



**HARVARD**

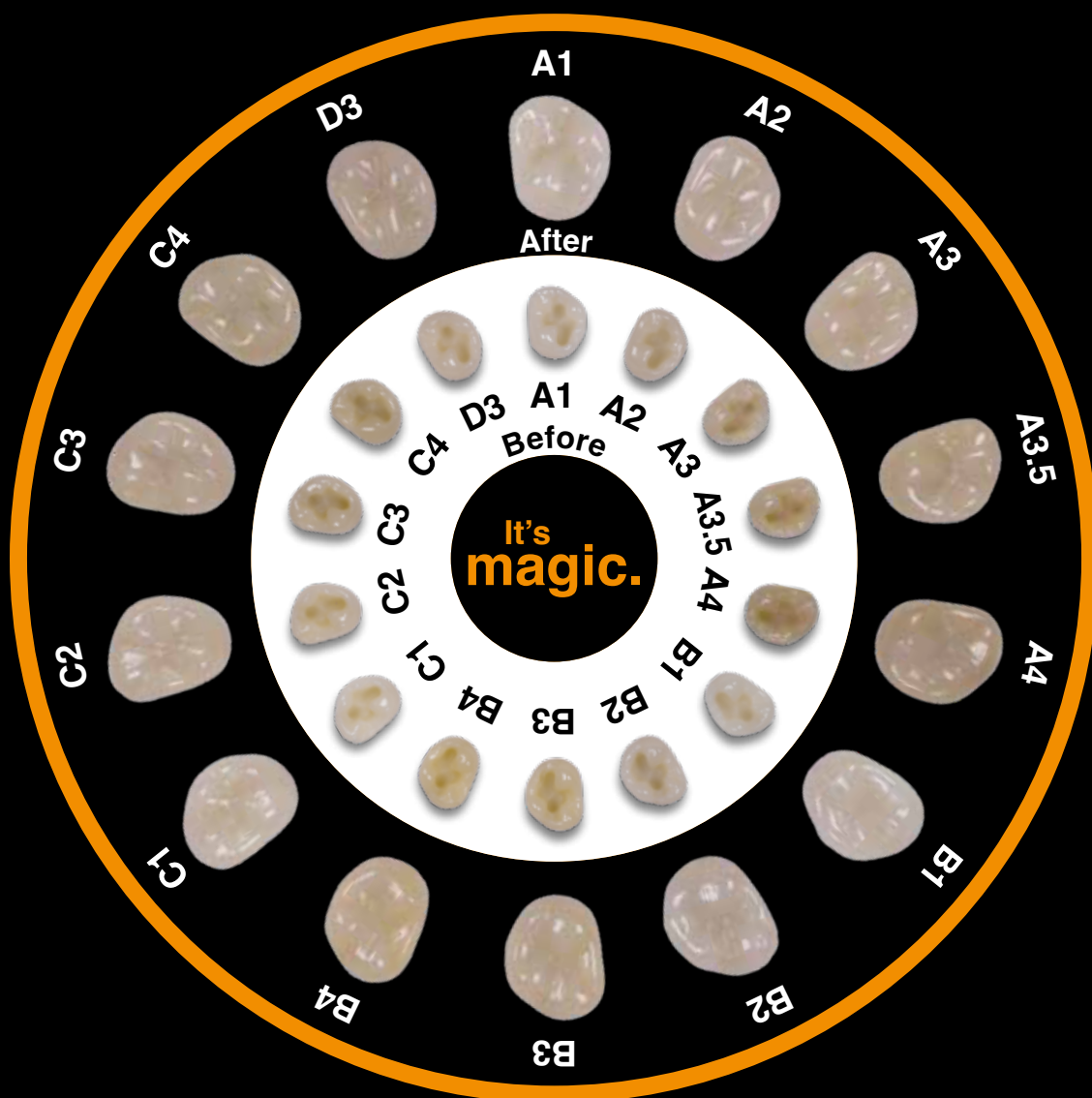
# RESTORATIVES

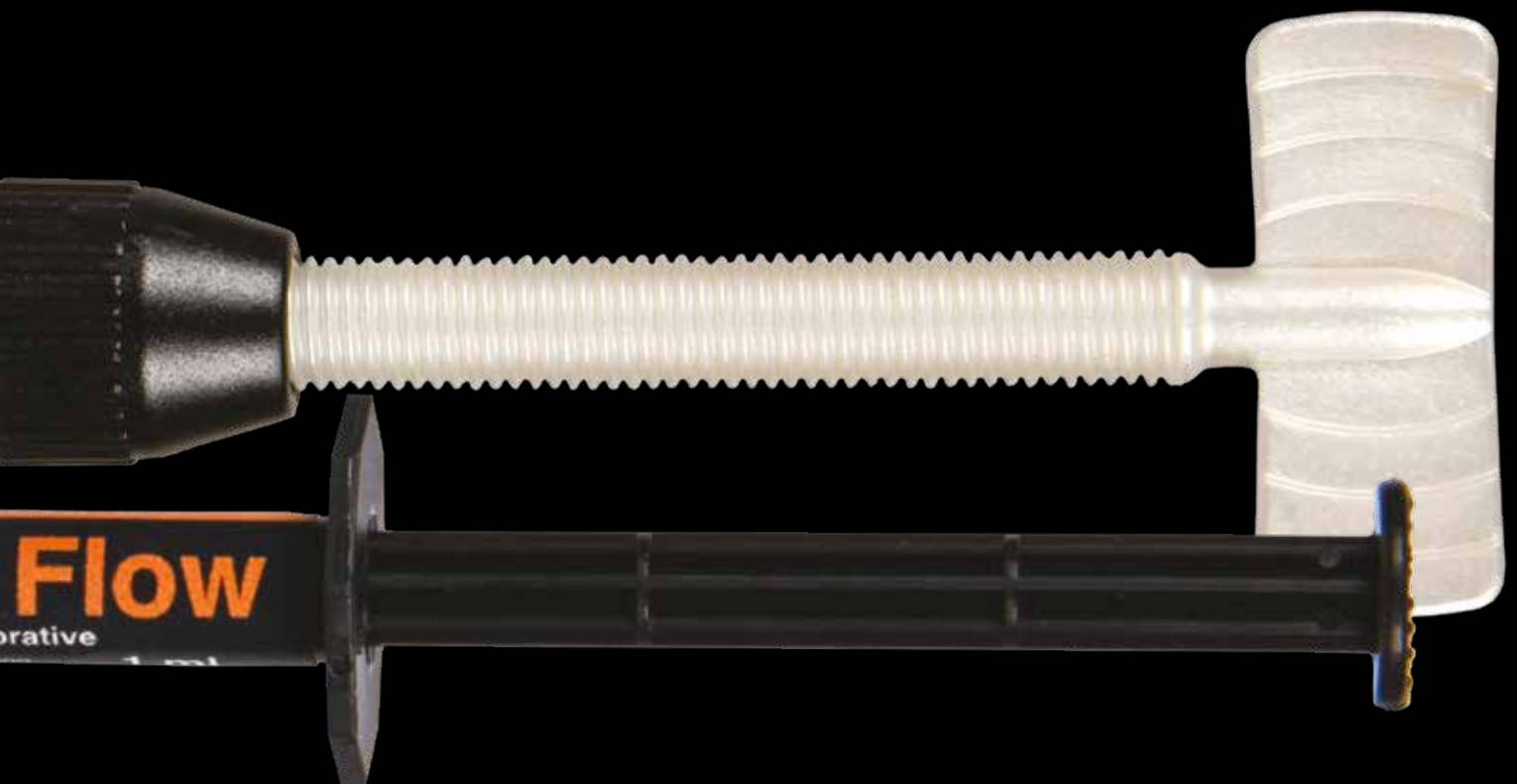
A large selection of composite restoratives, cavity liners, adhesives and filling cements in classic or resin reinforced versions makes up the comprehensive Harvard range in the area of restoration.

