
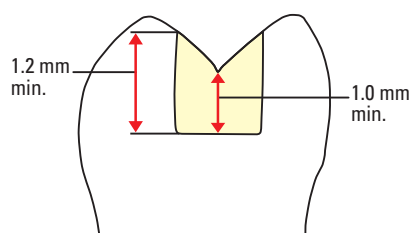
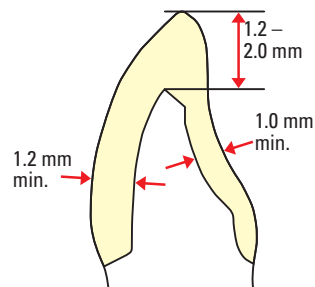
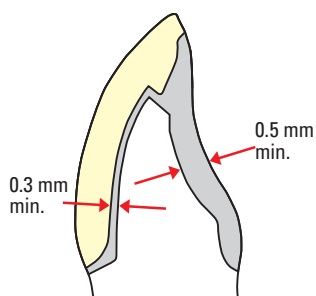
A SINGLE SYSTEM FOR ALL CROWN AND BRIDGE RESTORATIONS

SOLIDEX is a light curing, ceramic-filled, micro-hybrid composite with organic particles in its structure which are impregnated with and enveloped in silanised microfillers. This specific composition is extremely homogeneous and exhibits exceptionally high abrasion-resistance, together with elasticity. With these advantages, the SOLIDEX system can be used for a virtually unlimited range of restorations.

- Crowns and bridges
- Telescopic crowns
- Precision attachment work
- Implant-supported restorations
- Long-term temporary restorations
- Occlusal facings
- Inlays and onlays
- Laminate veneers
- Modifying conventional acrylic teeth

5

To make maximum use of these advantages for fabricating aesthetic restorations, the minimum thickness should be taken into account while preparing the tooth.

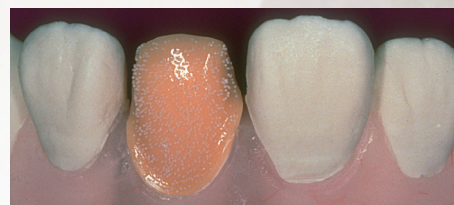


A precise preparation results in restorations which blend harmoniously with their surroundings and cannot be distinguished from natural teeth.

BOND TO METAL FRAMEWORKS...

The Retention BEADS SET and BEADS PEN produce optimum retainers and the copings remain thin. These white beads have a diameter of only 150 μm , can be placed accurately on the wax pattern and form an effective retentive surface with a thin layer of bead adhesive.

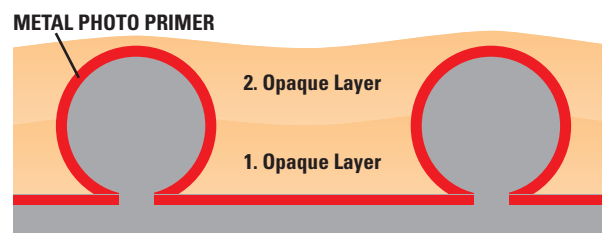
RETENTION BEADS SET



The white retention beads can be seen clearly despite their diameter of only 150 μm .

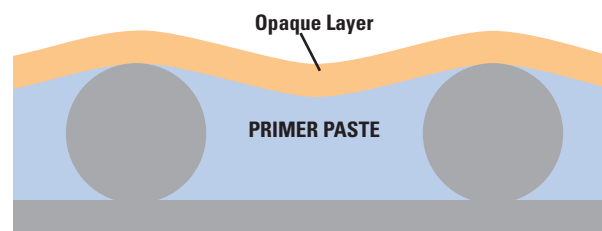
The SOLIDEX system provides two alternative bonding materials, which are applied to the conditioned metal framework to create a reliable and lasting bond.

METAL PHOTO PRIMER



The adhesive monomer in METAL PHOTO PRIMER matches the monomer in the opaque and forms an excellent bond between the alloy and composite during the first light-curing cycle.

