

Quantium™

Universal Composite



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TAKE THE QUANTUM LEAP INTO THE NEW ERA OF BISCO COMPOSITES WITH QUANTIUM

At BISCO, we set out to create a composite that balances strength, handling, and esthetics. Drawing inspiration from quantum mechanics, a field that explores the smallest building blocks of our universe with precision, we sought to innovate in the same way. A quantum leap signifies a significant advancement, much like the innovation behind our new composite. We needed a name that reflected both the science and its impact, and that's how Quantum was born—a name inspired by quantum science and the art of restorative dentistry. Quantum integrates advanced filler and resin technology that will empower clinicians to create durable, seamless restorations. Quantum isn't just a new composite; it's a leap forward in restorative dentistry.



A BETTER COMPOSITE DOWN TO THE FINEST DETAILS



Durable Restorations

Quantum's high strength, wear resistance, and low shrinkage create durable restorations.



Low Shrinkage

Quantum features low volumetric shrinkage, which minimizes microleakage and ensures marginal adaptation.



Excellent Esthetics

Quantum is designed to be easily polished and stain resistant to create esthetic results that maintain their appearance over time.



Easy Handling

Quantum delivers smooth, non-sticky handling and its unit dose capsules can be warmed for an even greater flowable experience, depending on the clinician's needs and preference.

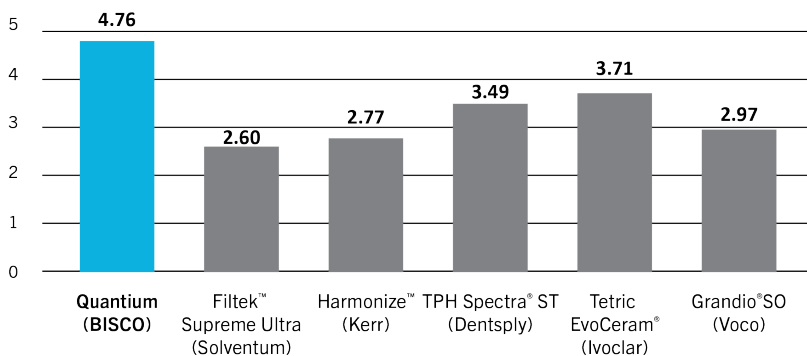


Highly Radiopaque

Quantum is highly radiopaque for easy identification on radiographs, aiding in post-treatment evaluation and allowing clinicians to confidently monitor the integrity of the restoration.

PHYSICAL PROPERTIES

Radiopacity (mm Al)*



Materials with high radiopacity will contrast with enamel/dentin to help identify recurrent caries.

Quantum A3 Enamel Radiograph



Compressive Strength
308.39 MPa



Flexural Strength
120.933 MPa



Volumetric Shrinkage
2.28%



Diametral Tensile Strength
40.30 MPa

* BISCO data on file.

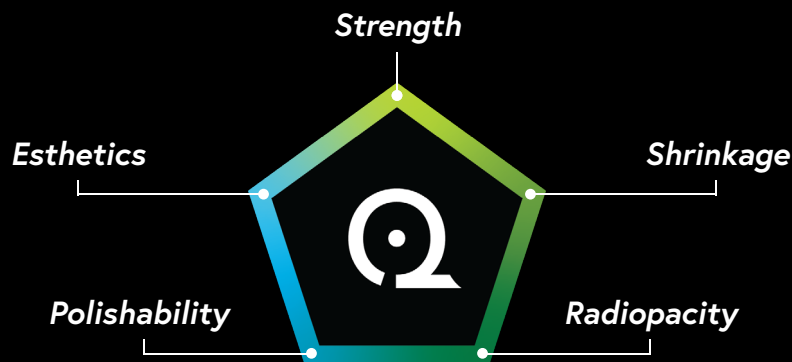
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SCIENCE BEHIND THE FORMULA

Quantum is more than just a composite, it's the result of precise engineering and thoughtful formulation. Developed with an optimized blend of fillers, Quantum meets the demands of a truly universal composite—suitable for both direct and indirect restorations, in anterior and posterior applications. Quantum is formulated with:

- **Nanofillers** for enhanced polishability and radiopacity
- **Microfillers** to reinforce strength and reduce volumetric shrinkage
- A proprietary **pre-polymerization** process allowing for increased filler loading without sacrificing polishability or handling

This strategic range of filler sizes enables dense packing, superior physical properties, and a low resin content—striking the perfect balance between esthetics and performance.



