DLS DENTAL LIFE SCIENCES

CROSS INFECTION CONTROL COMPOSITE

DENTAL LIFE SCIENCES

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CiCC®

CROSS INFECTION CONTROL COMPOSITE

a single-use dose blisters: 0.2 g or *0.07 g

*blisters available only in colours A1, A2, A3, A3.5

WHY CiCC?

REDUCES BIOHAZARD	REDUCES COST OF MATERIALS	REDUCES TIME AND EFFORT REQUIRED FOR ANY FILLING PROCEDURE

INDICATIONS

SMALL FILLINGS IN DECIDUOUS AND PERMANENT TEETH

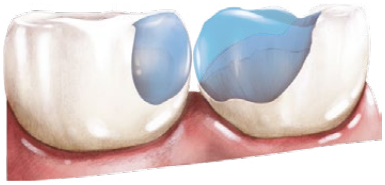
0.07 g blister is an ideal quantity for small fillings without waisting any material.

MEDIUM-SIZED FILLINGS

Combine CiCC blisters in any way you want: two 0.07 g blisters are perfect for filling medium-size cavities without the need to remove any excess material.

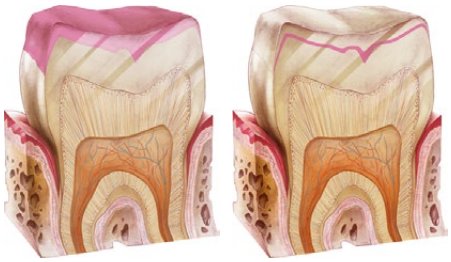
LARGE FILLINGS

CiCC is also available in a 0.2 g blister which is most suitable for large cavities and onlays.



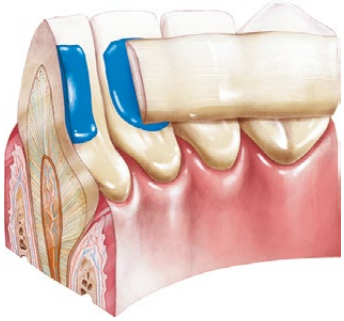
COLOURED FILLINGS IN DECIDUOUS TEETH

Why not make a dental appointment a little bit fun? Pink and blue fillings are especially popular with the youngest patients. Let them choose their colour.



TEMPORARY TREATMENTS: OCCLUSAL CORRECTION

Use CiCC PINK/BLUE to correct the bite or as the first layer of the occlusal correction. Coloured composite contrasts with enamel and thereby eliminates the risk of accidental enamel damage during its removal.



TEMPORARY TREATMENTS: SPLINTS AND RETAINERS

Using CiCC PINK/BLUE as a temporary splint or a retainer attachment ensures a clear demarcation between composite and a tooth, eliminating the risk of enamel demage.