- >> **Filling Composites**
- >> **Liners**
- >> **Light Cure Adhesives**
- >> **Filling Cements**
- >> **Pulp Protection**

**Pictures from practice**  
1.: Harvard Block 'n Mask and then Harvard MultiChrome  
2.: Perfect marginal fit with Harvard UltraFill Universal Opacity  
3.: Cavity lining with Harvard BioCal®-Line  
4.: Harvard BioCal®-CAP on the exposed pulp







# Harvard MultiChrome It's magic.

**Shade-adaptive  
composite for almost all  
tooth shades.**

- >> Hyper-Nano technology, spherical fillers
- >> Without any color pigments
- >> Light-optical chameleon effect for perfect match with natural tooth substance
- >> Simple storage logistics

# Filling Composites

## Restoratives



Dentist Dr. Basel Hourri



**„Easy to use and excellent results.“**

„Patient came to the office having an old composite restoration from canine to canine. And you can see old dull not shine composite filling with discoloration.“



1: Sharps and broken edges with open margins.

2: After applying the wedges and the retraction cord for pushing the gingiva, removed the old composite fillings and made new preparations, excavation of the decays, have a sound dentine to get an optimal place for dentine shade.

3: Applying on interproximal areas Harvard MultiChrome composite.

4: Restoration before polishing.

5: Restoration after polishing.

6: MultiChrome restoration.



„Broken incisal edge 21. Apply Harvard Block 'n Mask then Harvard MultiChrome Multi-Shade Restorative.“



**Optimal shade-adaptation for almost all tooth shades after light polymerization.**



## Harvard MultiChrome

Light cure, multi-shade, composite restorative

- >> Shade-adaptive composite for almost all tooth shades
- >> Invisible transition between enamel, dentine and composite
- >> Spherical fillers
- >> Hyper-Nano technology
- >> Without any color pigments
- >> Light-optical chameleon effect
- >> Superior handling properties
- >> Non-sticky consistency, stays where placed
- >> Permanent high gloss after polishing
- >> Low shrinkage
- >> High abrasion resistance
- >> Excellent physical strength
- >> Radiopaque
- >> Opalescent
- >> Simple storage logistics

### Order Details

Harvard MultiChrome	
3 g syringe	7100001
20 x 0.25 g OptiTips®	7100002

Harvard MultiChrome Kit	
3 syringes ea. 3 g Harvard MultiChrome,	7100009
1 syringe 3 g Harvard Block 'n Mask	

Harvard Block 'n Mask	
3 g syringe	7100005
20 x 0.25 g OptiTips®	7100007

Harvard Applier OptiTips®	7095200
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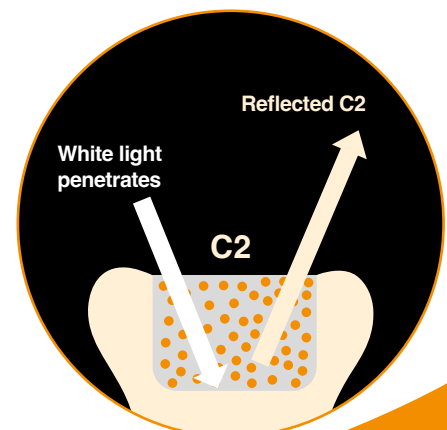
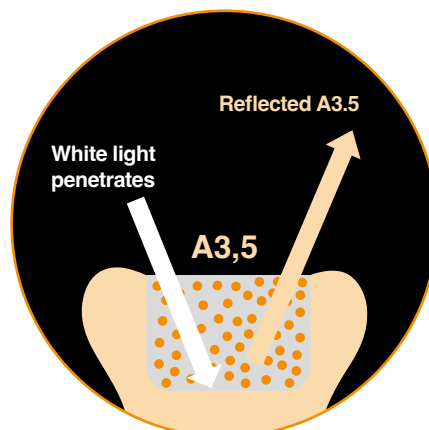
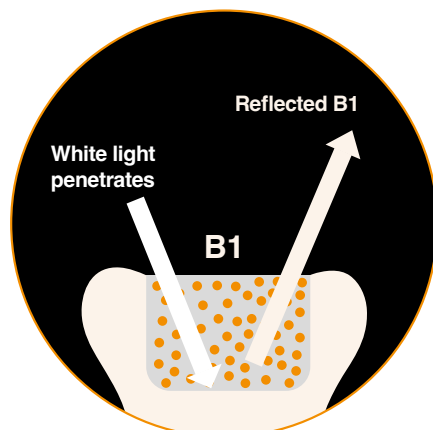
### Harvard Block 'n Mask

Composite for blocking and masking

- >> Corrects the background for shade matching in difficult situations (e.g. when the dark oral cavity shines through) and in case of strong discolourations