SUPERIOR HANDLING

Quantum's carefully selected monomer blend is deliberate, equally delivering ideal viscosity with exceptional optical and mechanical properties. The result? A composite that resists slumping, maintains precise instrument control, and performs consistently across all shades. Quantum delivers a smooth, non-sticky, controlled viscosity that feels right from the first touch, giving clinicians confidence in every application. For clinicians who prefer a lower viscosity at placement, Quantum (unit dose only) is fully compatible with composite warming devices—without compromising the physical properties of the material.

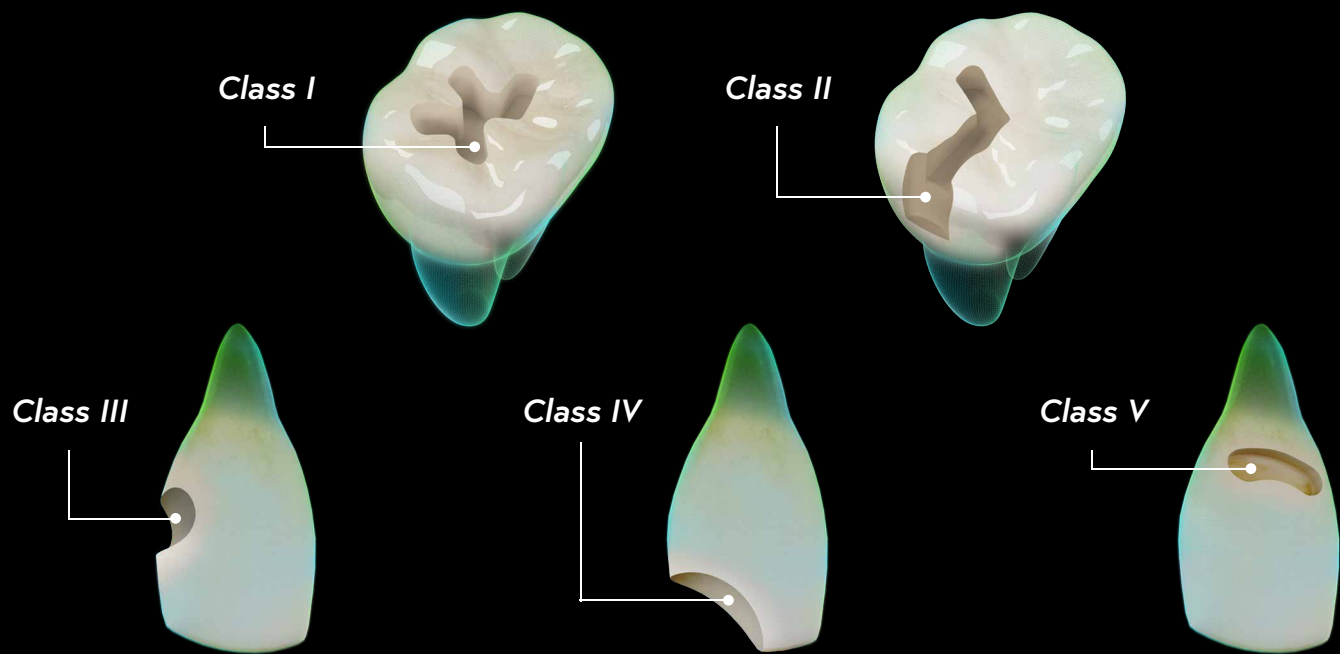


THE ADVANTAGE OF WARMING

Warming composite materials enhances flowability, which can improve marginal adaptation, reduce microleakage, and increase conversion rates¹. Quantum unit dose capsules can be warmed for up to one hour at 68°C (154°F), maintaining the composite's physical properties while providing even greater flexibility in handling. This allows clinicians to fine-tune viscosity to their preference without sacrificing strength or reliability.