USER FRIENDLY BLISTER PACK

1

2

Convenient grip

3

Easy opening

4

Precise dose

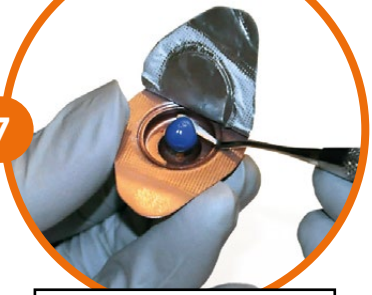
5

Precise dose

6

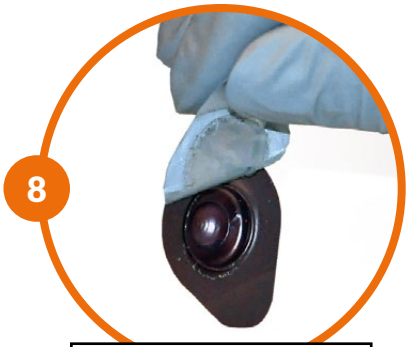
Precise dose

7



Simple application

8



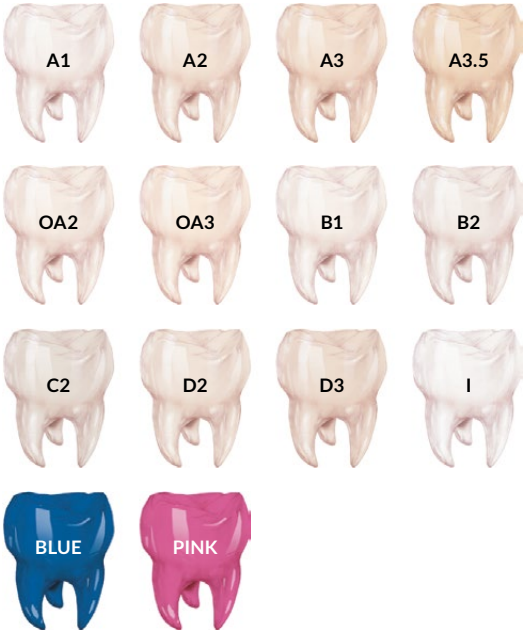
Single-use packaging

CROSS INFECTION CONTROL
C O M P O S I T E

BLISTER PACKED UNIVERSAL LIGHT CURED DENTAL COMPOSITE

AVAILABLE IN COLOURS

A1, A2, A3, A3.5, OA2, OA3, B1, B2, C2, D2, D3, I, BLUE, PINK



*0.07 g blisters available only in A1, A2, A3, A3.5

COMPOSITION

- dimethacrylate resins (BIS-GMA, TEGDMA, UDMA, Bis-EMA)
- mineral fillers Ba-Al-B-Si glass, fumed silica) about 78% of the composite
- photoinitiating system (CQ : DMAEMA),
- inhibitors, stabilisers, pigments

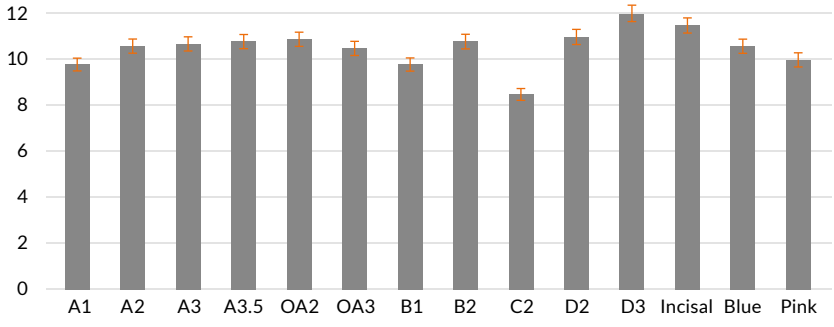
FLEXURAL MODULUS, E [GPa]

$$E\,[GPa] = \frac{Fl^3}{4bh^3d}$$

where:
F – the maximum load exerted on the specimen [N]
l – the distance between the supports [mm]
b – the width of the specimen [mm]
h – the height of the specimen [mm]
d – the deflectioncorresponding to the load F [mm]

E [GPa]

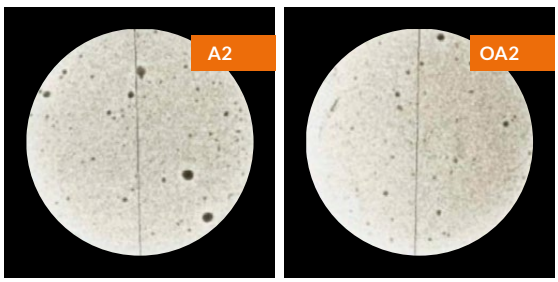
11 ±2 GPa



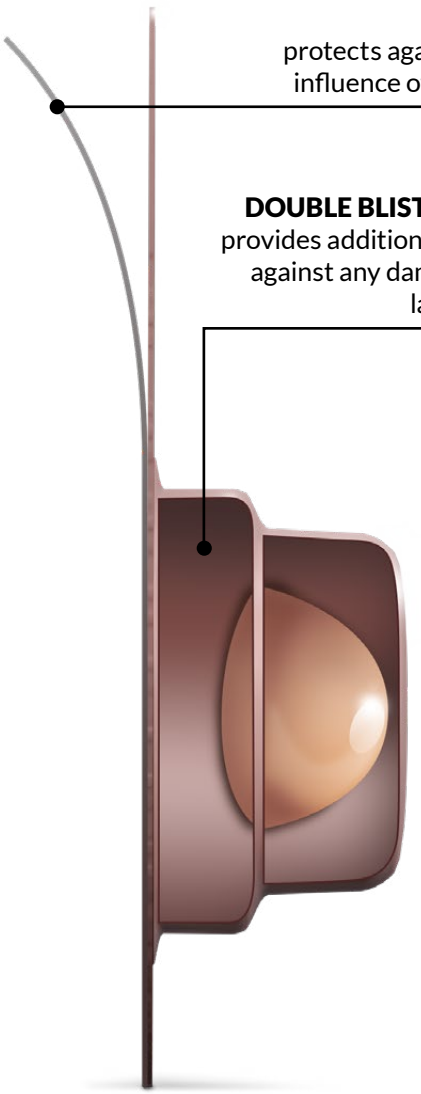
Flexural modulus at the level of 11 GPa, minimal volume shrinkage (about 1.7%) and ease of flow of CiCC composite mean an excellent marginal seal of the restoration.

