



**Feels
good
to save
teeth**

Biodentine™ XP



Biodentine™ XP

Predictable
outcomes

Durable
restorations

Simple
workflow

FEE
GOO
TO S
TEE



ELLS
OOD
SAVE
ETH

Patient
comfort

Adapted
to all deep caries
cases

Biodentine™ XP

PREDICTABLE OUTCOMES

Trust in the success of your vital pulp therapy.
Eliminate retreatments.
Protect your practice reputation.

Clinical excellence

>94%
Clinical success **in 3 VPT**
indications

Systematic review and meta-analysis of
Randomized Controlled Trials in VPT (2025)¹

CLINICAL SUCCESS RATE

96%²

Direct
pulp capping

95.4%³

Pulpotomy

96%⁴

Indirect
pulp capping

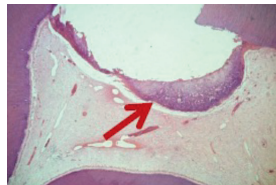


Biodentine™ XP is a calcium silicate material designed for Vital Pulp Therapy procedures, as recommended by ESE and AAE Guidelines

Proven biological properties

SUPERIOR BIOACTIVITY⁵⁻⁸ Favorable interaction with pulp cells

Dense dentinal bridge formation to protect pulp



Remineralization of damaged dentin

EXCELLENT BIOCOMPATIBILITY⁹⁻¹¹



RESIN



EXTRA-PURE
C3S



CELL
DEATH

ANTIBACTERIAL PROPERTIES¹²⁻¹³

pH **11+**

At release
maintained for 28 days

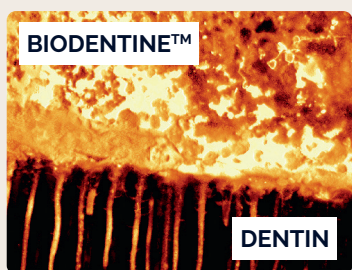


Unfavorable environment
for bacteria responsible for
pain and secondary caries

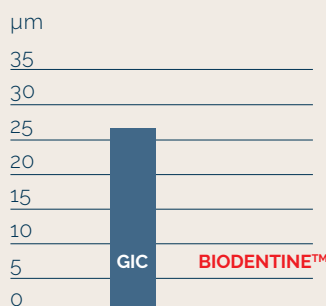
DURABLE RESTORATIONS

Gain the total reassurance that comes with long-lasting restorations, satisfied patients, and a stellar reputation.

Tight marginal seal under composite^{8,14-17}



Deep penetration within dentin tubes



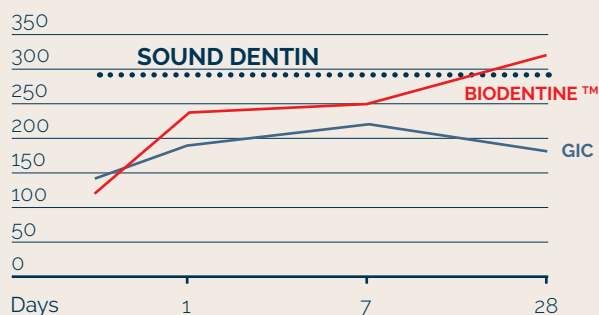
Less microleakage than GIC

0
Photo-polymerization shrinkage

Unlike resin-based materials

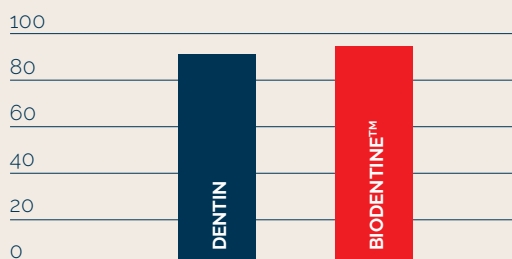
Strong mechanical properties¹⁸⁻²⁰

Compressive Strength MPa (24 hours)



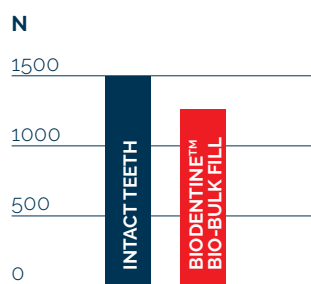
Dentin-like resistance to mastication forces

Vickers Micro Hardness HVN (24 hours)



Dentin-like stress absorption

High resistance to fracture²¹

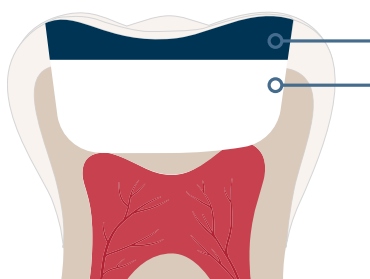


Resistance to fracture

Biodentine™ in 6mm increment provides:

- Fracture resistance comparable to intact teeth
- Tight hermetic seal

Enhanced restorative material



Resin composite

Bio-Bulk Fill:
Biodentine™
placed in
a single block
> 4mm

Biodentine™ combines
**BIOLOGICAL &
RESTORATIVE** properties
for durable restorations

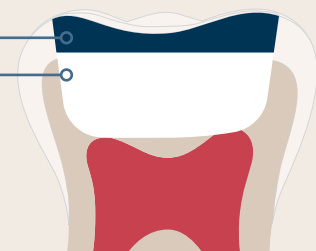
Streamline your workflow with one material that combines biological & restorative functions in one.

All-in-one: Biological & Restorative properties



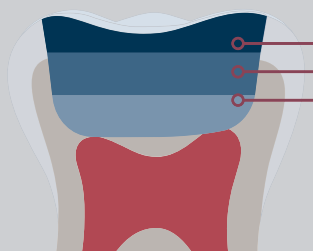
ONE MATERIAL

Resin composite
Bio-Bulk Fill:
Biodentine™
placed in a single
block > 4mm



MULTIPLE MATERIALS

Resin composite
Filling
Liner



Streamlined Bio-Bulk Fill procedure^{22,23}

Fill the **entire cavity** with only Biodentine™ XP **from the pulp to the tooth surface.**



Final enamel restoration to be performed:

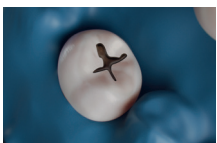
- > In the same session
- Or
- > In a second session, between 2 weeks and 6 months later²⁴

Only one material to fill the entire cavity

- Fewer materials, streamlined workflow
- Direct placement in the tooth
- Same technique for all VPT procedures (IPC, DPC, pulpotomy)
- Adapted to all caries removal techniques
- Final enamel restoration in 1 or 2 sessions

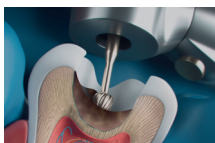
Simplified Bio-Bulk Fill protocol

1



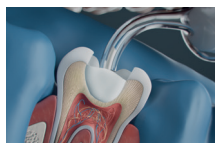
Isolate the tooth
with a rubber dam

2



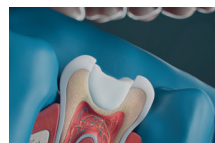
Remove remaining
caries

3



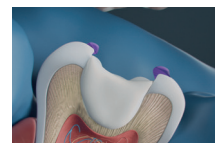
Fill the cavity with
Biodentine™ XP in
Bio-Bulk Fill

4



Leave 2mm space
and wait for setting

5



Apply a universal
adhesive containing
10-MDP for optimal
bonding

6



Place a resin
composite

'There's no need for multiple layers or thin increments—I can simply fill the tooth with a single material and place the composite directly over Biodentine™. This streamlines the process, reduces the risk of errors, and saves valuable clinical time.' – Dr. Patel (UK).

Detailed Bio-Bulk Fill Protocol

CAVITY PREPARATION

✓ Aligned with ESE and AAE Vital Pulp Therapy Guidelines

- 1 Assess the pulp status
- 2 Isolate the tooth with a rubber dam
- 3 Perform caries excavation (use your preferred technique)

In the event of a **pulp exposure**, achieve haemostasis by compression (1-6% NaOCL)

If haemostasis cannot be achieved within 5 minutes, further pulp tissue should be removed (perform partial or full pulpotomy)

BIO-BULK FILL

- 4 Activate and mix the Biodentine™ XP cartridge with the Biodentine™ XP Mixer
- 5 Using the Biodentine™ XP Gun, place the tip at the cavity base and slowly inject Biodentine™ XP to fill the cavity on > 4mm (Bio-Bulk Fill)²
- 6 Ensure a good marginal adaptation, and limit occlusal shaping and pressure while Biodentine™ XP sets

FINAL RESTORATION

in the same session

- 7 Leave 2 mm of occlusal space, and wait until Biodentine™ XP has set (~12 min)
- 8 Apply a self-etch adhesive system (selective etch or self-etch mode) over Biodentine™ XP and the tooth structure - ideally a universal adhesive containing 10-MDP for optimal bonding
- 9 Place a resin composite
- 10 Patient recall according to current recommendations

FINAL RESTORATION

in a 2nd session

(2 weeks to 6 months after the 1st session)

- 7 At 2nd session, assess the pulp vitality status
- 8 Cut Biodentine™ XP back sufficiently (average of 2 mm)
- 9 Apply the adhesive system: total etch (etch&rinse) or self-etch over Biodentine™ XP and the tooth structure - ideally a universal adhesive containing 10-MDP for optimal bonding
- 10 Place a resin composite
- 11 Patient recall according to current recommendations

(1) Procedure extracted from international dental practitioners experts board (Position statement, September 2023).