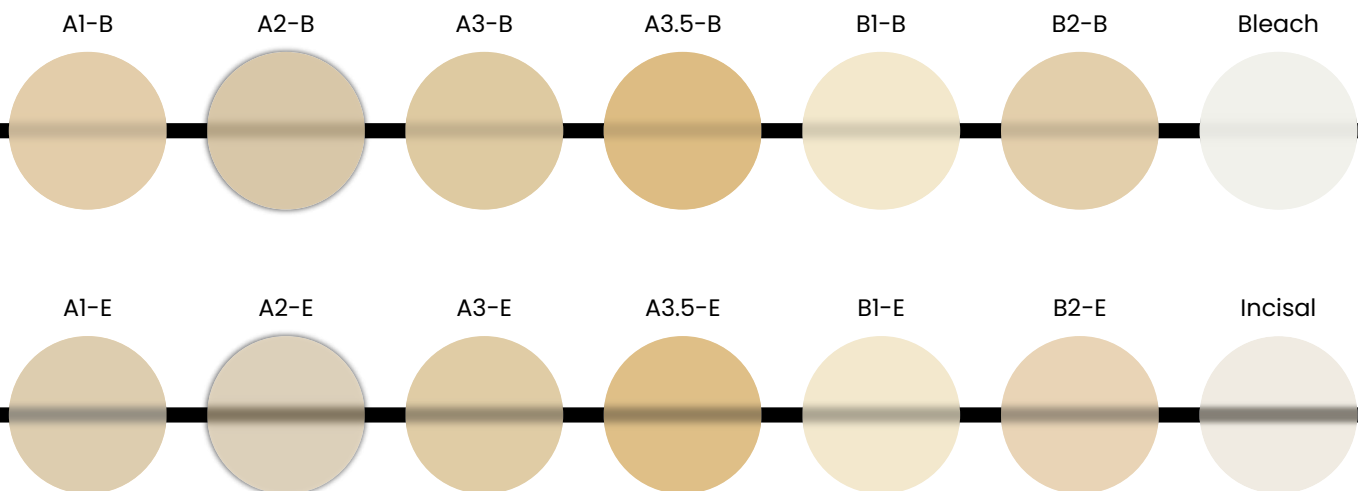
1. Baroudi, K., Bayne, S. C., Deb, S., Demarco, F. F., Eliades, G. C., Eltahlah, D., Fróes-Salgado, N. R., Opdam, N. J. M., Penn, R. W., Peutzfeldt, A., Sarrett, D. C., Trujillo, M., Yang, J., Abdulmajeed, A. A., & Brady, L. A. (2023, May 20). Prewarming effect on adaptation, porosities, and strength of a composite resin. *Journal of the Mechanical Behavior of Biomedical Materials*. <https://www.sciencedirect.com/science/article/abs/pii/S1751616123002667#preview-section-cited-by>

ONE COMPOSITE – ANTERIOR, POSTERIOR, ANY CLASS



BEAUTIFUL RESTORATIONS AT YOUR FINGERTIPS!

Quantum makes shade selection simple with a broad range of options designed to match the VITA® Classical Shade Guide, reducing guesswork and helping you achieve natural-looking results.