RADIOPACITY

The contrast is excellent regardless of the shade.

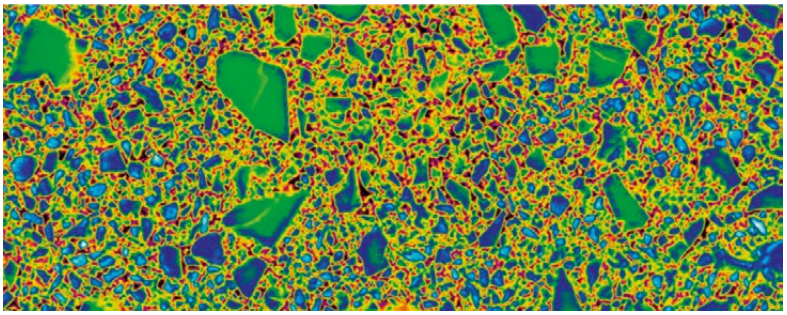


Radiographs of CiCC specimens (d = 8 mm, h = 1 mm); 175-215 greyscale (with corresponds to 5-6 mm Al)



PEEL-BACK LID
protects against the negative influence of external factors

DOUBLE BLISTER STRUCTURE
provides additional protection and against any damage to the outer layer of the blister



The optimal size and uniform distribution of filler particles in the organic matrix guarantee high mechanical strength and resistance to hydrolysis of CiCC.

FLEXURAL STRENGTH, σ [MPa]

In accordance with ISO 4049 (min. 80 MPa)

$$\sigma\,[MPa] = \frac{3Fl}{2bh^2}$$

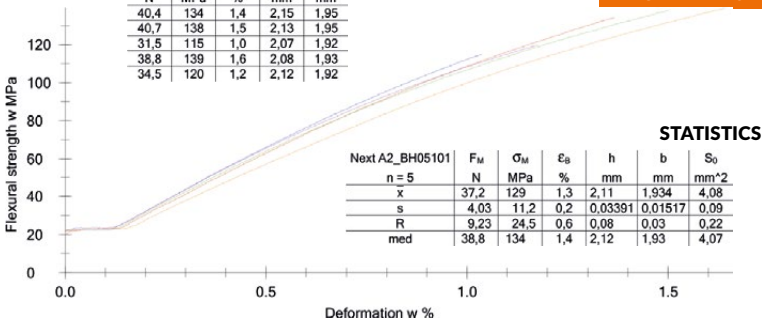
where:
F – the maximum load exerted on the specimen [N]
l – the distance between the supports [mm]
b – the width of the specimen in its centre [mm]
h – the height of the specimen in its centre [mm]

Ordering party : DLS
Order number : ex/17/4023
Relevant quality standard : EN ISO 4049:2009
Initial load : 1 N
Test speed : 0,75 mm/min
Type and designation : dental composite
Material : Next A2_Lot BH0510

RESULTS

F_M N	σ_M MPa	ε_B %	h mm	b mm
40,4	134	1,4	2,15	1,95
40,7	138	1,5	2,13	1,95
31,5	115	1,0	2,07	1,92
38,8	139	1,6	2,08	1,93
34,5	120	1,2	2,12	1,92

125 ±10 MPa



STATISTICS

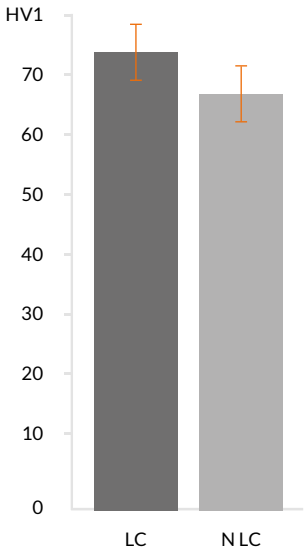
Next A2_BH05101 n = 5	F_M N	σ_M MPa	ε_B %	h mm	b mm	S_0 mm^2
x	37,2	129	1,3	2,11	1,934	4,08
s	4,03	11,2	0,2	0,03391	0,01517	0,09
R	9,23	24,5	0,6	0,08	0,03	0,22
med	38,8	134	1,4	2,12	1,93	4,07

CiCC has high levels of flexural strength regardless of the shade and the power of the curing lamp.