(2) Possible technique in the context of a coronal restoration.

*Fill the entire cavity with only Biodentine™ XP from the pulp to the tooth surface. Final enamel restoration to be performed in the same session or in the second session which can be performed between 2 weeks and 6 months later.

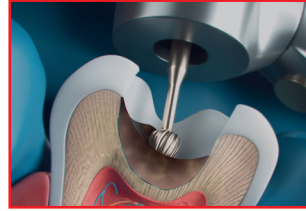
CAVITY PREPARATION



1. Assess the pulp status



2. Isolate the tooth with a rubber dam



3. Perform caries excavation (use your preferred technique)

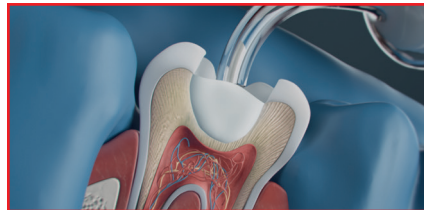


In the event of a **pulp exposure**, achieve haemostasis by compression (1-6 % NaOCL)

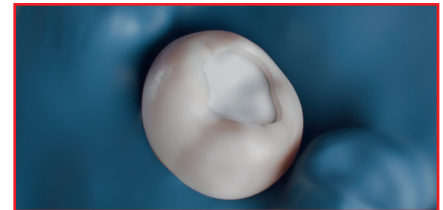
BIO-BULK FILL



4. Activate and mix the Biodentine™ XP cartridge with the Biodentine™ XP Mixer



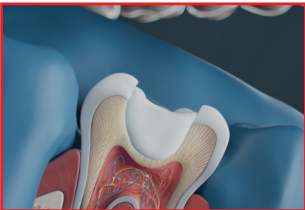
5. Using the Biodentine™ XP Gun, place the tip at the cavity base and slowly inject Biodentine™ XP to fill the cavity on > 4mm (Bio-Bulk Fill)²



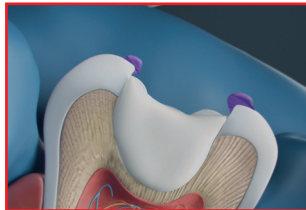
6. Ensure a good marginal adaptation, and limit occlusal shaping and pressure while Biodentine™ XP sets

FINAL RESTORATION

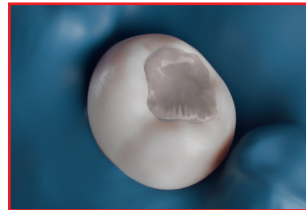
in the same session



7. Leave 2 mm of occlusal space, and wait until Biodentine™ XP has set (~12 min)



8. Apply a self-etch adhesive system (selective etch or self-etch mode) over Biodentine™ XP and the tooth structure



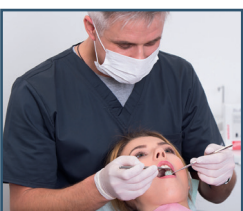
9. Place a resin composite



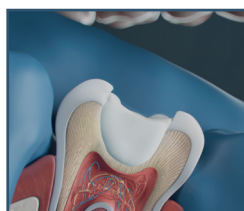
10. Patient recall according to current recommendations

FINAL RESTORATION

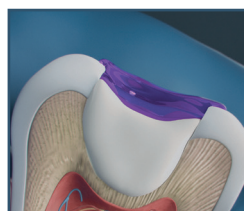
in a 2nd session - 2 weeks to 6 months after the 1st session)



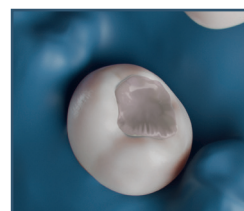
7. At 2nd session, assess the pulp vitality status



8. Cut Biodentine™ XP back sufficiently (average of 2 mm)



9. Apply the adhesive system: total etch (etch&rinse) or self-etch over Biodentine™ XP and the tooth structure



10. Place a resin composite



11. Patient recall according to current recommendations

Aiming for a pain-free patient means fewer disruptions, fewer emergency calls, and fewer return visits.
Put their comfort first.

