**GrandioSO and GrandioSO Heavy Flow**

GrandioSO, the new, universal nano-hybrid restorative for all classes of cavity, meets the highest demands for restorations in anterior and posterior regions. GrandioSO is suitable for Class I to V restorations, reconstruction of traumatically injured anterior teeth, interlocking and splinting of loosened teeth, corrections of shape and shade to enhance aesthetic appearance, core build-up for crowns, and the fabrication of composite inlays.

As it offers superb material properties, GrandioSO is a most toothlike material with regard to its physical parameters. It allows for equally durable and aesthetic restorations, owing to a very high filler content (89 w/w%) and low shrinkage (1.61 %), a high compressive and flexural strength (439 MPa and 187 MPa, respectively), an E-modulus (16.65 GPa) and thermal expansion behaviour \( (\alpha = 27.3 \times 10^{-6} \, \text{K}^{-1}) \) similar to dentine, a very high surface hardness (210,3 M Hv), low abrasion (18 \( \mu \)m, ACTA with 200,000 cycles), as well as the optimal balance of translucence and opacity. GrandioSO polishes very well and owing to its outstanding abrasion resistance the restoration remains permanently lustrous. With 16 different shades, including the new shades \( \text{VCA3.25 and VCA5} \), the entire spectrum relevant to dentistry is covered.

GrandioSO Heavy Flow, a high-viscosity flowable universal nano-hybrid restorative, has a very high filler content (83 w/w%) and exceptional stability in comparison with conventional flow composites, as well as excellent wetting properties. Thus, it is recommended for any type of treatment that requires these qualities. For composite restorations that are directly modelled in the mouth, the increased viscosity results in simplified and stress-free placement of the composite layers. GrandioSO Heavy Flow is suitable for minimally invasive restorations of all types; restorations of small Class I cavities and extended fissure-sealing; Class II to V restorations, including treatment of cuneiform defects and cervical caries; blocking-out of undercuts; repair of fillings and veneers; luting of translucent prostheses (for example, full ceramic crowns); and interlocking and splinting of teeth with glass-fibre strands such as GrandTEC. It can also be used as base material, in combination with glass-fibre strands, for the fabrication of semi-permanent crowns and bridges.

**Optimal handling**

Owing to its smooth consistency, GrandioSO is readily packable and sculpts well without sticking to the instrument. In addition, it combines exceptionally long workability under ambient light with very short setting times during subsequent polymerisation. It is possible to cure the material reliably in 10 seconds per 2 mm increment. GrandioSO is available in easy-to-use rotating syringes and particularly economical caps.

GrandioSO Heavy Flow is subject to far lower shrinkage than conventional flow materials during polymerisation (2.96 %). It also features high compressive and flexural strength (417 MPa and 159 MPa, respectively), an E-modulus that is extremely high for a flowable material (11.85 GPa), a high surface hardness (175 M Hv), as well as low abrasion (40 \( \mu \)m, ACTA with 200,000 cycles). This slow flowing composite, which complements flowables with conventional viscosity, offers users many advantages. On the one hand, it offers a longer working period during which the material can be placed in the cavity and distributed before polymerisation; on the other hand, less time is required for the removal of any excess due to running of the material.

Owing to its reduced flowability, GrandioSO Heavy Flow is well suited to all fillings that do not require elaborate sculpting. Its excellent material and handling properties make GrandioSO Heavy Flow superior to many packable composites. GrandioSO Heavy Flow is available in a non-run, non-drip NDT syringe in ten shades and as caps in five shades. GrandioSO and GrandioSO Heavy Flow may also be used in combination.