VIKERS HARDNESS, HV1

Load applied – 10 N; Penetration time – 20 s
The analysis was performed in specimens of h = 3.5 mm

60 - 70 VHN



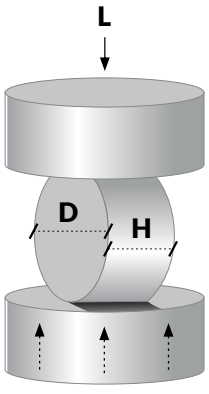
LC (light-cured)
hardness value for the light-cured surface;

NLC (non-light-cured)
hardness value for the non-light-cured surface (the bottom surface)

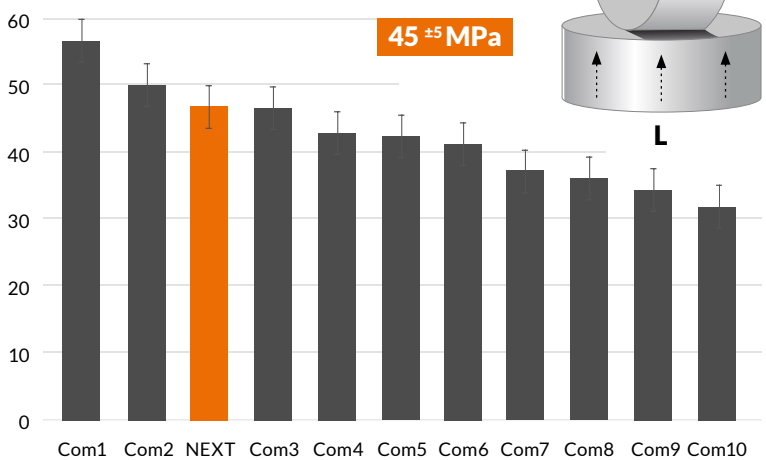
DIAMETRAL TENSILE STRENGTH, DTS (MPa)

crosshead speed - 2 mm/min,
initial force - 0.5 N

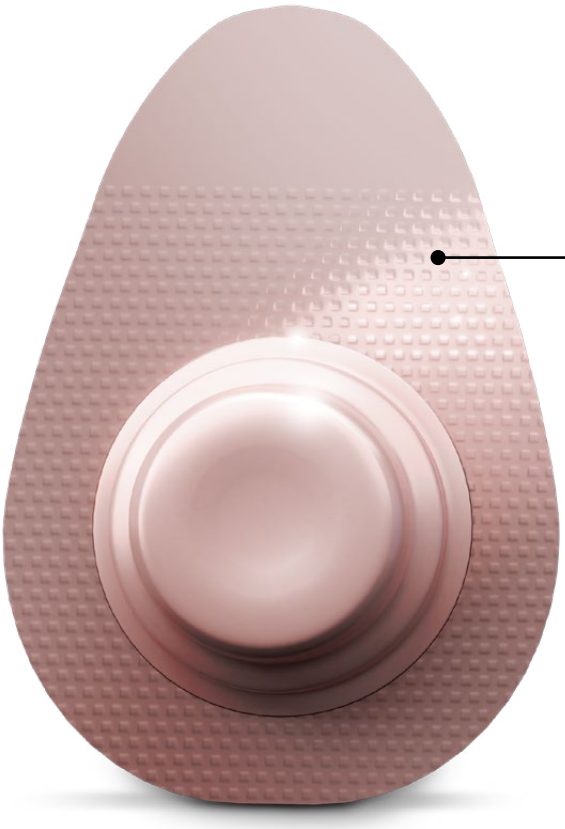
$$D = \frac{2L}{\pi DH}$$



45 ±5 MPa



HOW CICC REDUCES BIOHAZARD



CiCC blister
- is single-use
- reduces the risk of cross infection in the surgery
- is immediately discarded after each use