PRIMER PASTE



PRIMER PASTE is a bonding agent and first opaque coat all in one. This milky paste has a lower viscosity than SOLIDEX opaque paste and also uses adhesive monomers to bond the opaque and metal. This technology achieves excellent bond strength values despite the shorter light-curing times corresponding to those of Metal Photo Primer.

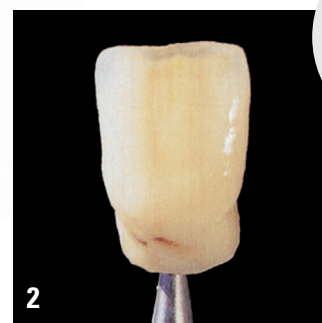
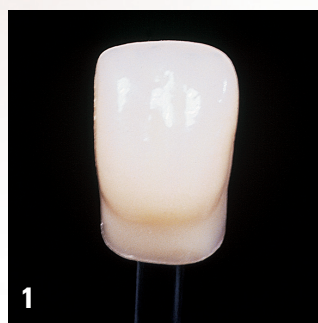
... COMPOSITE AND ACRYLIC TEETH

SOLIBOND

An additional method for creating a dependable bond between the metal and composite involves the use of silane coupling systems, such as Rocatec, Espe, or the Silicoater, Heraeus-Kulzer, with SOLIDEX composite.

The other manufacturer's silane coupling agent is simply replaced with SOLIBOND.

The same silane coupling agent is also recommended for use when adjusting or repairing existing composite restorations and customising conventional acrylic teeth.



- 1 A conventional acrylic tooth often appears unnatural and fails to match the patient's remaining dentition.
- 2 SOLIBOND bonds securely to create custom restorations.

STAIN LIQUID

This light curing liquid is for adjusting the viscosity of SOLIDEX paste stains. Apart from this, STAIN LIQUID is also used for recreating the air-inhibition layer on trimmed composite surfaces such as after adjusting the contours of the dentine area or applying SOLIBOND when customising acrylic teeth.



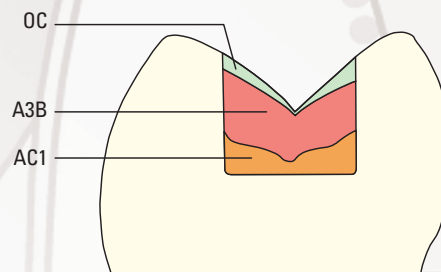
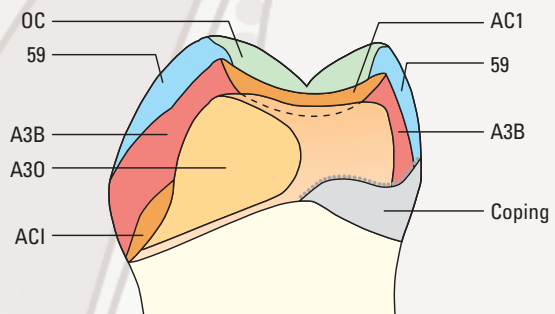
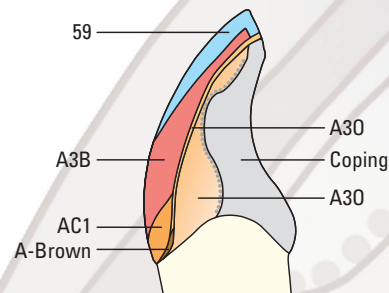
Applying a thin coat of STAIN LIQUID recreates the air-inhibition layer quickly and without having to light-cure again.

REFRACTS LIGHT EXACTLY LIKE PORCELAIN TO CREATE A NATURAL APPEARANCE USING AN EASY LAYERING TECHNIQUE

The special composition of SOLIDEX micro-hybrid composite enables the individual materials to transmit light in an identical manner to porcelain, so that a simple layering technique is enough to produce a natural looking restoration.

The natural aesthetics are further enhanced by the logically matched opaque, cervical and dentine materials which enable the restorations to blend in, even if the layers differ in thickness.

No matter whether crowns and bridges, implant-supported restorations, inlays, onlays or composite jacket crowns are being fabricated, SOLIDEX materials harmonise to provide systematic working methods and virtually unlimited opportunities for creating aesthetic restorations.