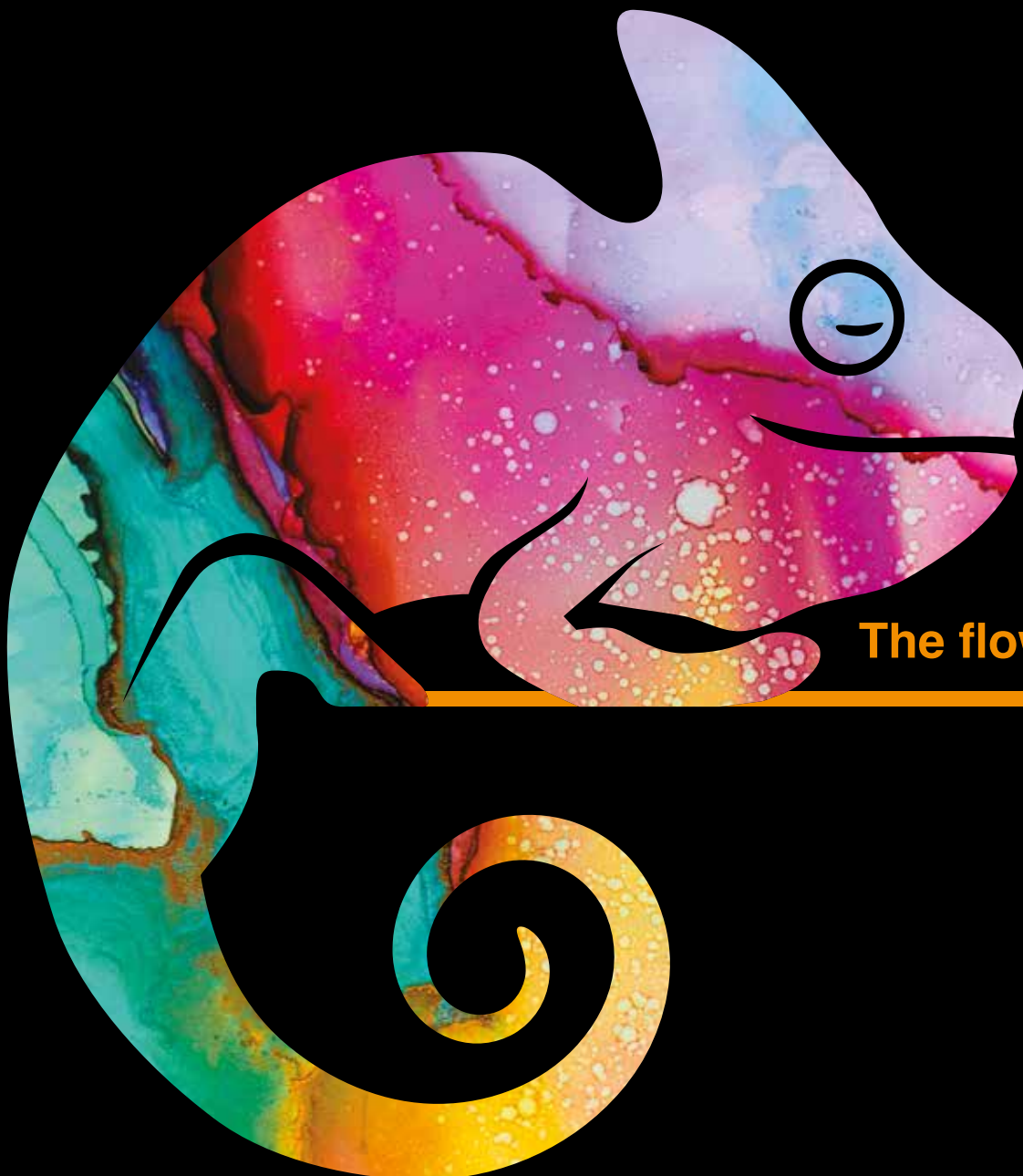
**Harvard MultiChrome** with round Hyper-Nano fillers. White light is refracted and reflected in cavity color.



# Harvard MultiChrome Flow

**Perfect for  
small enamel  
restorations.**

- >> Hyper-Nano technology, spherical fillers
- >> Shade-adaptive composite for almost all tooth shades
- >> Without any color pigments
- >> Light-optical chameleon effect
- >> Simple storage logistics



**The flowable**



## Harvard MultiChrome Flow

Light cure, multi-shade, flowable composite restorative

- >> Shade-adaptive flowable composite for almost all tooth shades
- >> Invisible transition between enamel, dentine and composite
- >> Spherical fillers
- >> Hyper-Nano technology
- >> Without any color pigments
- >> Light-optical chameleon effect
- >> Excellent handling
- >> Optimal flow consistency, thixotropic
- >> Permanent high gloss after polishing
- >> Low shrinkage
- >> High abrasion resistance
- >> Excellent physical strength
- >> Radiopaque
- >> Opalescent
- >> Simple storage logistics

### Order Details

Harvard MultiChrome Flow	
2 x 1 ml syringe incl. 8 needle tips H18	7100003

Harvard Block 'n Mask Flow	
2 x 1 ml syringe incl. 8 needle tips H18	7100006

Harvard NeedleTips H18	
Refill bag with 50 needle tips	7095158



### Harvard Block 'n Mask Flow

Flowable composite for blocking and masking

- >> Corrects the background for shade matching in difficult situations (e.g. when the dark oral cavity shines through) and in case of strong discolourations



with chameleon effect.

Extended posterior fissure

Restoration with  
Harvard MultiChrome Flow



Before



After

Optimal **shade-adaptation** for small enamel restorations.

Dentist MSc. Andreas Kluschke



„Perfect esthetic results with the Harvard UltraFill Multi Opacity layering technique.“

## Multi Opacity Cases



Dr. Pawel Paszkiewicz



„For this demanding case I decided to use Harvard UltraFill.“

1: Initial situation with incisor tooth fracture

2: Removal of the old composite, Silicone impression



3: A palatal shell was cast on as a basis for the restoration

4: Mamelons were prepared with dentine composite (90% opacity – Harvard UltraFill A1 D)

5: Final layer was applied to the mamelons with enamel opacity (80% opacity – Harvard UltraFill A1 E) and an incisal edge of Harvard UltraFill INC



6: After the 3D anatomical correction



## Harvard UltraFill

Ultra gloss, opalescent, high performance composite  
for **anterior** and posterior restorations

- >> Permanent high gloss
- >> Opalescence
- >> Tooth-like fluorescence
- >> Easy to work with
- >> Superior handling properties
- >> Low polymerization shrinkage
- >> High abrasion resistance
- >> Optimal physical properties
- >> Radiopaque



### Order Details

#### Multi Opacity

##### 3 g syringe

A1 E	7131111
A1 D	7121111
A2 E	7131112
A2 D	7121112
A3 E	7131113
A3 D	7121113
A3.5 E	7131114
A3.5 D	7121114
BL E	7131153
BL D	7121152
INC	7141160
T	7141170

#### Universal Opacity

##### 3 g syringe

A1 U	7111111
A2 U	7111112
A3 U	7111113
A3.5 U	7111114
BL U	7111151

##### 20 x 0.25 g OptiTips®

A1 U	7111211
A2 U	7111212
A3 U	7111213
A3.5 U	7111214

#### Harvard Applier OptiTips®

7095200

Harvard UltraFill  
„Universal Opacity“ IntroKit S  
3 syringes ea. 3 g, A2 U, A3 U, A3.5 U

7175100

Further shades are possible. Please contact us.