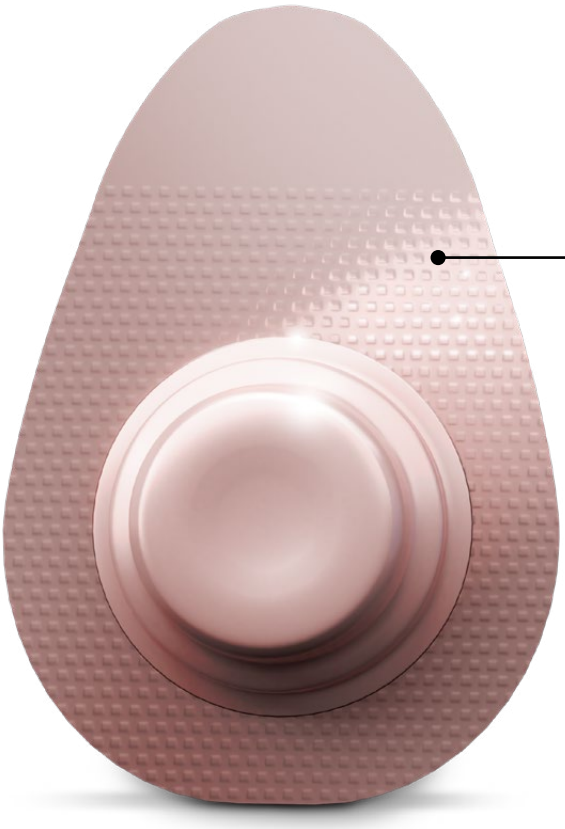
Allways use CiCC in potentially high-risk groups of patients, such as pregnant women, children, elderly, immunocompromised and chronically ill persons.

Always use CiCC in patients whose health may be a public threat i.e, persons with communicable diseases, persons of poor hygiene.

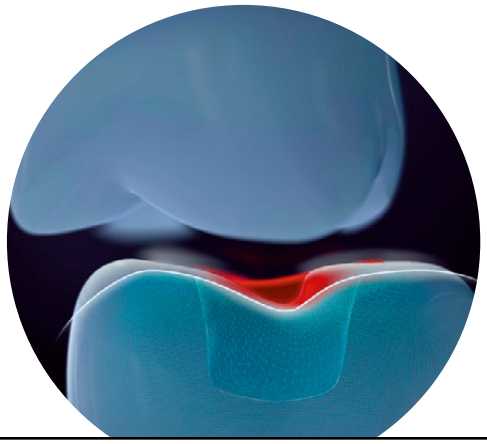
European standards mandate the use of an autoclave or the use of disposable medical products and instruments at all times.

SYRINGE
- always reused
- always contaminated with microorganism carried by the aerosol generated during dental procedures
- rarely disinfected (its tiresome disinfection after each patient is an absolute minimum of the required safety standards)
- a common source of cross infection in dental offices

HOW CICC REDUCES COST OF MATERIALS



CiCC blister
- a single-unit dose eliminates the problem of material waste
- each blister is airtight, fresh and uncontaminated
- a single-unit dose eliminates the risk of the composite being slightly polymerised thus changing its properties
- such dosage allows a precise calculation of expenditure as well as a fast and thorough stock control

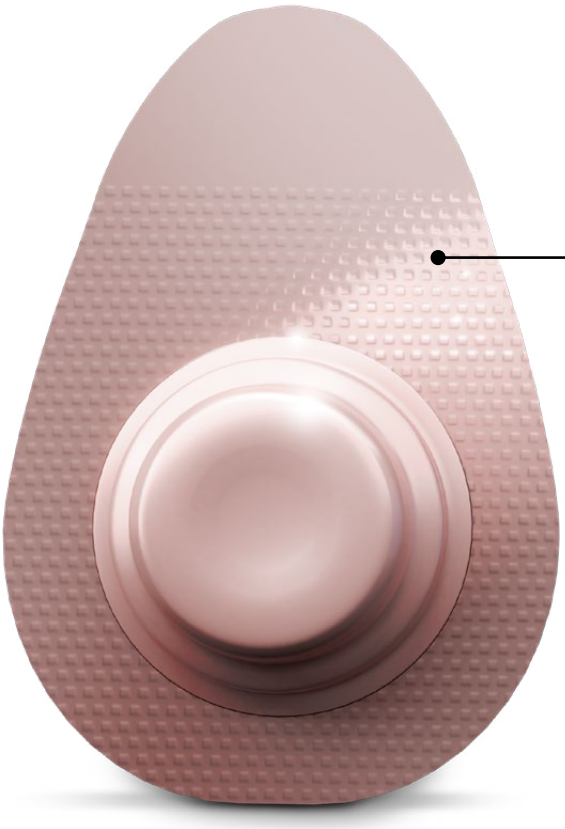


Excess composite requires a time consuming polishing and adjustment

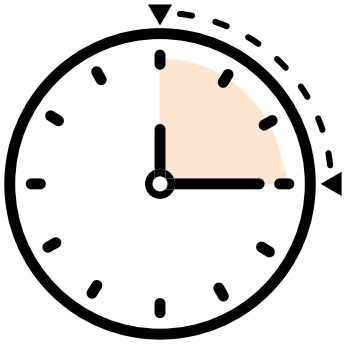
A precise dose suited to the size of the cavity