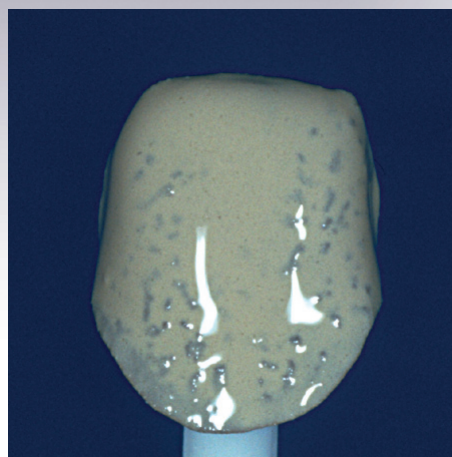


HANDLES EASILY AND QUICKLY

Handles easily and quickly, a thin coat masks and bonds securely to any alloy

The new SOLIDEX FLOW OPAQUE generation includes a special light curing filler which provides for exceptional viscosity and complete curing, even between the retainers. As they are thixotropic, these opaques are straightforward and fast to handle. These characteristics enable the user to mask a metal framework with a uniformly thin layer.

This provides an excellent basis for matching the shades to the Vita* Classic and SHOFU NCC® systems. Apart from these basic shades other effect modifiers are also available. SOLIDEX FLOW OPAQUES are available for most applications ranging from masking retainers on fixed/removable restorations with PINK OPAQUE (PO) to adjusting the brightness value as required with VALUE PLUS (VPO) or VALUE REDUCE OPAQUE (VRO).



SOLIDEX FLOW OPAQUE flows easily into undercuts beneath retention beads.



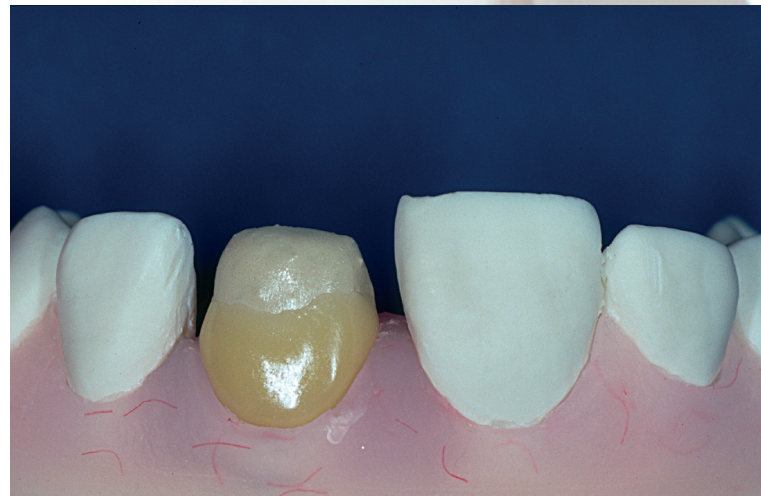
Flows easily!
After applying the opaque, the framework can be stained as required.

* VITA is a registered trademark of VITA Zahnfabrik, Bad Säckingen, Germany.

STEP-BY-STEP GUIDE TO CREATING ...

SOLIDEX CERVICAL

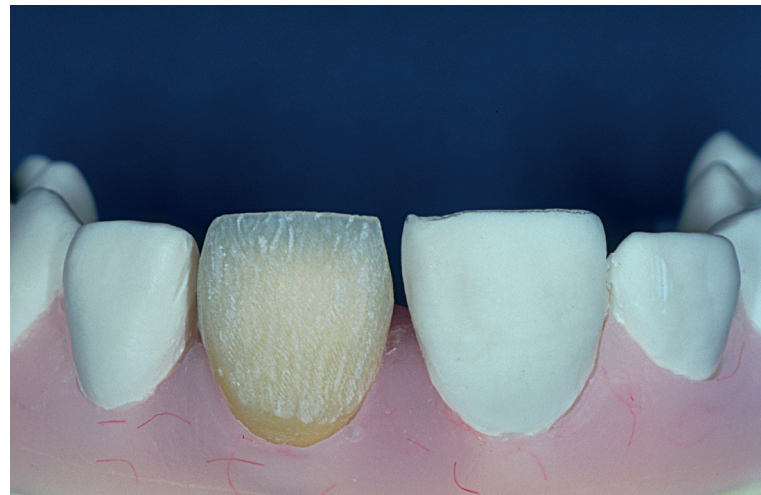
As SOLIDEX cervical materials are highly opaque, they reproduce shades excellently, especially where the layers are thin, as it is often the case with telescopic crowns and bridges. Another indication is to apply a base layer on occlusal surfaces for fabricating inlays/onlays with natural shades.