### Multi Opacity layering technique



- >> Multiple shades in **various** opacities
- >> Excellent permanent esthetics
- >> Chameleon effect

### Universal Opacity easy technique



- >> Selected shades in **one** opacity
- >> In 80 % of clinical cases best compromise of opacity

## Harvard UltraFill Flow

Ultra gloss, opalescent, flowable composite  
for **anterior** and posterior restorations

- >> Easy polishability, permanent high gloss
- >> Opalescence
- >> Optimal flow consistency
- >> Thixotropic
- >> Tooth-like fluorescence
- >> Reduced polymerization shrinkage
- >> High abrasion resistance
- >> Optimal physical properties
- >> Easy to work with
- >> Radiopaque
- >> Available in Comfortip®F

Order Details			
2 x 1 ml syringe		20 x 0.25 g Comfortip® F	
A1	7112111	A2	7112212
A2	7112112	A3.5	7112214
A3	7112113		
A3.5	7112114		
B1	7112121		
BL	7112151		
incl. 8 needle tips H18			
Harvard NeedleTips H18		7095158	
Refill bag with 50 needle tips			
Harvard Applier OptiTips®		7095200	

No stock item, please contact the Harvard sales team.



Dentist MSc. Andreas Kluschke



1: Tooth 14 and 15 Wedge-shaped defects



2: Class V restorations after high gloss polish

„Easy and quick  
to polish, durable  
high gloss.“



## Harvard PremiumFill<sup>+</sup>

Nano-optimized hybrid composite  
for **posterior** and anterior restorations

- >> Excellent esthetics
- >> Superior handling properties
- >> Non-sticky consistency and highly sculptable
- >> Low polymerization shrinkage
- >> Tooth-like fluorescence
- >> Excellent high gloss polishability
- >> High abrasion resistance
- >> Optimal physical properties
- >> Nano-filler technology



4 g



4 g

### Order Details

#### Enamel Opacity

##### 4 g syringe

A1 E	7082310
A2 E	7082311
A3 E	7082312
A3.5 E	7082313

#### Universal Opacity

##### 4 g syringe

A1 U	7082300
A2 U	7082301
A3 U	7082302
A3.5 U	7082303
B1 U	7082304
B2 U	7082305

##### 20 x 0.3 g OptiTips®

A1 U	7082400
A2 U	7082401
A3 U	7082402
A3.5 U	7082403

Harvard Applier OptiTips® 7095200

Harvard PremiumFill<sup>+</sup>  
„Universal Opacity“ IntroKit S 7082500  
3 syringes ea. 4 g, A2 U, A3 U, A3.5 U

Further shades are possible. Please contact us.

No stock item, please contact the Harvard sales team.



20 x 0.3 g

Dentist MSc. Andreas Kluschke



1



2

„Very nice  
esthetic results.“

1: Defective large composite filling on tooth 46

2: New excellent high gloss filling with Harvard PremiumFill<sup>+</sup>

# Filling Composites

## Restoratives

### Harvard PremiumFlow<sup>+</sup>

Nano-optimized hybrid flowable composite  
for **posterior** and anterior restorations

- >> Optimal flowable consistency
- >> Thixotropic
- >> Excellent high gloss polishability
- >> Beautiful esthetic restorations
- >> Low polymerization shrinkage
- >> Low abrasion
- >> Improved mechanical properties

#### Order Details

2 x 1 ml syringe		20 x 0.25 g ComforTip® F	
A1	7082600	A2	7082701
A2	7082601	A3	7082702
A3	7082602		
A3.5	7082603		

incl. 8 needle tips H18

Harvard NeedleTips H18	7095158
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Refill bag with 50 needle tips

Harvard Applicator OptiTips®	7095200
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Further shades are possible. Please contact us.



Dentist MSc. Andreas Kluschke



„Perfect flow properties for the construction of sophisticated anatomical shapes (e.g. incisal and cervical restorations).“

- 1: Defective filling
- 2: After removal etching and bonding
- 3: Application of Harvard PremiumFlow<sup>+</sup>
- 4: Polished filling



## Harvard Restore

Universal light cure microhybrid composite

- >> Suitable for anterior and posterior restorations
- >> Nice non-sticky consistency
- >> Low abraision
- >> Good polishability
- >> Tooth-like fluorescence
- >> Good price / performance ratio

### Order Details

4 g syringe	
A1	7083201
A2	7083202
A3	7083203
A3.5	7083204
B1	7083221
B2	7083222

<b>System Kit Plus</b>	7083217
4 syringes ea. 4 g, A1, A2, A3, A3.5	
3 ml syringe Harvard RestoreFlow A2	
5 ml bottle Harvard Self-Bond	
5 Appli-Pads, 50 Microbrush®,	
5 needle tips	

Further shades are possible. Please contact us.



## Harvard RestoreFlow

Universal flowable light cure microhybrid composite

- >> Suitable for anterior and small posterior restorations and for lining of cavities
- >> Controlled flow
- >> Good mechanical properties
- >> Tooth-like fluorescence
- >> Good price / performance ratio

### Order Details

3 ml syringe	
A1	7083211
A2	7083212
A3	7083213
A3.5	7083214

incl. 3 needle tips H20

<b>Harvard NeedleTips H20</b>	7091226
Refill bag with 50 needle tips	

Further shades are possible. Please contact us.





## Filling Composites Restoratives



**Up to 4 mm  
in the blink of an  
EYE!**

And this with very low shrinkage and  
very low shrinkage stress.  
**Self-leveling.  
Also ion-active.**

**Use your preferred composite to restore the enamel.**

Bulk fill up to 4 mm with  
Harvard IonoSphere Bulk Flow



Finalized restoration with your trusted moldable  
composite e.g. **Harvard UltraFill** or **Harvard PremiumFill** +





## Harvard IonoSphere Bulk Flow

Flowable composite with bioceramic fillers for a fast bulk dentine filling

- >> Bulk dentine filling up to 4 mm layer thickness
- >> Good flow properties
- >> Very low shrinkage
- >> Very low shrinkage stress
- >> Acid-inhibiting
- >> Ion-active
- >> Fluoride releasing
- >> Radiopaque

### Order Details

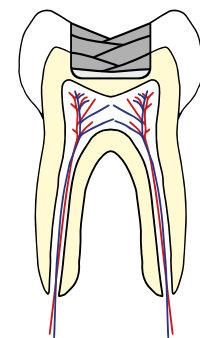
2 x 1 ml syringe	20 x 0.25 g OptiNeedleTips
Universal 7100011	Universal 7100012
incl. 8 needle tips H18	
Harvard NeedleTips H18	7095158
Refill bag with 50 needle tips	
Harvard Applier OptiTips®	7095200



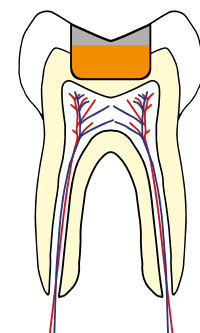
## With bioceramic fillers for precise and fast bulk dentine filling.