SYRINGE
- always reused, often kept unsealed, might be used for many months after first opening
- tests show that premature polymerisation and lose of properties may result in up to 10% of the composite being wasted
- its form makes precise stock control almost impossible

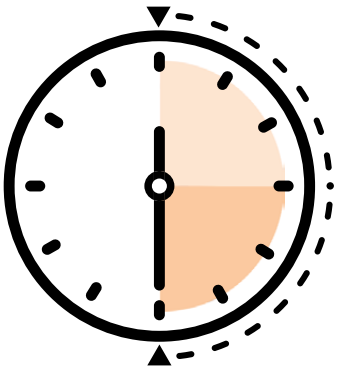
HOW CICC REDUCES TIME AND EFFORT



CiCC blister
- reduces the time of making a filling by up to 50%
- eliminates the need for all the procedures related to syringe usage



time needed to make a filling using CiCC in blisters



time needed to make a filling using composite in a syringe

SYRINGE
- is reusable so it requires constant disinfection
- forces dentists to conduct numerous unnecessary and cumbersome procedures

APPLICATION

CiCC is a lightcured dental composite suitable for all fillings, in anterior, posterior, deciduous and permanent teeth, both of, caries and non-caries etiology.

COMPOSITION

CiCC is composed of dimethacrylate resins. Mineral fillers make up about 78% by weight of the composite.

INDICATIONS

Composite fillings in all types of cavities.

Direct and indirect splints either temporary or permanent.

Repair of acrylic/composite crowns and bridges.

Temporary crowns and bridges, inlays, onlays.

Major restorations crowns/bridges, together with fibre support.

POLIMERISATION TABLE

Lamp	Shade	20 s	30 s
Halogen/LED (500-800 mW/cm²)	I	2,8 mm	3,0 mm
	A1, A2, A3, B1, B2, C2, D2	2,0 mm	2,5 mm
	A3.5, OA2, OA3, D3	1,8 mm	2,2 mm
	Blue, Pink	1,2 mm	1,5 mm
LED (>800 mW/cm²)	I	2,5 mm	3,0 mm
	A1, A2, A3, B1, B2, C2, D2	3,0 mm	3,5 mm
	A3.5, OA2, OA3, D3	2,2 mm	2,5 mm
	Blue, Pink	1,5 mm	2,0 mm

INDICATIONS FOR USE

1. Prepare the cavity. In the case of deep cavities, use with a cavity liner. Etch, rinse, dry, and apply a bonding agent to the cavity.
2. Peel back the aluminium foil and open the blister.
3. Load your instrument with the composite.
4. Fill the cavity, light curing each layer until complete.
5. Discard the blister.
6. Finish and polish as necessary.

CONTRAINDICATIONS AND LIMITATIONS IN USAGE

Do not use in patients with a known allergy to methacrylates.

It is important to isolate the operating area from saliva, blood or moisture. Contamination can disrupt polymerisation affecting the mechanical properties of the final restoration.

INTERACTIONS

Not to be used with materials containing eugenol | Eugenol disrupts polymerisation and can release unpolymerized resin. It is therefore essential to remove all traces of any temporary filling or other material containing eugenol.

PRECAUTIONS

- Avoid contact of the unpolymerized composite with the skin, eyes and soft tissues of the mouth. In case of contact, rinse with plenty of water. If there is any adverse reaction or symptoms, consult a medical practitioner.
- in case of allergy to methacrylates, stop using the product. In case of late onset of an allergic reaction, remove the restoration.
- If aspirated into the respiratory tract, seek immediate medical attention.

STORAGE

Store the material at a temperature under 25°C. If stored at lower temperature, bring back to room temperature before use.

WARNINGS

⚠

For use by dentists and dental technicians only.

Keep out of reach of children

Protect from heat and light.

Do not exceed the curing time: this may cause overheating of the soft tissue of the mouth.

Do not use after the expiry date.

Instruct the patient on proper oral hygiene.

COLOURFLOW

CICC IN BLISTERS

GLAZE

COMCORD

SEALPRIM

COMCORD SCISSORS

CHORDS

PREOP

PERIOFLUSH

SHAPEDCHORDS

SILKFLOW

ETCHGEL

CREATE

BOND

COLOURANT

CREATE IN BLISTERS