Especially where the layers are thin, the Cervical materials assume the role of Opaque Dentine.

SOLIDEX BODY

As the SOLIDEX body materials transmit light exactly the same as porcelain systems, the thickness and design of the dentine body also correspond to those of porcelain. No modelling liquids are required as the restoration is easily built up with an instrument or flat brush. After intermediate light-curing the dentine body can still be contoured by trimming it with Dura-Green stones. Before further materials are built up, STAIN LIQUID is applied to renew the air-inhibition layer.

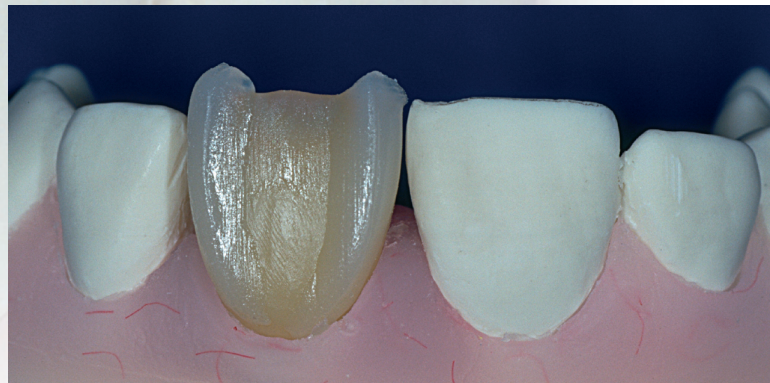


The shape of the dentine has been adjusted and STAIN LIQUID is to be applied to recreate the air-inhibition layer.

... AESTHETIC COMPOSITE RESTORATIONS

SOLIDEX TRANSLUCENT

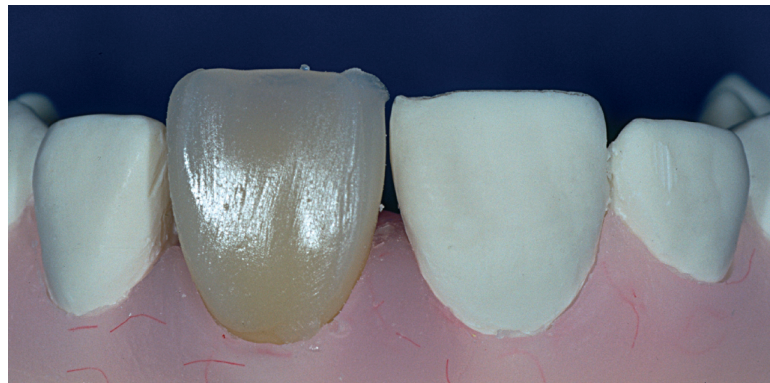
Natural teeth often include zones of differing translucency in their incisal/interproximal areas. For these cases, the SOLIDEX system includes three different translucent materials which are applied between the other layers.



High Value Translucent (HVT) creates lighter translucent areas.

