### GRADIA™ DIRECT

**Light-Cured Microfilled Hybrid Resin Composite**

**GC America Inc.**
Advancing the Art and Science of Dentistry
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http://www.gcamerica.com

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**Volume/Weight**
- Anterior Unitips: 0.16 ml/0.24 g
- Anterior Syringes: 2.7 ml/4.0 g
- Posterior Unitips: 0.16 ml/0.28 g
- Posterior Syringes: 2.7 ml/4.7 g

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**423001 Gradia Direct Complete Kit (Unitips)**
Contains: 106 Unitips, 5 tips of each shade (A1, A2, A3.5, A4, A3, CV, AO3, DT, NT, P-A1, P-A2, P-A3, P-A3.5, P-WT, P-NT) and 3 tips of each shade (A4, B2, B3, C3, CVD, AO4, A04, BW, WT, CT, GT, CVT), Shade Guide, Unitip Applier and Mixing Pad.

**423002 Gradia Direct Complete Kit (Syringe)**
Contains: 26 Syringes, one of each shade, Shade Guide and Mixing Pad.

**001964 Gradia Direct Introductory Kit (Unitip)**
Contains: 35 Unitips, 5 tips each in 7 shades (Anterior A2, A3, A3.5, AO3, CV, CT and Posterior P-A2) and Shade Guide.

**002039 Gradia Direct Introductory Kit (Syringe)**
Contains: 1 Syringe (2.7 ml) of each shade (Anterior A2, A3, A3.5, AO3, CV, CT and Posterior P-A2) and Shade Guide.

**Gradia Direct Unitip Refills**
Contains: 20 Tips (.16 ml each).

**Gradia Direct Syringe Refills**
Contains: 1 Syringe (2.7 ml each).

**Gradia Direct Shade Guide**

### Anterior Shades

- **Standard:** A1, A2, A3, A3.5, A4, A3, CV (Cervical), CVD (Cervical Dark), BW (Bleaching White)
- **Inside Special:** AO2, AO3, AO4
- **Outside Special:** NT (Natural Translucent), CT (Clear Translucent), DT (Dark Translucent), WT (White Translucent), GT (Gray Translucent), CVT (Cervical Translucent).

### Posterior Shades

- **Standard:** P-A1, P-A2, P-A3, P-A3.5
- **Outside Special:** P-WT, P-NT

### Notes
- Standard = Dentin/Enamel
- Inside Special = Opaque Dentin
- Outside Special = Translucent Enamel

**Volume/Weight**
- Anterior Unitips: 0.16 ml/0.24 g
- Anterior Syringes: 2.7 ml/4.0 g
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- Posterior Syringes: 2.7 ml/4.7 g
GRADIA® DIRECT
High-End Esthetics Made Easy.

Esthetic Invisibility - Single Shade Simplicity
With the best light refractory index, opalescence, fluorescence and translucency available, GRADIA DIRECT makes it easy to complete natural looking, high-end multi-layer restorations with as little as a one shade technique. GRADIA DIRECT not only picks up the color and matches the surrounding tooth, it becomes esthetically “invisible.”

Best Handling Composite Ever
One thing every professional notices about GRADIA DIRECT is the superior handling. Anterior shades sculpt readily and posterior shades offer strength and body. GRADIA DIRECT gives you plenty of working time even in strong ambient light. And it’s not sticky, so it shapes and sculpts easily. You can even add and take away material with an artist’s brush.

Optimal Balance of Physical Properties
Light-cured GRADIA DIRECT is a micro-filled hybrid resin composite with microfine pre-polymer resin fillers, a unique coupling agent and urethane dimethacrylate co-monomer matrix which offers significant advantages in esthetics, polishability, wear resistance and fracture toughness.

Clean and Simple Shade System
GRADIA DIRECT is a complete restoration system for direct that features 26 shades in choice of Unitip or Composite Syringe delivery.

Great Physical Properties
GRADIA DIRECT’s optimal balance of physical properties provides outstanding esthetics without sacrificing strength, durability and longevity.

Tough and Flexible: GRADIA DIRECT has high fracture toughness and a low modulus of elasticity to resist bending and cracking from occlusal forces.

Esthetic Invisibility - Single Shade Simplicity
In fact, about 95% of restorative cases, GRADIA DIRECT can achieve brilliant esthetics with only one shade.