The layer thickness of up to 4 mm enables efficient bulk filling. The flowable material is self-leveling at the surface and thus easy and quick to apply, with excellent adaptation on the cavity walls. The final layer can be carried out with the desired shade of a moldable composite. Harvard IonoSphere Bulk Flow exhibits a very low shrinkage and very low shrinkage stress, is ion-active with a high fluoride release and acid-inhibiting.

Increment technique



Bulk flow technique

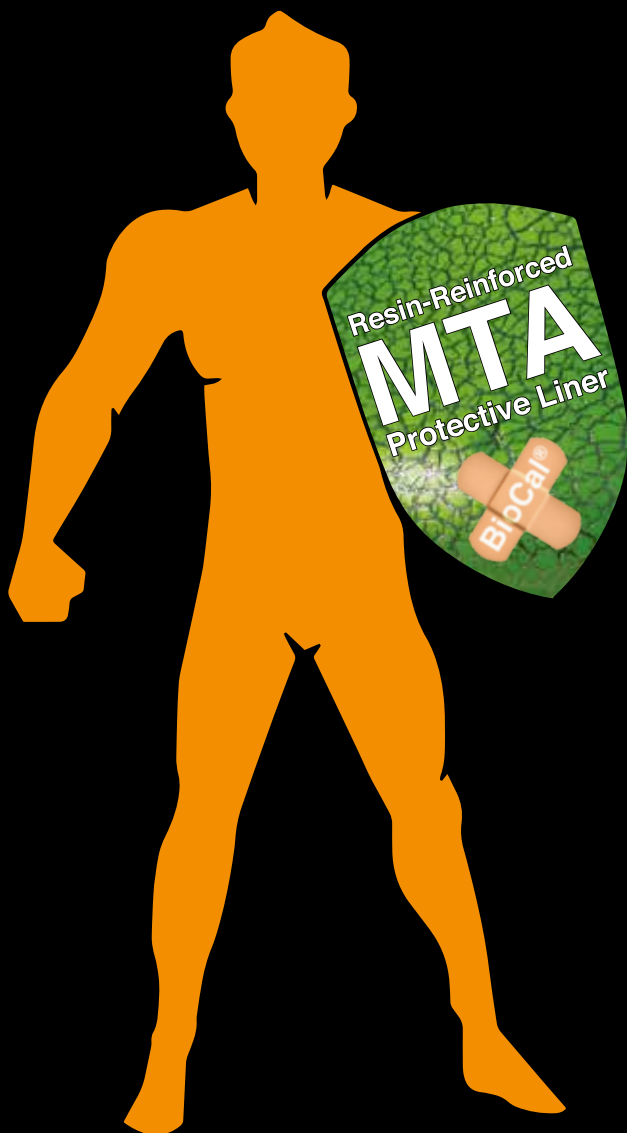


Class 2 cavity



Base in cavity up to 4 mm in one layer

## Harvard BioCal®-Line

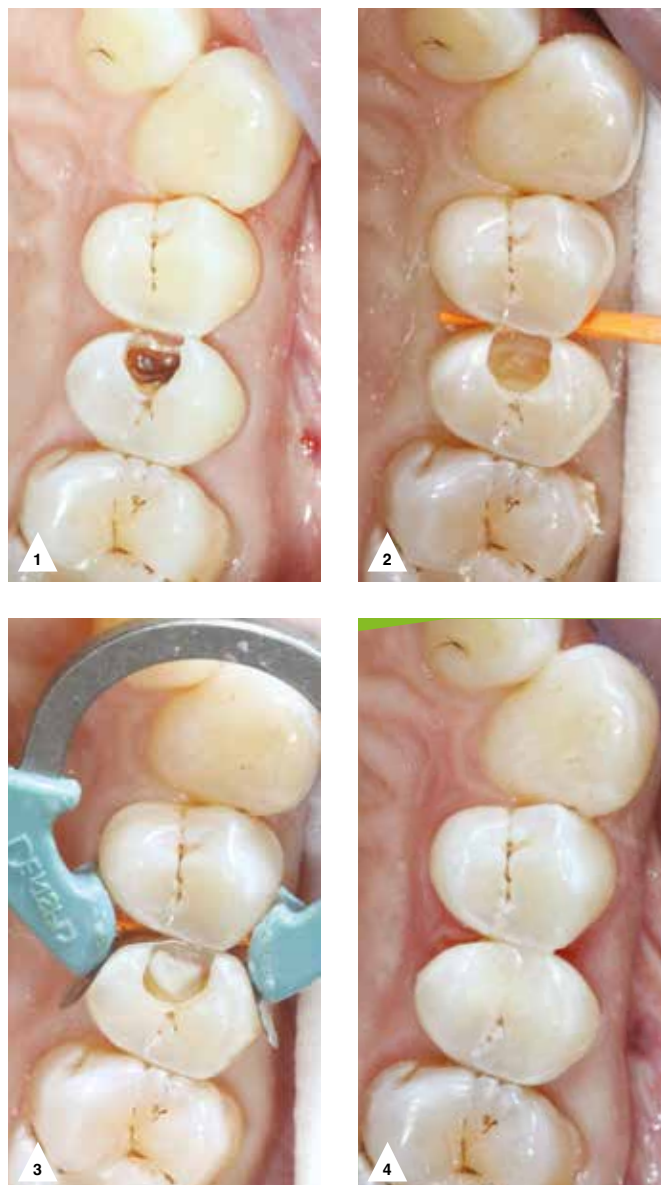


**This liner protects!**

- >> **Bioactive**
- >> **pH protective shield**
- >> **Mineralizing**
- >> **Light cure**

Dentist MSc. Andreas Kluschke

„Maximum pulp protection with light-curing bioactive MTA liner in deep caries lesions.“