SOLIDEX INCISAL

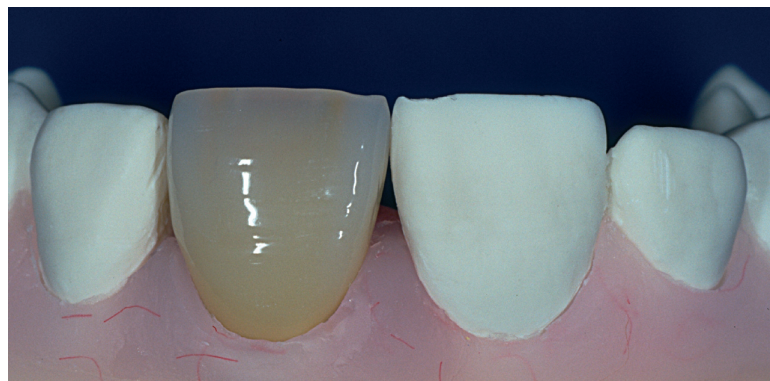
The natural translucency of the enamel structure, especially in the incisal edge region, is easily achieved by applying SOLIDEX incisal materials which are opalescent and naturally fluorescent.



The final contours of the restoration are easily built up with a flat brush.

Perfect Aesthetics

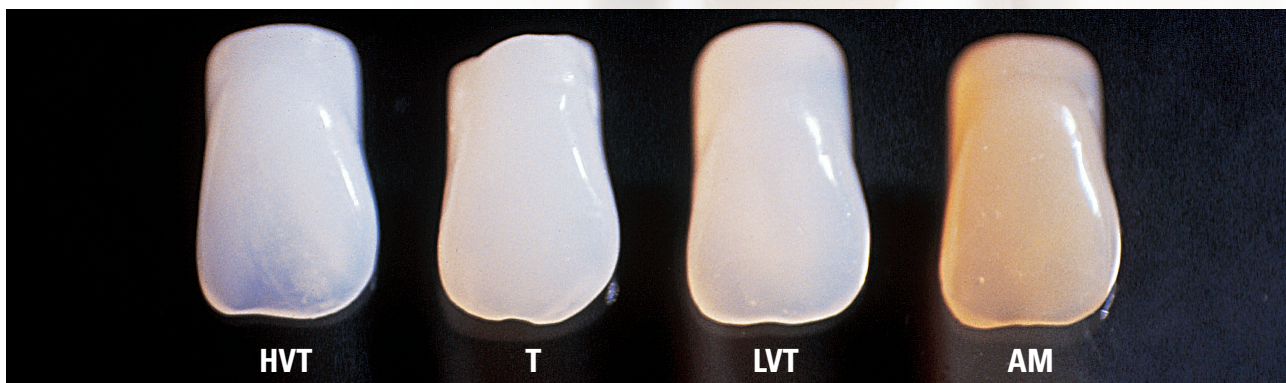
The finished SOLIDEX restoration is difficult to distinguish from a porcelain restoration.



The advantages of a light curing composite with the aesthetics of porcelain.

TRANSMITS LIGHT PERFECTLY IN THE ENAMEL REGION

The SOLIDEX composite system includes versatile opalescent translucent and enamel modifiers usually only supplied with porcelain systems. No matter whether you wish to reproduce translucent areas with a particular in-depth effect, the amber incisal areas frequently seen in older teeth or milky occlusal spots, these materials meet all challenges as far as aesthetics and special effects are concerned.



The structure and distribution of the particles in the opalescent translucent modifiers closely resemble those of natural enamel.

Easily creates special effects

The appearance of natural teeth is often influenced by widely varying changes in shade and effects. SOLIDEX stains are based on this situation. As these ready-mixed stain pastes also consist of light curing hybrid composite, they are excellent for staining custom anomalies on the dentine body or for shading cervical regions.

This staining technique can also be employed when customising acrylic teeth. The stained surfaces simply have to be coated with composite.



1 Prior to adding the special effects, STAIN LIQUID is applied to the trimmed dentine body to renew the air-inhibition layer after applying SOLIBOND.

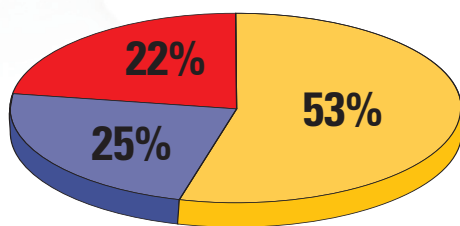
2 Once the stains have been applied, they are light-cured and coated with composite.

