

# MARKETPLACE

# Successful bonding and cementation

**Tony Beale** looks at a recently introduced material specifically intended for the permanent cementation of IPS E.max and lithium disilicate restorations

With the advent of the newer generation of ceramic materials, such as IPS E.max and lithium disilicates, it soon became clear to clinicians that existing conventional fixation cements were not entirely suitable for permanent cementation of these types of dental restorations.

A different and totally compatible cement, would, therefore, be necessary to guarantee the permanent fixation of restorations produced in both IPS E.max and lithium disilicate materials.

The properties of these new materials are such that they require a high strength resin that can provide good aesthetics at the gingival margins, and they must be capable of guaranteeing long-term retention for both single and multiple unit restorations. Ideally, the cement should also be capable of being light-cured or dual-cured.

## The E.cement programme

In response to these requirements, American dental manufacturer Bisco

has developed E.cement, and this new material is now available from Optident Ltd.

The new cement is supplied in the form of a versatile all-in-one kit that allows the dental practitioner to use E.cement for IPS E.max and lithium disilicate restoration cementation in virtually all situations.

It contains 4.5g syringes of E.cement highly-filled, light-cured resin cement (both milky bright and translucent shades) that are formulated to flow within the milled resin spaces, and be fully reactive at 2mm to the absorbing light energy.

In addition, a 4.5g syringe of E.cement dual-cure resin cement is included that delivers a dedicated self-cure, to ensure effective polymerisation where curing lights

A 3ml bottle of porcelain primer is provided for silanation of the IPS E.max surface in order to prepare this



Figure 1: The complete Bisco E.cement kit

for effective cementation, and to ensure increased durability.

A 6ml bottle of the now well known, and well-proven Bisco All-Bond Universal adhesive is also included in the kit. This will create a sealed surface to both dentine and enamel, thus, contributing to the overall strength of the IPS E.max restoration.

Four per cent porcelain etch gel is another useful kit component that is used to treat lithium disilicates, and will effectively improve the bond between porcelain and the resin cement.

Bisco Select HV Etch with high viscosity for total control when etching completes the range of materials in the kit. This superior 35% high viscosity phosphoric acid etch is used as a conditioner on tooth structures prior to bonding.

Other components in the comprehensive kit include, a selection of applicator brushes, various etchant tips, mixing wells and technique instructions.

## Clinicians' requirements

The kit, therefore, provides all the components that dental clinicians require

for the successful cementation of crowns, bridges and veneers of both milled and pressed types.

E.cement allows the dental practitioner to accommodate successful bonding and cementation where varying materials and differing intraoral surfaces are to be utilised.

For example, when cementing thicker and more opaque veneers, a dual-cure aesthetic resin cement with a dual-cured total etch (ie, etch and rinse) bonding agent is recommended, and when bonding to tooth structures, adhesive resin cements or dual-cured aesthetic cement is suggested. **D**

**ALL THE MATERIALS** mentioned in this article are available from Optident Ltd, International Development Centre, Valley Drive, Ilkley, LS29 8AL. For more information, visit [www.optident.co.uk](http://www.optident.co.uk) or call (0044) 01943 605050, or email [sales@optident.co.uk](mailto:sales@optident.co.uk).



Figure 2: The E.cement light-cured and dual-cured resin syringes