
eXperience
Unmatchable handling . simplicity . aesthetics
SOLARE X
GC

SOLARE X
gives unmatchable aesthetic invisibility

Restorations placed using SOLARE X achieve unmatchable aesthetic invisibility through a remarkable chameleon effect. 90% of restorations can be completed using a single shade.

Dr J Smithson

Dr J Smithson

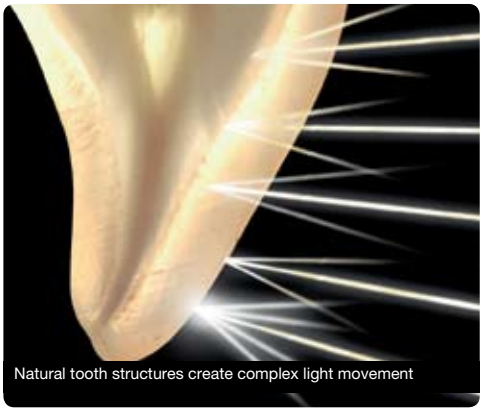
Dr L Harris

Dr J Smithson

Dr J Smithson

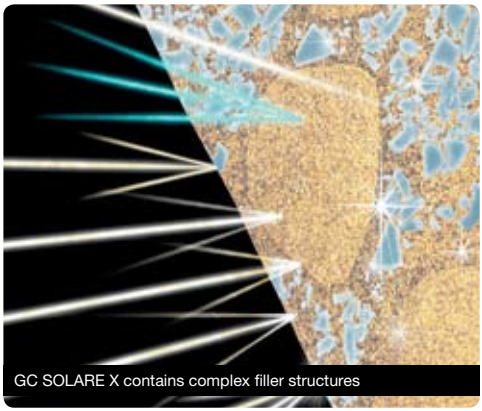
Dr J Smithson

The intelligent use of diverse filler technologies within SOLARE X means exceptional aesthetic outcomes can be achieved through a simplified shade system, with minimal need to undertake layering techniques.



Natural tooth structures create complex light movement

Light movement through natural teeth is highly diverse due to the complex multifaceted structures within teeth.

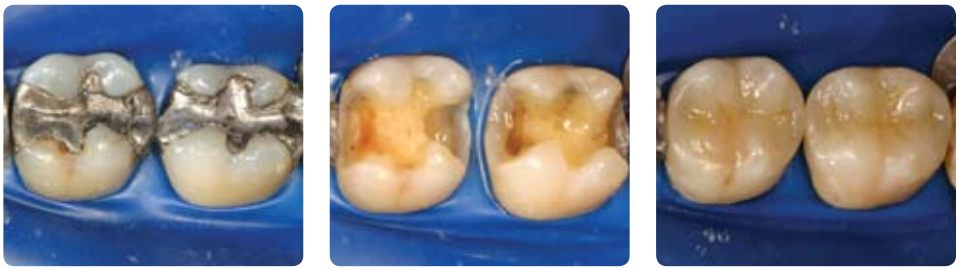


GC SOLARE X contains complex filler structures

To replicate the aesthetic properties of natural teeth SOLARE X contains nano fillers, glass fillers and pre-polymerised fillers that imitate the complex light transmission, diffusion and reflection characteristics found in natural teeth.

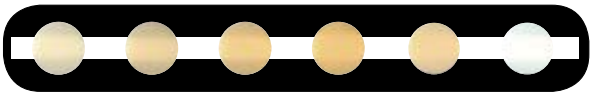
Unmatchable simplicity

SOLARE X is designed with the clinician foremost in mind. A strong, radiopaque anterior/posterior composite with exceptional beauty… yet shade selection is remarkably simple. With an optimal combination of handling and finishing characteristics, placement time is minimised and the final high quality restorations are achieved with unmatchable ease.



Dr L Harris

A simplified shade range allowing the majority of restorations to be completed using a single layer technique.