Patient comfort^{3,25}



DURING THE VITAL PULP THERAPY PROCEDURE

Compared to Root Canal Treatment:

- Less invasive
- Less time spent
- Fewer materials used
- Fewer manipulations in the mouth
- Lower cost

"Maintaining pulp vitality is cost-effective and preferable to root canal treatment. Saving the pulp is not only clinically valid, it's also economically valid."

Prof. Dr. Schwendicke, LMU Munich

Discover
the full article
here





AFTER THE VITAL PULP THERAPY PROCEDURE

6 MONTHS, 1 YEAR, 3 YEARS AND BEYOND

- No thermal sensitivity
- 0 discomfort during mastication
- 0 spontaneous pain

Clinical follow-up on 10 patients (at 6, 12, 36 months) ¹

Pain-relieving procedure

93%

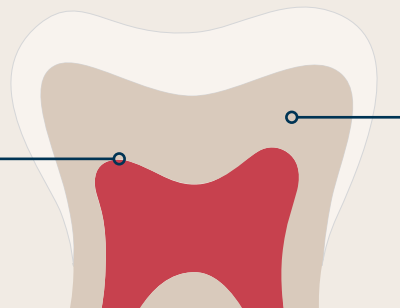
felt no postoperative pain
after using Biodentine in direct
pulp capping (114 patients)²⁶

"The evidence from clinical studies supports a pain-relieving effect for Biodentine™ in asymptomatic and symptomatic pulpitis, which is in line with its in vitro anti-inflammatory action." Prof. About ¹³

Doubts and uncertainties in indirect pulp treatment

PULP CONCERNS

- CLOSE PROXIMITY TO THE PULP?
- BACTERIA?
- INFLAMMATION?



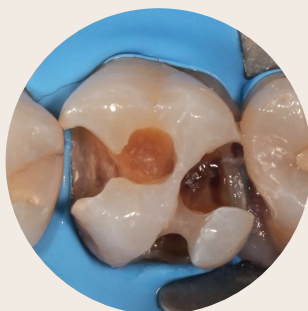
DENTIN CONCERNS

- DEMINERALIZED DENTIN?
- RESISTANCE?
- SEALING?

Caries removal techniques

SCR

selective caries removal

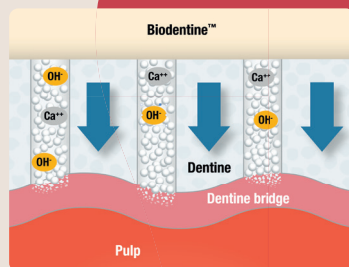
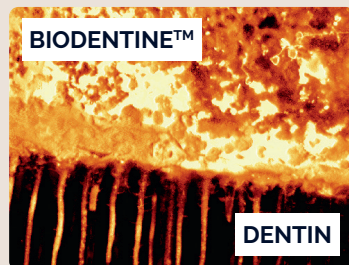
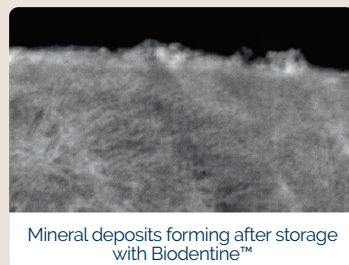
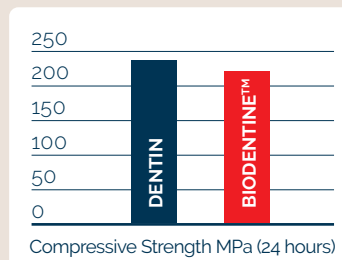


NSCR

non-selective caries removal



Whatever your technique in indirect pulp treatment, you can rise to the challenge with confidence and deliver predictable results.



Resists¹⁸⁻²¹

Fracture resistance comparable to intact teeth thanks to dentin-like mechanical properties.

Remineralizes⁵

Creates conditions for mineral deposition in demineralized dentin unlike GIC.

Seals^{8, 11, 14-17, 21}

- Penetrates dentin tubules
- Dimensional stability
- 0 microleakage

Preserves^{5, 8, 12, 13}

Limits proliferation of bacteria and creates a dentinal bridge.

Heals⁵⁻¹¹

Heals the pulp thanks to superior bioactivity, biocompatibility and anti-inflammatory effect.

Indirect pulp treatment:

96%

Clinical Success⁴

What is the true value of saving natural teeth?

Biodentine™ XP



Biodentine™ XP 200
Box of 10 cartridges



Biodentine™ XP
Mixer



Biodentine™ XP 500
Box of 10 cartridges



Biodentine™ XP
Gun

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