3 SOLIDEX stains and incisal modifiers produce perfect special effects.

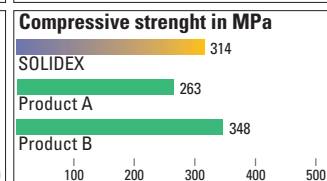
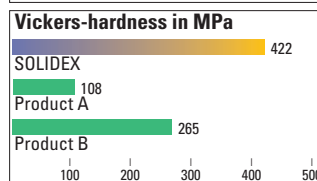
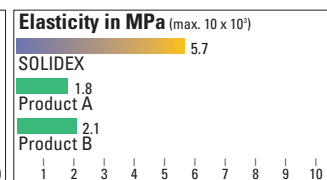
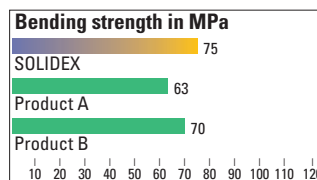
TECHNICAL DATA

SOLIDEX composite is a light curing, ceramic filled, micro-hybrid composite which, owing to its special composition, combines excellent physical properties with exceptionally natural aesthetics.

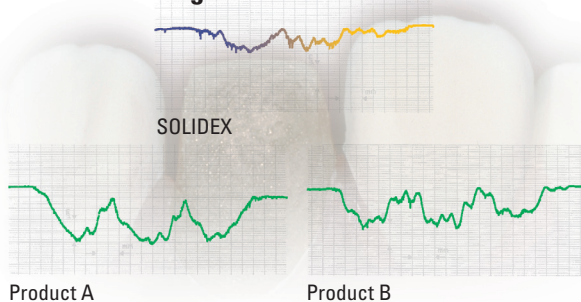
This provides physical properties far exceeding the values required by DIN / ISO 10477 and ensuring safety margins for you to place durable composite restorations. This is a great benefit appreciated by many satisfied patients and dentists.



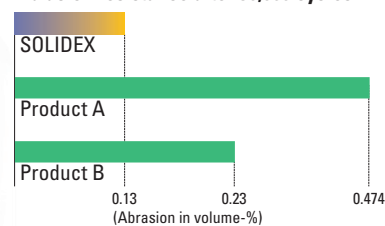
- inorganic ceramic micro-fillers
- Co-polymers with multi-functional resin
- conventional resins/photo-initiators



The SOLIDEX restoration and color remain stable for many years, even after the most demanding wear.



Abrasion resistance after 30,000 cycles*



* with conventional tooth-brush

Silane / SOLIBOND

The bond between SOLIDEX and an alloy can be improved further by using a silane bonding system. To achieve the optimum bond strength exchange the silane bonding agent for SOLIBOND.

Procedure	Silicoater* MD	Silicoater* MD	Silicoater* MD
Type of silane	Siliseal*	Siliseal*	Solibond*
Composite	conventional	SOLIDEX	SOLIDEX
24 hrs. in 37 °C water (kgf/cm²)	80.3	103.3	119.5
2000 Thermal-cycles (kgf/cm²)	35.5	61.3	62.5

Procedure	Rocatector* MD	Rocatector* MD	Rocatector* MD
Type of silane	Espe-Stil*	Espe-Stil*	Solibond*
Composite	conventional	SOLIDEX	SOLIDEX
24 hrs. in 37 °C water (kgf/cm²)	74.4	103.6	115.0
2000 Thermal-cycles (kgf/cm²)	21.7	52.2	74.5

*Registered Trademark (treatment of the systems according to the manufacturers instructions)

AN EASY METHOD FOR CREATING AESTHETIC SURFACES ON COMPOSITE RESTORATIONS

The outstanding materiological properties and opalescent incisal and modifier shades of SOLIDEX micro-hybrid composite provide virtually unlimited methods for reproducing natural aesthetics.

In addition, finished restorations resist abrasion well due to the high ceramic filler content.

That's why it is essential to contour and polish all crown & bridge restorations systematically after light-curing.

The matched rotary instruments and specially developed diamond impregnated CompoMaster polishers in the SOLIDEX Finishing & Polishing Kit polish composite surfaces rationally and systematically, even in those areas difficult to access.