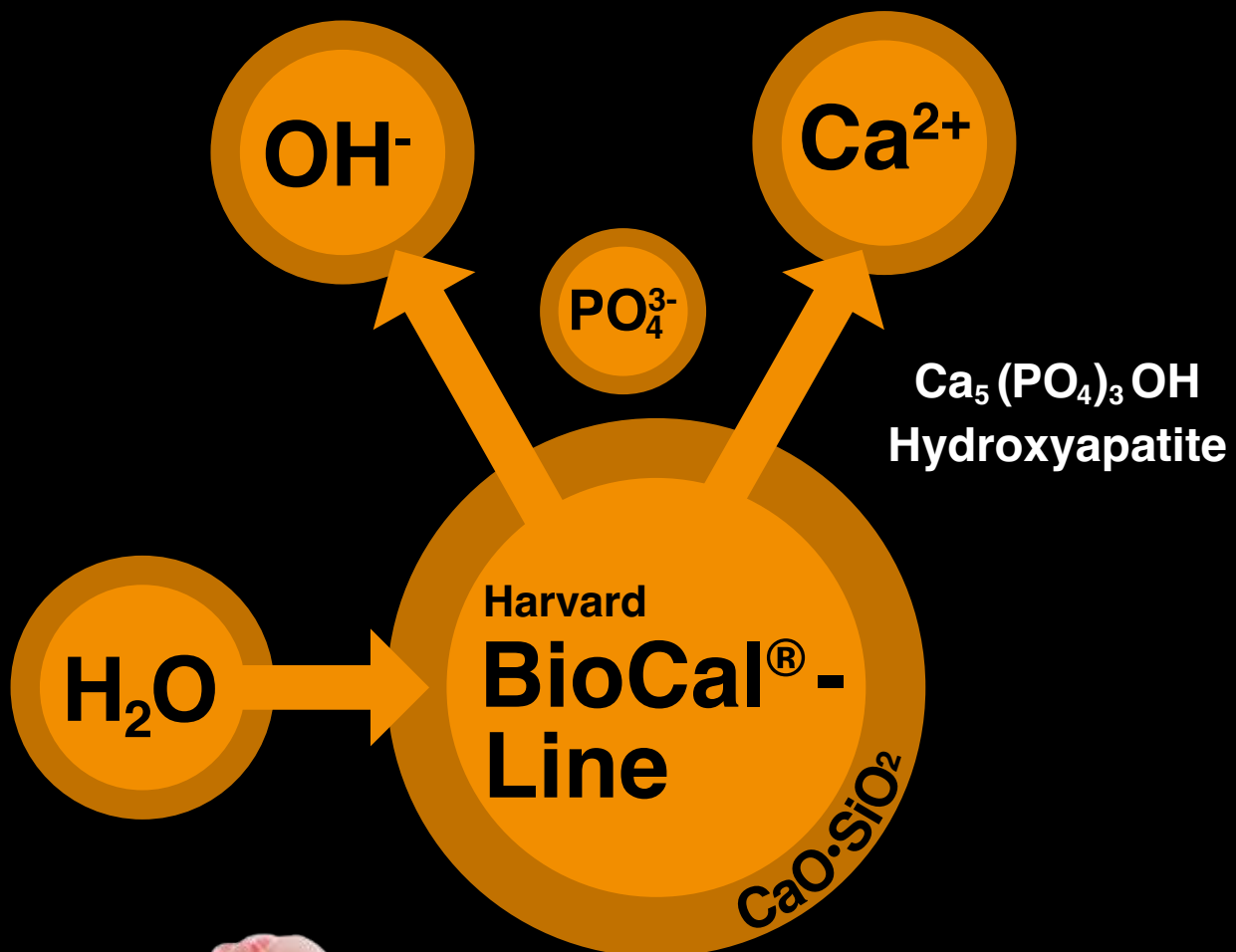


- 1: Premolar after initial preparation
- 2: Full caries excavation
- 3: Cavity lining with **Harvard BioCal®-Line** after application of adhesive system
- 4: Composite restoration with **Harvard UltraFill**



Harvard BioCal<sup>®</sup>-Line is a bioactive, light cure, resin-reinforced MTA protective liner. The good strength and the protective effect of the MTA components (high alkalinity and mineralization) ensure pulp protection with sufficient stability for subsequent filling at the same time. Harvard BioCal<sup>®</sup>-Line is moisture-tolerant, insoluble and exhibits high radiopacity. Harvard BioCal<sup>®</sup>-Line can be applied very precisely, even in deep cavities. Light cure ensures a controlled curing.

The release of calcium and hydroxyl ions promotes mineralisation. A safe and gap-free pulp protection. The high alkaline pH creates an environment hostile to bacteria and thus supports healing and protects against hypersensitivity.



## Harvard BioCal®-Line

**Bioactive, light cure, resin-reinforced MTA protective liner**

- >> Perfect as a thin-layer, protective liner in deeper cavities
- >> Also suitable for indirect and direct pulp capping
- >> Environment hostile to bacteria (pH 11)
- >> Mechanically stable
- >> Short setting times due to light cure
- >> Mineralizing
- >> Compatible with all composite restorative materials
- >> Radiopaque

Technical data		
Flexural strength	76	MPa
Compressive strength	187	MPa
Calcium release (24 h)	204	µg / cm <sup>2</sup>
pH value (24 h)	11	



Order Details	
1 g syringe, 12 needle tips	7081554
Harvard NeedleTips H22 Refill bag with 50 needle tips	7095162



Class I cavity



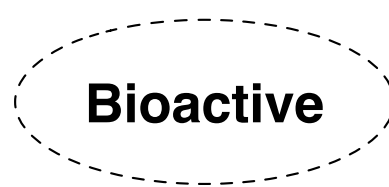
Class I cavity after application of an adhesive



Application of Harvard BioCal®-Line

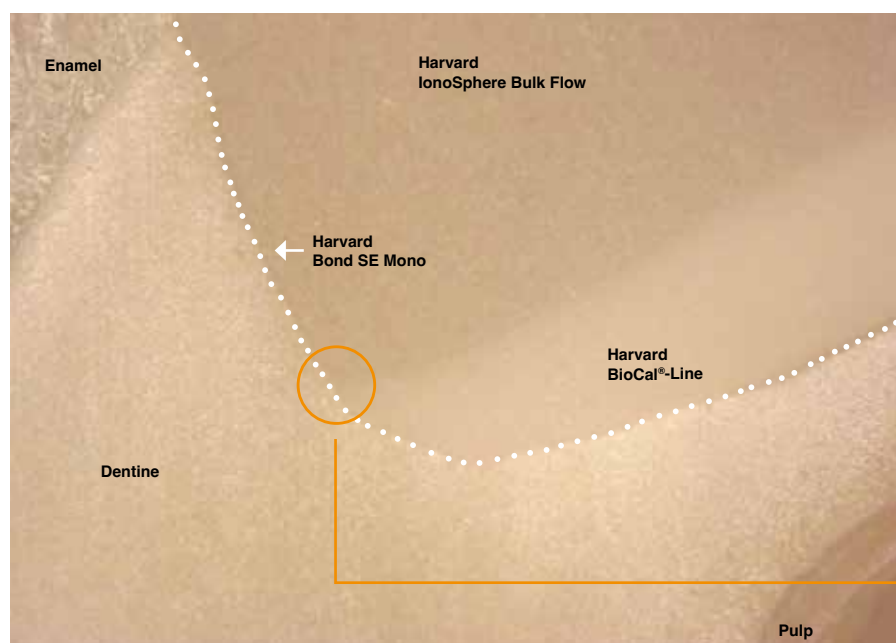


Harvard BioCal®-Line cured after 40 seconds light curing



Harvard BioCal®-Line should be used with a dentine adhesive, ideally with Harvard Bond SE Mono. Harvard Bond SE Mono does not restrict the bioactive effect. A continuous gap-free marginal seal and high alkaline bioactive MTA components protect pulp and dentine equally, especially in deep restorations.