X-A1 X-A2 X-A3 X-A3.5 X-AO2 X-WT

Unmatchable handling

Optimal adaptation

SOLARE X has just the right amount of flow under pressure, ensuring intimate contact with the cavity walls and floor, for the best possible adhesive interface and marginal adaptation.

Total control, even with a brush

SOLARE X is easy to manipulate and can even be brush contoured. It won't stick or slump or set up prematurely under the overhead light, giving total control to the clinician.

Dr R Lowe

Self correcting surface

Free-hand contouring is made easier with a remarkable self-correcting feature where small surface voids and imperfections simply vanish leaving a smooth and naturally contoured surface.

A beautiful polish

Polishing with a rubber point under water spray

Final polish with a diamond polisher at low speed

Dr K Kajimura

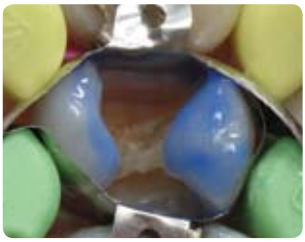
Optional high gloss buff with a diamond polishing paste at low speed

SOLARE X, G-BOND and Fuji IX$_{GP}$ EXTRA. Perfect partners for the sandwich technique.

Fuji IX$_{GP}$ EXTRA provides strong adhesion, effective sealing of dentine and foundation support for the remaining restoration.

G-BOND links the components together by chemically bonding SOLARE X to the glass ionomer cement foundation, the etched enamel margins and any remaining dentine that's not covered by gic.

1. Cavity preparation. A thin layer of affected dentine has been left directly over the pulp horn to avoid a potential exposure.



2. Enamel margins are selectively etched with 37% phosphoric acid gel for 15 seconds and rinsed.

6. Technique option. A thin layer of radiopaque flowable composite can be placed over all internal surfaces to ensure optimal adaptation of composite resin to the bonded surfaces.

7. SOLARE X is placed in incremental layers to reduce polymerisation shrinkage stress.

3. The dentine is conditioned with GC CAVITY CONDITIONER (20% polyacrylic acid, 3% Aluminium Chloride) for 10 seconds, rinsed and gently dried.

4. Fuji IXGP EXTRA is carefully injected onto the conditioned dentine to form the foundation for the sandwich technique.
Fuji IXGP EXTRA will chemically bond and seal the dentine surfaces and help stimulate remineralisation of the affected dentine.

5. G-BOND is applied to all surfaces for 5-10 seconds, vigorously air thinned and light cured for 10 seconds. G-BOND will chemically bond to glass ionomer cement, etched enamel and any remaining dentine not covered by gic.

8. Completed composite build up using SOLARE X shade A2 overlaid with shade A1.

9. Good matrix selection and careful composite placement mean minimal finishing and polishing.

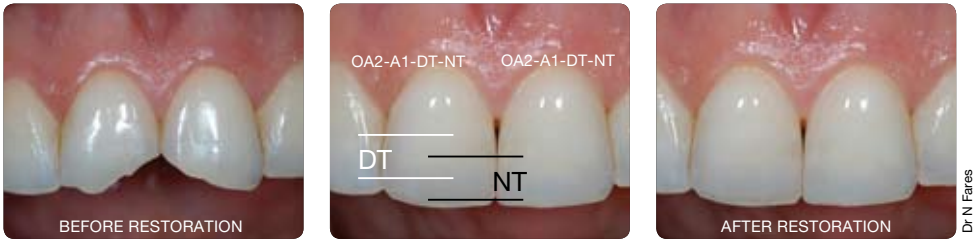
10. The completed restoration using a closed sandwich technique.

Dr G Milicich

SOLARE

An anterior composite restorative with remarkable aesthetics. SOLARE is designed for clinicians who desire the highest level of aesthetic outcome in anterior restorations.

A chameleon effect that gives you impressive shade matching ability



With just 3 GC SOLARE syringes, you can match all 16 VITA shades!

