

Comcord

composite and fibre matrix

INSTRUCTIONS FOR USE

COMCORD is a fusion of composite and filaments, applied wherever dental restorations need to be strengthened. Its unique properties make it easy to use and time saving over existing materials.

DIMENSIONS:

- length – 60 mm (+ 2 x 5 mm at the ends)
- width – 2.5 ± 0.2 mm
- thickness – 0.7 ± 0.1 mm

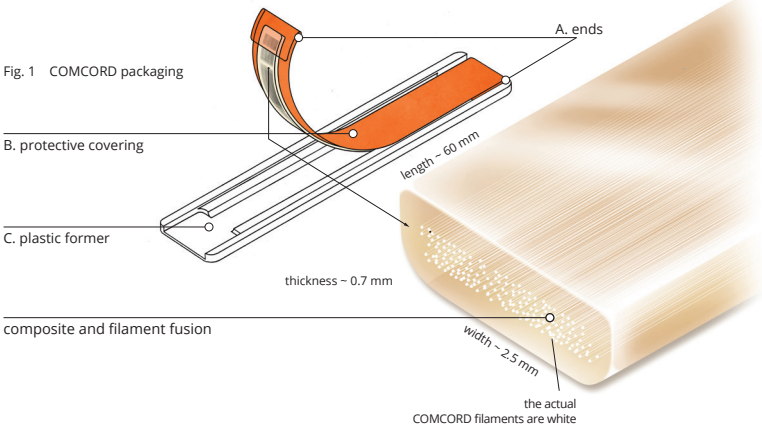


Fig. 2 COMCORD schematic structure

INDICATIONS:

- splinting of loose or avulsed teeth;
- support for permanent composite restorations such as fillings, crowns, bridges, onlays and inlays;
- composite bridges: conventional, Maryland and Rochette types;
- orthodontic retainers.

COMCORD is ready for use straight from the packaging.

GENERAL INSTRUCTIONS FOR USE

1. Prepare teeth in the normal way.
2. Isolate the gingiva in order to protect it from the contact with unpolymerised COMCORD:
 - a) if using an **indirect method**, as in the case of a bridge or a crown, protect the teeth with vaseline or a rubber dam, take an impression and cast a model;
 - b) if using a **direct method**, as in the case of splinting, isolate the operating field from blood and saliva contamination, etch, dry and apply a bonding system.
3. Polymerise in sections no longer than 5-8 mm (approximately the width of your light guide), referring to the polymerisation table.

PRODUCT HANDLING

- COMCORD is sensitive to visible light. To avoid accidental polymerisation, release the product from the plastic former in sections (Fig. 1 C), making sure the protective covering (Fig. 1 B) shields the unpolymerised part of COMCORD from light.
- COMCORD should only be handled using instruments. Do not touch it with your fingers or contaminate it in another way.
- COMCORD can be used to form the external layer of composite restorations, regardless of their size and shape. An unlimited number of COMCORD layers can be built up provided the occlusal space is sufficient and the outer layer of the device remains undisturbed. The composite layer covering the filament core of COMCORD is approximately 0.3 mm. A single, external fracture of a filament will not affect the strength of layered COMCORD restorations; however, in order to maintain a smooth surface, the damaged part should be covered with a thin layer of composite or glaze.
- COMCORD can be used for direct reconstruction of contact points. The shape of the reinforcement is not important. Optimal mechanical strength of the work is ensured by running COMCORD along the entire length of the restoration.
- COMCORD can be used alone or it can be placed in one or several layers.
- COMCORD is compatible with any composite material based on dimethacrylate resins. In the case of temporary splinting, mark a clear boundary between COMCORD and the tooth by placing a contrasting coloured composite, such as Colourflow, as the first layer. This will assist subsequent removal of the splint.

PRODUCT USE

1. Open the aluminum pouch and remove the device. Place it with the protective covering to the light. Do not remove COMCORD from the white plastic former.
2. Measure out, and if necessary cut off, the appropriate length of COMCORD together with the plastic former. We recommend cutting the device with disposable blades after having placed it on a hard surface. Store the remaining part in the aluminum pouch.
3. Grasp the end (Fig. 1 A) and hold it firmly, slowly pull COMCORD out of the plastic former (Fig. 1 C). Note: COMCORD can only be pulled out of the plastic former by one of the orange ends, never by the end which has been previously cut.
4. Remove the protective covering (Fig. 1 B) from COMCORD in sections and start placing it.
5. Begin by placing COMCORD at one of its ends in either the deepest, or the most distant, from the labial/buccal surface, part of the prepared tooth. Polymerise in accordance with the polymerisation table provided. Continue to place the remaining, unpolymerised part, section by section, removing the protective covering and polymerising the product until it runs to the opposite side of the preparation. If necessary, join two pieces of COMCORD by overlapping them by 2 mm - this will maintain the strength of the restoration.
6. Subsequently, either further layers of COMCORD or layers of composite can be built up on the prepared reinforcement, in accordance with clinical requirements. The best results are obtained by combining COMCORD with the following materials: Create, Silkflow, Colourflow, Colourant, Glaze.
7. When using the indirect method, cement the restoration in position.
8. Adjust to the bite and aesthetics of the neighbouring teeth.

POLYMERISATION TABLE

Lamp power density	< 500 mW/cm ²	500–2000 mW/cm ²	> 2000 mW/cm ²
Curing time	40 s	20-30 s	10 s

COMPOSITION

COMCORD is a system of 1056 UHMWPE (ultra high molecular weight polyethylene) filaments (Fig. 2), running parallel to one another, embedded in a composite cover based on dimethacrylate resins (Bis-GMA, TEGDMA, UDMA, Bis-EMA). COMCORD undergoes free radical polymerisation when activated by visible light at wavelengths between 400 nm and 500 nm (blue region).

PRECAUTIONS

Protect the gingiva from the contact with an unpolymerised product.
Avoid contact of an unpolymerised product with skin, eyes and soft tissues of the mouth.
In case of such contact, rinse with plenty of water. In case of any symptoms, consult a doctor giving information about the product.
In case of allergy, stop using the product.
In case of delayed allergic reaction, remove the restoration.
In case of swallowing or aspiration into the respiratory tract, seek immediate medical attention.

LIMITATIONS IN USAGE, INTERACTIONS

Ensure sufficient polymerisation of COMCORD, especially in places which are difficult to access. Insufficiently polymerised product can be allergenic.
Do not use in direct contact with materials containing eugenol. These materials disrupt polymerisation and may affect the mechanical properties of the restoration.

STORAGE

Store the material at a temperature under 25°C.
After opening, COMCORD retains all its properties for up to 12 months if it is stored at a temperature between 3°C and 5°C (37-41 °F).

CONTRAINDICATIONS AND WARNINGS

Use in accordance with the manufacturer's instructions.
Do not use in patients with a known allergy to methacrylates.
Keep out of reach of children.
Keep the material away from sources of heat.
Protect from light.
Do not use after the expiry date.
Instruct the patient on proper oral hygiene.
For use by dentists and dental technicians only.

WARRANTY

ARKONA will replace products that have been proved to be defective or will refund the price of purchase. ARKONA is not liable for any loss or damage caused by misuse or improper use of the product.

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