High strength values and minimal layer thickness ( $\leq 1$  mm) form the foundation for safe and reliable restorative therapy.



**Laser microscopic image (magnification: 5x / 0.13)**

Deep composite restoration close to the pulp Experimental Tooth. Preparation (cross section) after one-week storage in artificial saliva (37 °C / 98,6 °F, thermocycling)



**Image detail (magnification: 50x / 0.95)**

Interface: Dentine / Harvard IonoSphere Bulk Flow & Dentine / Harvard BioCal®-Line  
In between: Harvard Bond SE Mono



Harvard

## CalciumHydroxide LC

Calcium hydroxide liner, light cure, resin-based  
with calcium release, pH 11

- >> Suitable for indirect pulp capping
- >> High pH level with antimicrobial effect
- >> Optimal flow
- >> Radiopaque
- >> Good price / performance ratio

### Order Details

2 ml syringe, 3 needle tips	7071263
Harvard NeedleTips H18 Refill bag with 50 needle tips	7095158



**Classical**

Harvard

## IonoLine

Glass ionomer liner, light cure, resin-modified  
with fluoride release

- >> Suitable as liner or base
- >> Contains fluoride
- >> Perfectly flowing
- >> Radiopaque
- >> Good price / performance ratio

### Order Details

2 ml syringe, 3 needle tips	7071260
Harvard NeedleTips H20 Refill bag with 50 needle tips	7091226



## Harvard InterLock® ONE

### Universal Adhesive

- >> Universal: suitable for all tooth conditioning techniques: with or without etching gel, wet or dry
- >> Only one thin layer necessary
- >> High and reproducible bond strength to enamel and dentine even under long term stress
- >> Effective marginal seal for low risk of postoperative sensitivity
- >> Excellent performance also with self or dual cure composites
- >> Convenient and precise application with the triangle ergonomic bottle with defined drop size

If light curing of **Harvard InterLock® ONE** cannot be achieved, please mix with **Harvard InterLock® ONE Self Cure Activator**.

### Harvard InterLock® ONE Self Cure Activator

- >> Activator for safe adhesion in indications, where light curing of **Harvard InterLock® ONE** cannot be ensured (e.g. in the root canal)
- >> Ideal for cementing of posts with dual and self cure composites



5 ml



50 x 0.1 ml



5 ml

### Order Details

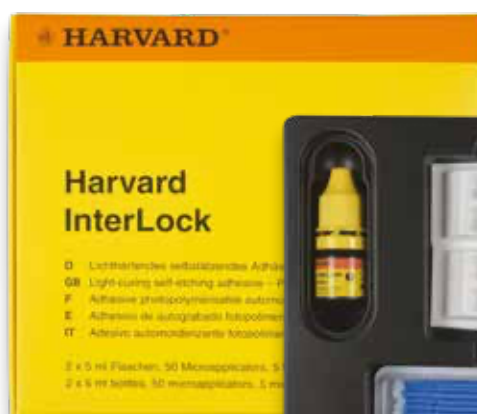
<b>Universal Adhesive</b>	
5 ml bottle	7083611
50 x 0.1 ml SingleDose	7083613
<b>Self Cure Activator</b>	
5 ml bottle	7083612
<b>Microbrush®</b>	
Refill bag with 50 applicators	7095156

## Harvard InterLock®

Very strong, self-etch, light cure bonding within two steps

- >> Long-term, strong and safe adhesion to enamel and dentine
- >> High and even bond strength
- >> Extremely reliable
- >> Easy and fast application
- >> Excellent seal
- >> Not technique and moisture sensitive
- >> Hydrophilic for wet bonding technique
- >> For perfect margins to protect against secondary caries

### The gold standard



2 x 5 ml



### Order Details

2 x 5 ml bottle	7083603
50 Microbrush®, 5 Appli-Pads	
<b>Microbrush®</b>	
Refill bag with 50 applicators	7095156



Harvard

## Bond SE Mono

Self-etch, light cure bonding; etching, priming and bonding in one step

- >> Strong and long-lasting adhesion to enamel and dentine
- >> Only one layer necessary
- >> Hydrophilic for wet bonding technique
- >> Good price / performance ratio



5 ml

### Order Details

5 ml bottle	7083601
Microbrush® Refill bag with 50 applicators	7095156

Harvard

## Self-Bond

Self-etch, light cure bonding

- >> For bonding of composites on dentine and enamel
- >> No extra etching necessary
- >> Only one layer necessary
- >> Easy application
- >> Hydrophilic for wet bonding technique
- >> Good price / performance ratio



5 ml

### Order Details

5 ml bottle	7083218
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Harvard

## Bond TE Mono

Light cure one bottle adhesive for total-etch technique

- >> Strong bonding to enamel and dentine
- >> Strong bonding of light cure composites, non-precious and precious metals
- >> Hydrophilic for wet bonding technique
- >> 2 bonding layers necessary; very strong adhesion
- >> Good price / performance ratio



5 ml

### Order Details

5 ml bottle	7083607
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Harvard

## Etch

Thixotropic etching gel for etching of enamel and dentine

- >> Selective enamel etching or total-etch technique for:
  - >> Composite restorations
  - >> Sealing of fissures
  - >> Adhesive cementation of inlays, onlays, crowns and bridges
- >> Optimal consistency: stays where placed
- >> Thixotropic, controlled etching
- >> Good price / performance ratio



2 ml

### Order Details

2 ml syringe, 3 needle tips	7054000
Harvard NeedleTips H25 Refill bag with 50 needle tips	7095126



# Filling Cements

## Restoratives





## Harvard POWERmer Bulk

High strength, self adhesive, dual cure composite-hybrid for restorations

- >> **Bulk fill material**
- >> No increments necessary
- >> Dual cure
- >> Self-adhesive
- >> No shrinkage
- >> **No adhesive necessary!**
- >> **Fluoride release**
- >> In strength, wear, esthetics and polishing: **LIKE A COMPOSITE!**
- >> **Translucent**
- >> Radiopaque
  
- >> HandMix or OptiCaps®
  
- >> **Quick and easy!**
- >> **An Alternative to Amalgam!**

### Order Details

50 OptiCaps® ea. 0.5 g, ea. packed in aluminum pouch A2	7071202
10 OptiCaps® ea. 0.5 g, ea. packed in aluminum pouch A2	7071212
15 g powder / 7 ml liquid, dosage spoon, mixing pad A2	7071222
Harvard Applier OptiCaps®	7092000

**Resin-  
Reinforced**



**Universal, self-adhesive resin-modified high-performance glass ionomer cement. Bulk Fill.**

Harvard POWERmer Bulk is a tooth-coloured bulk filling material with the high mechanical strength of composite and the esthetic appearance of composite. No adhesive required. This makes Harvard POWERmer Bulk an ideal alternative to amalgam.