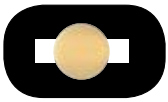
VITA shade	A1	A2	B1	B2	A3	B3	B4	C1	C2	D2	D3	D4	A3.5	A4	C3	C4
SOLARE shade	A2				A3								A3.5			

Outside special shades

match variations in enamel translucency and value

Inside special shades

to block shine through



NB. Outside special shades are available in GRADIA DIRECT

GRADIA DIRECT is not suitable for restorations where radiopacity is required

Physical properties

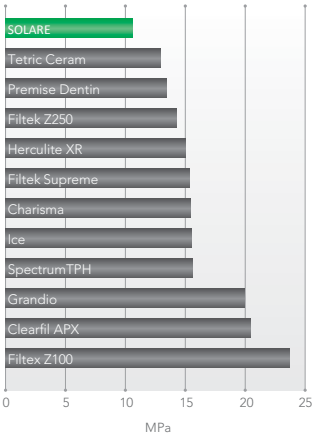
Low polymerisation shrinkage stress

SOLARE and SOLARE X have minimal shrinkage stress due to their combination of low polymerisation shrinkage and low modulus of elasticity (ie a more flexible and less brittle composite). The low shrinkage is achieved through an optimised resin formulation and the use of new generation pre-polymerised fillers. SOLARE composite has been confirmed as the benchmark for low shrinkage stress through a number of independent evaluations.

High Fracture toughness

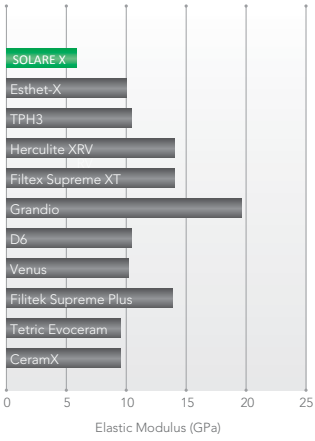
The combination of optimised resin and new filler technologies gives strength to SOLARE X and high fracture toughness.

Polymerisation shrinkage stress of nanofilled and hybrid composite resins



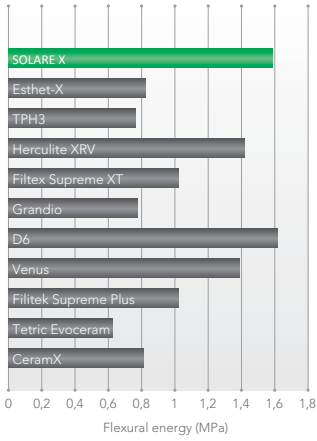
De A Gee, C Kleverlaan, A Feilzer, ACTA Amsterdam, Nederlands Tandartsenblad, January 2007

Modulus of elasticity



R&D Dept. GC Corporation.

Fracture toughness

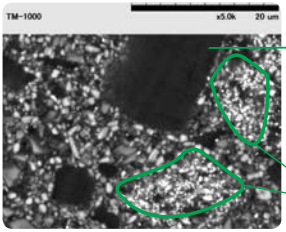


R&D Dept. GC Corporation.

Q&A

Q How was the combination of translucency, chameleon effect and radiopacity achieved in SOLARE X?

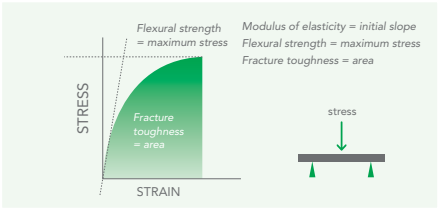
A SOLARE X has pre-polymerised fillers containing lanthanoid fluoride nano-particles. The pre-polymerised fillers contribute significantly to the chameleon effect, while the lanthanoid fluoride fillers allow good transmission of light (translucency) while blocking x-rays (radiopacity). SOLARE X also contains silica nano-particles, pre-polymerised fillers containing silica nano-particles and fluoroaluminosilicate glass fillers.

