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CiCC®

CROSS INFECTION CONTROL COMPOSITE

DLS DENTAL LIFE SCIENCES

ARKONA
Laboratorium Farmakologii Stomatologicznej
Nasutów 99 C, 21-025 Niemce, Poland, EU

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CiCC®

CROSS INFECTION CONTROL
COMPOSITE

WHY CiCC

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

USES

SMALL FILLINGS IN DECIDUOUS AND PERMANENT TEETH

Composite in a 0.07 g blister is the ideal quantity for a small filling. Without wasting material.

MEDIUM-SIZED FILLINGS

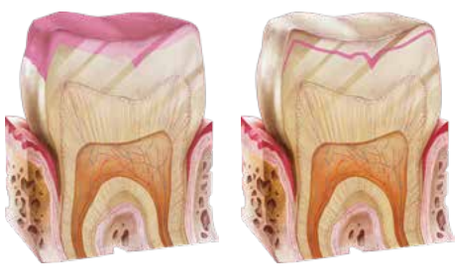
Combine CiCC blisters in any way you want: two 0.07 g blisters are perfect for filling medium-sized cavities without the need to remove any excess material.

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 of 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 retainer attachment ensures a clear demarcation between composite and a tooth, eliminating the risk of enamel damage.

USER FRIENDLY BLISTER PACK

1

2

Convenient grip

3

Easy opening

4

Precise dose

5

Precise dose

6

Precise dose

7

Simple application

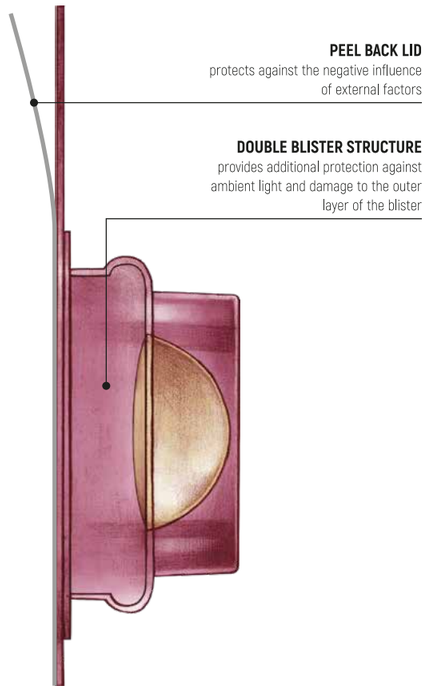
8

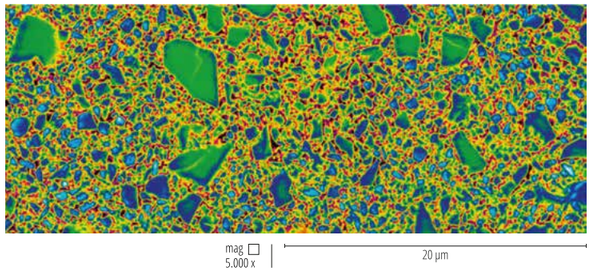
Unit dose packaging

CROSS INFECTION CONTROL
COMPOSITE

BLISTER PACKED UNIVERSAL LIGHT CURED DENTAL COMPOSITE

AVAILABLE IN 14 COLOURS:
A1, A2, A3, A3.5, OA2, OA3, B1, B2, C2, D2, D3, I, BLUE i PINK





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)

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

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]

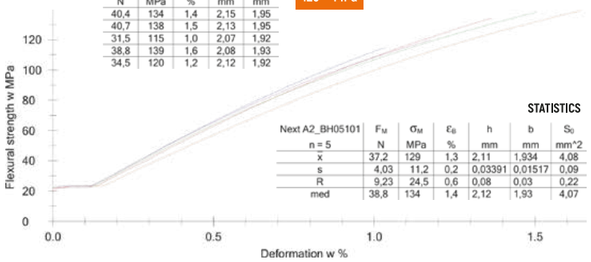
Ordering party : DLS
Order number : ex/17/4023
Relevant quality standard: EN ISO 4049:2009
Initial load : 1 N
Test speed : 0,75 mm/min

Type and designation: dental composite
Material : Next A2_Lot BH0510⁺

RESULTS

F_M	σ_M	ε_B	h	b
N	MPa	%	mm	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



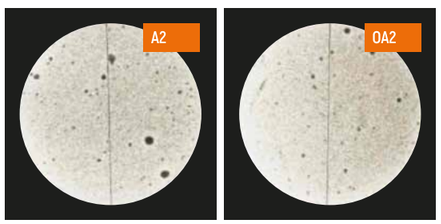
STATISTICS

Next A2_BH05101	F_M	σ_M	ε_B	h	b	S_0
n = 5	N	MPa	%	mm	mm	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 flexular strength regardless of shade and the powerof the curing lamp.