The composite is then polished to a high lustre with a wool mop and suitable polishing paste such as Diamond Stick or **DURA-POLISH DIA** (SHOFU).



The instruments in the SOLIDEX Finishing & Polishing Kit (PN 0328) prepare the surface perfectly for polishing.



After polishing, there is no distinction between porcelain and composite restorations.



AESTHETICALLY HARMONISED TEETH ENHANCE THE QUALITY OF LIFE

SOLIDEX has been proven clinically for more than 10 years – patients and dentists alike appreciate its natural looks and biocompatibility.

But even a natural looking restoration has to be cared for to ensure its aesthetic appearance for many years.

SHOFU has used in 80 years of experience in dental manufacturing to compile some important notes on daily cleaning methods for removable partial restorations – the booklet is available free.



High quality of life
with attractive teeth



Dear Patient

...naturally, natural teeth are a precious gift, since they are part of your health. At some point in a person's life the time may arrive when the matter of dentures has to be addressed.

Perfect dentures give a feeling of well-being, because it is easy to eat and drink, talk and laugh, and of course look good at the same time.

To maintain and restore your teeth and their functions, your dentist and the dental technicians in the dental laboratory provide for you optimum, individual care in line with the latest developments and with the best materials.

SOLIDEX Composite material which is a mixture of natural materials and has a natural appearance in the best possible way.

As natural as your own teeth, you need looking after them for many years of satisfaction.

In this brief leaflet, as compiled by our dentistry with more than 75 years of experience, we have compiled some important tips for daily care of your crowns and removable partial dentures.

clean your dentures two to three times a day in the same way as you clean your natural teeth.

Use cleaning tablets, cleaning gels, or ultrasonic cleaners. They can be used on your high-quality dentures without benefiting it.

When cleaning use a soft toothbrush with rounded nylon bristles. Avoid using abrasive cleaning dentures.

Use a special gel, which is specifically designed for cleaning dentures. It is non-abrasive.

- Clean your removable dentures over a wash basin half-filled with water. If you should drop them, they will not be damaged.



SET COMPONENTS

SOLIDEX INTRO SET

Your easiest method of starting with SOLIDEX

Available in the popular VITA* shades A2 and A3, this intro set includes all the necessary components from Metal Photo Primer to a No. 4 brush for applying the opaque and contouring the various materials.



SOLIDEX FULL SET

For an established composite concept

The Full Set is the basis of the SOLIDEX composite system. The logically matched components make it possible to reproduce all Vita* Classic shades naturally.



SOLIDEX STAIN SET

Straightforward special effects

The pastes in the SOLIDEX Stain Set can be used for reproducing all anomalies. This set includes ready-mixed cervical stains for A, B, C and D shades.



*VITA is a registered trademark of VITA Zahnfabrik, Bad Säckingen, Germany.

NCC[®] NATURAL COLOR CONCEPT

An aesthetic system

NCC[®] stands for Natural Color Concept and enables SOLIDEX to be matched to the shade concept of VINTAGE HALO porcelain. This concept is based on computer aided shade measurements of natural teeth to provide you with more than the 16 standard shades included on conventional shade guides.

The NCC[®] Supplementary Shades complements the SOLIDEX composite system for those users of VINTAGE HALO porcelain who already appreciate the versatile applications of Root A and RED Shift shades. The RED Shift shades are a fifth group of shades matching the "A" shades, but with a slightly more reddish hue.

Equally, the more reddish RED Shift shades are referred to as R2, R3 or R3.5. In addition to the extra shades, the RED Shift shades also match acrylic teeth more accurately as, once the pink denture base has been finished, they often appear slightly more reddish than the crown and bridge units veneered with composite.



A perfect match! 3 SOLIDEX NCC[®] composite- and 5 VINTAGE HALO porcelain restorations.



The difference is very obvious! When the shade A3 crown on the left is compared with the shade R3 crown on the right, the shade appears more reddish – although both have the same depth of shade.

SHADE CHARTS BASIC / EFFECT & STAINS / NCC®

All SOLIDEX composite shades are matched logically and provide a wide range of custom effect modifiers and stains.