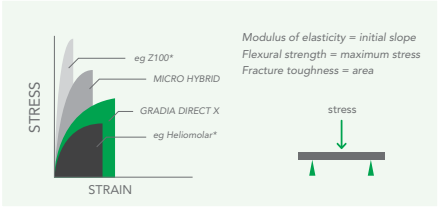


Q What is the benefit of SOLARE X having a lower modulus of elasticity and flexural strength with a higher fracture toughness?

A An important strength characteristic in composite is fracture toughness and, compared to traditional hybrid composite materials, SOLARE X has high fracture toughness.

Mechanical properties





* Z100 and Heliomolar are not trademarks of GC Corporation

SOLARE X is also designed to be more flexible than other hybrids, ie a lower modulus of elasticity. The relationship of these measurements and flexural strength is seen in the diagrammatic representations following;

With its good fracture toughness SOLARE X is strong and resilient. A low modulus of elasticity combined with low polymerisation shrinkage means significantly less polymerisation shrinkage stress develops during light curing. For optimal marginal adaptation, reduced microleakage and longevity of restorations this is a highly desirable combination of physical properties.

Q What is the difference between volumetric polymerisation shrinkage and polymerisation shrinkage stress?

A Volumetric shrinkage simply indicates how much a composite can shrink. Shrinkage stress is the amount of stress created as a result of polymerisation shrinkage combined with other influencing factors - eg a composite's modulus of elasticity and the nature of its polymerisation reaction. Shrinkage stress is a clinically relevant measurement and with its low volumetric shrinkage, low modulus of elasticity and optimised polymerization reaction, both SOLARE X and SOLARE produce low shrinkage stress.

Q How wear resistant is SOLARE X? How well has it performed in clinical evaluations?

A It is very wear resistant. Due to the large proportion of nano-sized silica particles in SOLARE X it has a good balance of wear resistance, minimal wear on opposing dentition and a high gloss surface polish. The Catholic University of Leuven has reported 4-year clinical results on wear as part of a trial of hybrid composite materials: "The three hybrid composites showed very acceptable clinical performance and presented enamel-like quantitative wear-patterns after 4 years of clinical service."*

Q What makes SOLARE X and SOLARE so special?

A Many local and international evaluators, including independent review organisations have commented on SOLARE's exceptional handling and beautiful yet simple-to-achieve aesthetics. The chameleon characteristics of SOLARE X are unmatched by any other composite and placement time is reduced thanks to uncanny handling that is both sculptable and brushable, yet never sticky. SOLARE X is rated at the very highest level because it gives clinicians total control to achieve beautiful results simply, quickly and with greatly reduced stress.

Q How should I compare composite quantity when deciding if a composite is good value for money?

A The quantity of composite should always be measured by volume (ml) as different composites have different weight of formulation and fillers. For example, SOLARE X syringes contain 5 grams of composite, while SOLARE Anterior syringes contain 4 grams of composite – however both deliver exactly the same quantity of composite, 2.7ml.

*PEF IADR 2008. Abstract 0708 Clinical, quantitative and qualitative wear evaluation of hybrid posterior composites. S Palaniappan, M Peumans, B Van Meerbeck, P Lambrechts. Leuven BIOMAT Reserch Center, Catholic University of Leuven, Belgium.

SOLARE X (Anterior/Posterior)

Standard: X-A1, X-A2, X-A3, X-A3.5

Inside shade: X-AO2

Outside shade: X-WT

Available: In 5 gram (2.7ml) syringes

SOLARE (Anterior)

Standard: A1, A2, A3, A3.5, B2, CV

Inside shades: AO3

Available: In 4 gram (2.7ml) syringes

G-BOND

Intro kit contains:

1x 5ml bottle of G-BOND
50x micro-tips
1x micro-tip applicator
1x dispensing dish

Unit Dose contains:

50x 0.1ml Unit doses of G-BOND
50x micro-brush applicators

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