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

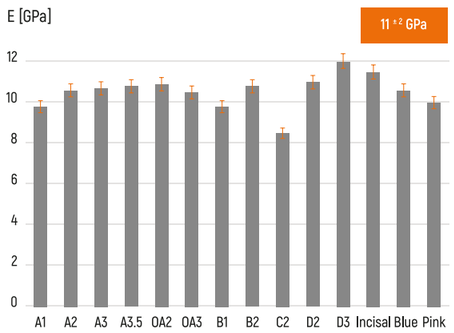
RADIOPACITY
The contrast is excellent regardless of the shade.



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

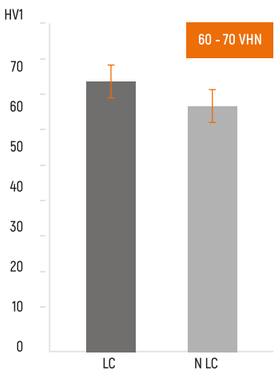
FLEXURAL MODULUS, E (GPa)
where:
F – the maximum load exerted on the specimen [N]
l – the distance between the supports [mm]
b – the width of the specimen [mm]
h – the height of the specimen [mm]
d – the deflection corresponding to the load F [mm]

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



Flexular 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.

VICKERS HARDNESS, HV1
Load applied – 10 N; Penetration time – 20 s
The analysis was performer on specimens of h = 3.5 mm

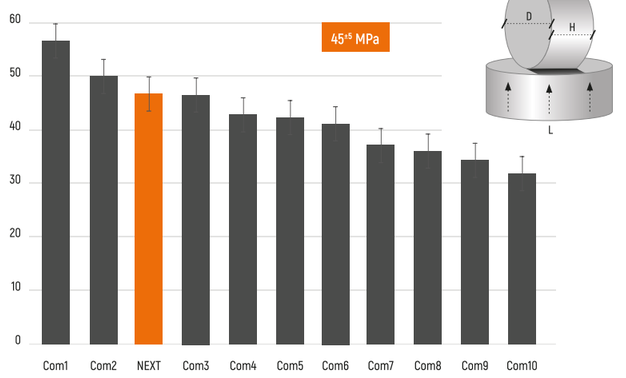


LC (light-cured) – hardness value for the light-cured surface;

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

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

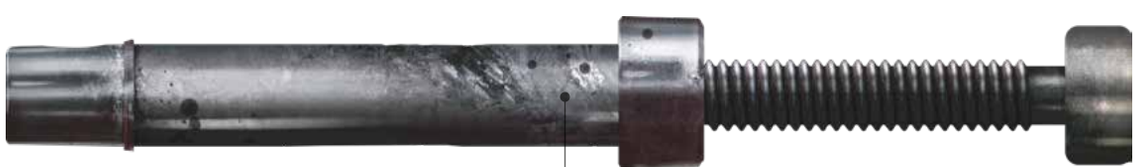


CiCC BLISTER
- is single-use
- reduces the risk of cross infection in the surgery
- contaminated materials are immediately discarded after each use

Always 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 health threat i.e. persons with communicable diseases, persons of poor hygiene.

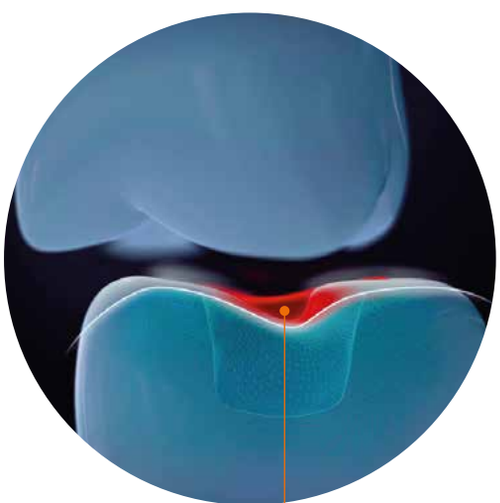
European standards mandate the use of an autoclave or the use of disposable medical products and instruments at all times.