95% Single Shade
6% Multi-Shade

DIRECT RESTORATIONS

Best Handling Composite Ever
GRADIA DIRECT is Easy to Place
GRADIA DIRECT restorations match the appearance of surrounding tooth with perfect translucency, opalescence and fluorescence.

Standard Shades (11 anterior; 4 posterior)
For most simple restorations, using just one of the Standard Shades in a single shade technique gives excellent results.

Special Shades
For more extensive multi-shade techniques, Special shades are placed underneath or on top of a Standard shade.

Inside Special Shades (3 anterior shades)
These are opaque shades placed underneath a Standard Shade to give warmth to the final color and block out unwanted dark color.

Outside Special Shades (6 anterior, 2 posterior)
Placed on top of a Standard shade, outside special shades take into account the age-related changes in the enamel - translucency and wear - to give a more lifelike appearance.

Direct or Indirect
Just like GRADIA (for INDIRECT laboratory restorations), new GRADIA DIRECT has multifaceted reflective and optical properties similar to that of natural tooth.

Ask your dental dealer about GRADIA DIRECT and its special introductory offer today!
Reflections Determine Color Perception

The way a natural tooth reflects light determines its perceived color. When all wavelengths are reflected, it is called a Mirror Reflection - this occurs on the outside surface of a highly polished tooth accounting for its glossy appearance.

Reflections from inside the tooth are derived from its diverse structural makeup: enamel crystals, dentinal tubules, peritubular dentin and the dentin-enamel junction. Certain wavelengths of light reflect off the tooth while some of the light is absorbed. This optical property is called Diffuse Reflection and is the reason the tooth’s hue (pure color), chroma (color saturation), value (lightness or darkness of the color), translucency (color depth) and opalescence can be seen. The tooth’s fluorescent appearance comes from emitted light.

Particle Structure Mimics Reflectivity of Natural Tooth

One of main reasons GRADIA DIRECT blends in and picks up the color of the surrounding teeth is because it has been designed to mimic the reflectivity of natural tooth structure.

Like tooth structure, GRADIA DIRECT is made up of diverse, multifaceted structures - a variety of particles consisting of a micro-filled matrix of resin composite, with compounds mainly of silica, pre-polymerised fillers and urethane dimethacrylate co-monomer matrix.

The amount of each element and its particle size distribution has been carefully chosen so that when added together, many different interfaces occur with different reflective properties. The result is internal reflectivity and optical properties which replicate that of natural teeth.

Natural Reflectivity Means Natural Esthetics

This toothlike reflectivity makes GRADIA DIRECT restorations appear natural, with true to life color and full vitality. Overall, GRADIA DIRECT restorations are esthetically “invisible” when compared to other restoratives. This means single shade simplicity for most restorations and easy to complete, natural looking high end multilayer restorations for more intricate cases.

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Composite Restoration Techniques / Examples

**Diastema Closure**

Shade Guide used to determine base color A-2 and translucent surface enamel slightly lighter.

Place GRADIA DIRECT to prepared bonding area.

Sculpt GRADIA DIRECT Composite with a thin bladed instrument.

Light-cure for 20 seconds.

One week after: Left and right central incisors bonded with GRADIA DIRECT to close the space.

**Class I Sandwich**

Prepare cavity in the usual manner.

Mix the lining material.

If desired, insert material into an applicating syringe.

**Geriatric restoration**

Completed with one shade.

Incisal Wear

Veneers completed with GRADIA DIRECT.

Light-cure.

One week after: Left and right central incisors bonded with GRADIA DIRECT to close the space.

**Class II Tunnel**

Prepare cavity as required.

Completed restoration.

**Class III Cavity**

Prepare cavity as needed.

Need copy for this pic

**Class III Cavity**

Prepare cavity as needed.

Need copy for this pic

**Central Veneers**

Prepare centrals as necessary.

Dr. R. Chilibeck
Dr. L. Herwig
Dr. R. Nash
Dr. Yamada
Dr. Yamada
Dr. Yamada

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**GRADIA® DIRECT**

High-End Esthetics Made Easy.

**GRADIA DIRECT Introductory Kits**

- Unitips: 5 each of A2, A3, A3.5, AO3, CV, CT, P-A2 and Shade Guide.
- Syringes: 7 syringes of A2, A3, A3.5, AO3, CV, CT and P-A2 and a Shade Guide.
- Complete Kits with all 26 Shades also available.