No matter whether you are producing a standard build-up or reproducing all the natural characteristics for a specific patient, you can always work systematically and accurately.

SOLIDEX Basic

	A1	A2	A3	A3.5	A4	B1	B2	B3	B4	C1	C2	C3	C4	D2	D3	D4
Opaque																
Incisal Opaque																
Cervical																
Body																
Incisal																

SOLIDEX Effect & Stains

Opaque Modifier					
Translucent					
Effect					
Base					
Stains					
Cervical Stains					

SOLIDEX NCC®

	A1	A2	A3	A3.5	A4	rootA	B2	B3	B4	C2	C3	D3	R2	R3	R3.5
Opaque															
Incisal Opaque															
Cervical															
Body															
Incisal															

The various SOLIDEX NCC® materials required for fabricating NCC® shades have a grey background in the table. They must be used in combination with SOLIDEX standard materials (e.g. Opaque, Incisal).

POWERFUL LIGHT CURING UNIT FOR DENTAL PRACTICES AND LABORATORIES

Solidilite EX

Designed specifically for use with SOLIDEX light curing, micro-hybrid material, the Solidilite EX light curing unit includes futuristic technology and a modern, functional design.

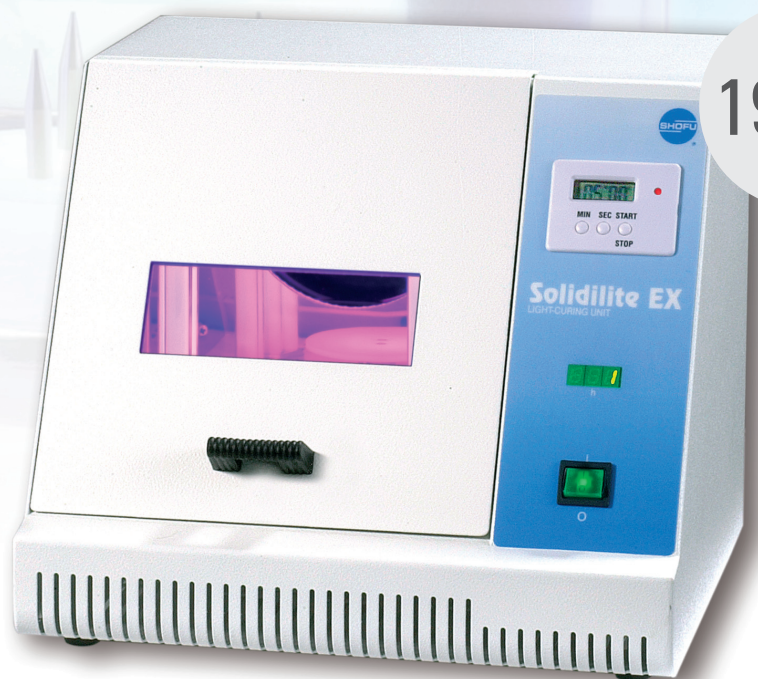
Two powerful Halogen reflector lamps and four UV cold light tubes produce a light wave range of 400 – 550 nm and, intensified by the reflectors in the curing chamber, cure exceptionally thoroughly at a maximum of 45 °C and in a very short time.

Also, the revolving platform eliminates shadows to ensure that the restorations are fully exposed to the curing lamps.

The clearly laid out keyboard and digital timer settings with electronic display indicating the remaining curing time are easy to use. A beeper indicates when light-curing is complete.

Technical data

Current consumption:	350 watt
Power supply:	230 volt – 50 hertz
Fuses:	2 x 4 ampere (AT)
Dimensions:	31 x 31 x 26 cm
Weight:	11 kg



The large curing chamber, despite its minimal exterior dimensions, ensures that the Solidilite EX is perfect for daily use in dental practices and laboratories.

We would like to thank Volker Brosch (Master Dental Technician), Essen, Germany, Kerstin Pia Henke (Master Dental Technician), Duisburg, Germany, and Dominique Oliver, Manzy (Dental Technician), France for the photographs showing the practical procedures.

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