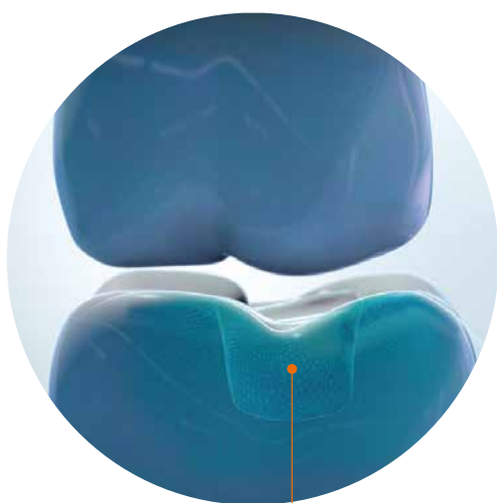
SYRINGE
- always reused
- always contaminated with microorganisms carried by the aerosol generated during dental procedures
- rarely disinfected (its tiresome disinfection after each patient is an absolute minimum of the required safety standards)
- a common source of cross infection in dental offices

HOW CICC REDUCES COST OF MATERIALS

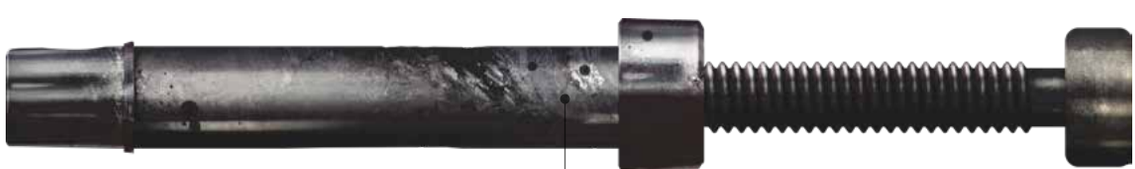
CiCC BLISTER
- a single-unit dose eliminates the problem of waste
- each blister is airtight, fresh and uncontaminated
- each blister is stable, without risk of the composite being slightly polymerised thus changing its properties
- allows precise calculation of expenditure as well as fast and thorough stock control



Excess composite requires time consuming polishing and adjustment



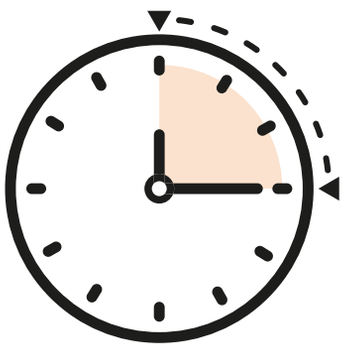
A precise dose suited to the size of the cavity



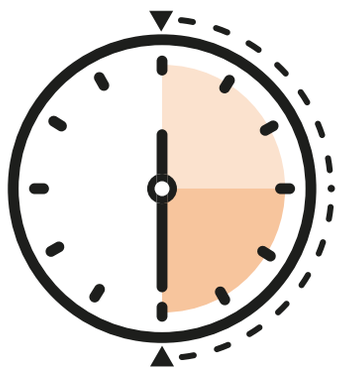
SYRINGE
- always reused, often open kept unsealed, might be used many months after first opening
- tests show that premature polymerisation and lose of properties may result in up to 10% of the composite being wasted
- its form makes precise stock control almost impossible, which in turn disturbs the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

HOW CICC REDUCES TIME AND EFFORT

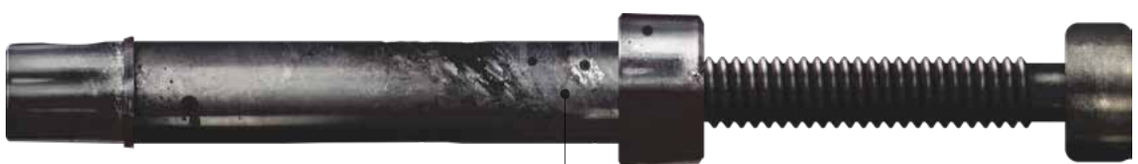
CiCC BLISTER
- reduces the time of making a filling by up to 50%
- eliminates the need for all the procedures related to syringes or composite guns usage



filling made using CiCC



filling made using a syringe



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

APPLICATION

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

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	3,0
	A1, A2, A3, B1, B2, C2, D2	2,0	2,5
	A3.5, OA2, OA3, D3	1,8	2,2
	Blue, Pink	1,2	1,5
LED (800-1200 mW/cm²)	I	2,5	3,0
	A1, A2, A3, B1, B2, C2, D2	3,0	3,5
	A3.5, OA2, OA3, D3	2,2	2,5
	Blue, Pink	1,5	2,0

SHADES

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

INSTRUCTIONS 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 unpolymerised resin. It is therefore essential to remove all traces of any temporary filling or other material containing eugenol.

PRECAUTIONS

- Avoid contact of the unpolymerised 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 between 3-28°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 tissues of the mouth.
Do not use after the expiry date.
Instruct the patient on proper oral hygiene.

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