POWER UP YOUR DENTISTRY... LAYER BY LAYER

Quantium™
Universal Composite

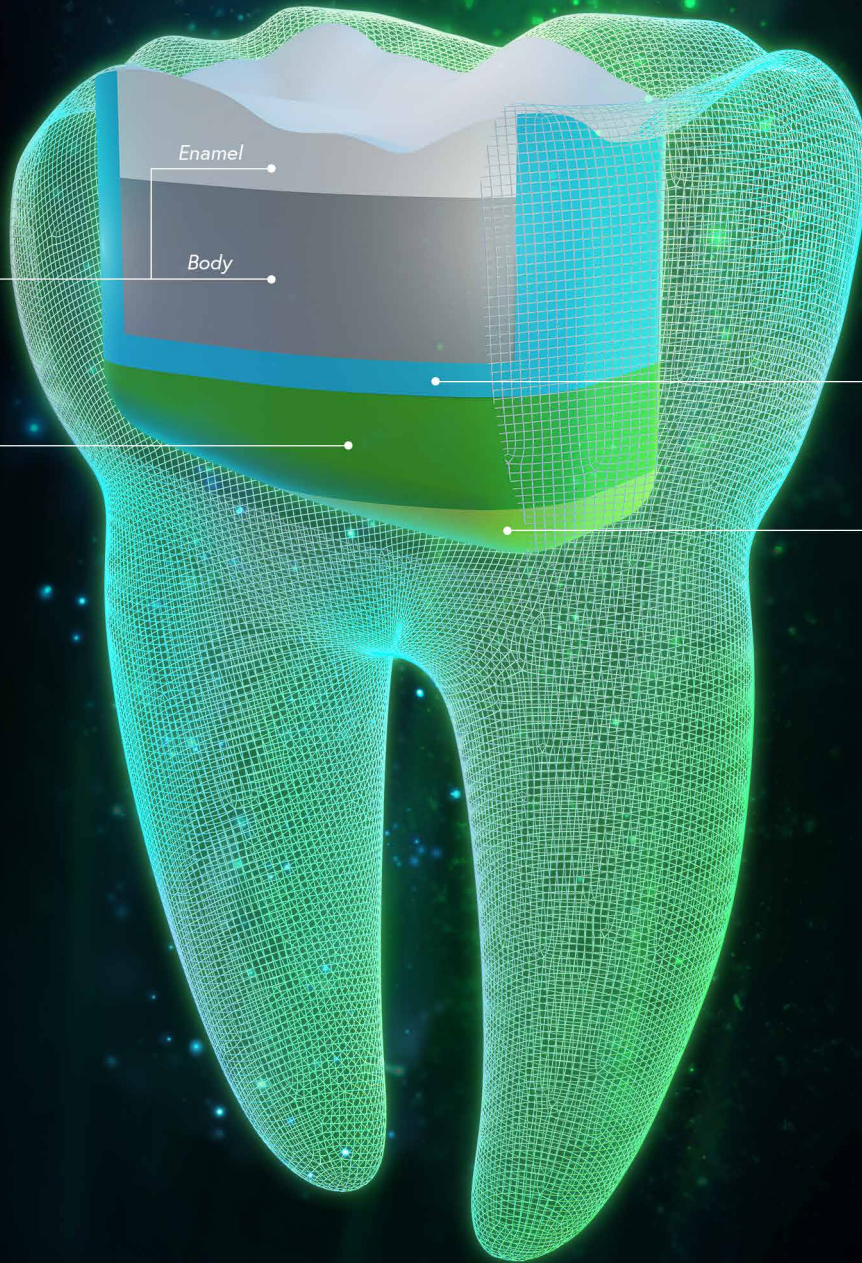
Enamel

Body

TheraBase®
Self-Adhesive Calcium
Releasing Base/Liner

All-Bond Universal®
Light-Cured Dental Adhesive

TheraCal LC®
Resin-Modified Calcium
Silicate Pulp Protectant/Liner



QUANTIUM IN ACTION

1



Pre-op case of old amalgam restoration.

2



The preparation was cleaned with a slurry of pumice and water, rinsed and dried.

3



TheraBase was applied to the dentin surface of the prepared cavity and light-cured for 20 seconds.

4



Select HV Etch was used in a selective-etch bonding technique.

5



All-Bond Universal was applied, following manufacturer's instructions.

6



Quantum A2 Body and Enamel were used in a layering technique.

7



Final restoration.



ORDERING INFORMATION

Kits

Quantum Syringe Intro Kit.....H-10000K

- 1 Quantum Syringe A2 Body (4g),
- 1 Quantum Syringe A2 Enamel (4g),
- 1 Quantum Syringe A3 Body (4g),
- 1 Quantum Syringe A3 Enamel (4g),
- 1 Bottle All-Bond Universal (6ml),
- 1 Syringe Select HV Etch w/BAC (5g),
- Accessories, Instructions

Quantum Unit Dose Intro Kit H-10100K

- 10 Quantum Unit Dose A2 Body Tips (0.25g ea.),
- 10 Quantum Unit Dose A2 Enamel Tips (0.25g ea.),
- 10 Quantum Unit Dose A3 Body Tips (0.25g ea.),
- 10 Quantum Unit Dose A3 Enamel Tips (0.25g ea.),
- 1 Bottle All-Bond Universal (6ml),
- 1 Syringe Select HV Etch w/BAC (5g),
- Accessories, Instructions



Syringes

1 Syringe Quantum (4g), Instructions

Body	A1 Body	H-100A1P
	A2 Body	H-100A2P
	A3 Body	H-100A3P
	A3.5 Body.....	H-100A35P
	B1 Body	H-100B1P
	B2 Body	H-100B2P
	Bleach.....	H-130BLCP

Enamel	A1 Enamel.....	H-110A1P
	A2 Enamel.....	H-110A2P
	A3 Enamel.....	H-110A3P
	A3.5 Enamel.....	H-110A35P
	B1 Enamel.....	H-110B1P
	B2 Enamel.....	H-110B2P
	Incisal.....	H-120ICSP

Unit Dose

20 Count Unit-Dose (0.25g ea.), Instructions

Body	A1 Body	H-1011A1P
	A2 Body	H-1011A2P
	A3 Body	H-1011A3P
	A3.5 Body.....	H-1011A35P
	B1 Body	H-1011B1P
	B2 Body	H-1011B2P
	Bleach.....	H-1311BLCP

Enamel	A1 Enamel.....	H-1111A1P
	A2 Enamel.....	H-1111A2P
	A3 Enamel.....	H-1111A3P
	A3.5 Enamel.....	H-1111A35P
	B1 Enamel.....	H-1111B1P
	B2 Enamel.....	H-1111B2P
	Incisal.....	H-1211ICSP

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Rx Only



MC-2044QC