Dr. Amir Ibrik D.D.S, N.D.B, E.R.B, MSc



**„This is an alternative  
to amalgam? Amazing!“**

- 1: Mixing for 10 seconds 2: Harvard POWERmer Bulk is applied without adhesive  
3: Finished restoration after 20 seconds of light cure





# Filling Cements

## Restoratives

The **BIOACTIVE**  
**DENTINE**  
Substitute

AND STRONG!



$\text{PO}_4^{3-}$   
Mineralizing effect





## Harvard BioPOWER Dentine

Bioactive, dual cure MTA-modified composite-hybrid dentin substitute

- >> pH value: 12
- >> Calcium release
- >> Fluoride release
- >> Bioactive
- >> Dual cure
- >> Self-adhesive
- >> No shrinkage
- >> No adhesive necessary!
- >> Strong
- >> Opaque
- >> Radiopaque
- >> HandMix or OptiCaps®

### Order Details

10 OptiCaps® ea. 0.5 g, ea. packed in aluminum pouch Universal	7071410
5 g powder / 3 ml liquid, dosage spoon, mixing pad Universal	7071411
Harvard Applier OptiCaps®	7092000

**Resin-  
Reinforced**



**Harvard BioPOWER Dentine** is an opaque dentine substitute based on MTA glass ionomer cement with calcium and fluoride release. In addition, the material can be light-cured on the surface to enable quick continuation of restoration.

The high compressive strength and a bacteriophobic environment, thanks to a high pH value of 12, ensure long-lasting results. **Harvard BioPOWER Dentine** shows no shrinkage and is self-adhesive.

A final enamel filling layer can be carried out by **Harvard POWERmer Bulk** directly, or – with a little more effort – with selective etch of the enamel, followed by an universal adhesive (e.g. **Harvard InterLock® ONE**), and followed by a suitable composite like e.g. **Harvard PremiumFill+**.



# Filling Cements

## Restoratives

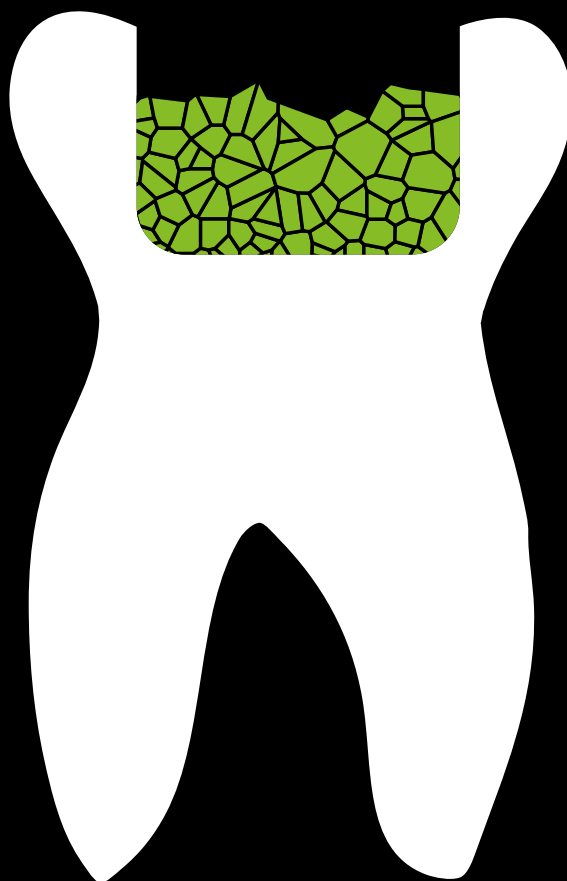
The BIOACTIVE  
**DENTINE**  
Substitute

$\text{PO}_4^{3-}$

$\text{Ca}^{2+}$

$\text{OH}^-$

**pH12**



**Resin-free**



## Harvard BioPhosphate Dentine

Bioactive MTA zinc phosphate dentine substitute, self cure

- >> MTA zinc phosphate dentine substitute
- >> pH value: 12
- >> Calcium release
- >> Bioactive
- >> Self cure
- >> Very low solubility
- >> Strong
- >> Opaque
- >> Radiopaque
- >> HandMix

### Order Details

5 g powder / 2,5 ml liquid,  
dosage spoon, mixing pad  
Universal

7071510



**Resin-  
Free**

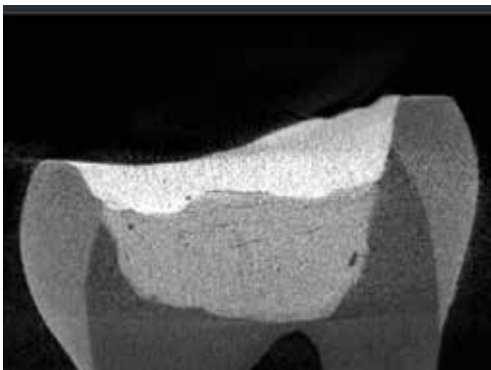
Close in composition / reaction to dentine!

**Harvard BioPhosphate Dentine** is an opaque dentine substitute based on MTA zinc phosphate cement with calcium release.

The high compressive strength and an environment hostile to bacteria, thanks to a high pH value of 12, ensure long-lasting results. **Harvard BioPhosphate Dentine** is volume stable and self-adhesive.

The reaction of MTA and phosphoric acid is mostly described to lead to calcium phosphate compounds e.g. **apatite**.

A final filling layer can be carried out by **Harvard POWERmer Bulk** directly, or – with a little more effort – with selective etch of the enamel, followed by an universal adhesive (e.g. **Harvard InterLock® ONE**), and followed by a suitable composite like e.g. **Harvard PremiumFill+**.



Harvard BioPhosphate Dentine covered with Harvard PremiumFill+ in an extracted tooth.

Harvard

## IonoGlas Fill Extra

Esthetic classical glass ionomer cement for fillings, self cure

- >> Esthetics and natural translucency
- >> Convenient to apply and easy to handle
- >> Easy finishing
- >> Low solubility
- >> High fluoride release
- >> Radiopaque
- >> HandMix or OptiCaps®

### Order Details

15 g powder / 8 ml liquid,  
dosage spoon

A2	7052112
A3	7052113

50 OptiCaps® ea. 0.5 g

A2	7052252
A3	7052253

Harvard Applier OptiCaps® 7092000



**Resin-  
Free**



Harvard

## IonoResin Fill Extra (LC)

Resin-reinforced glass ionomer cement for fillings, light cure

- >> Esthetic natural transparency
- >> Fine fillers
- >> Light- and self cure
- >> Good polishability
- >> Very good mechanical properties, practically no shrinkage
- >> Practically insoluble
- >> Fluoride release
- >> Radiopaque
- >> HandMix or OptiCaps®

### Order Details

15 g powder / 8 ml liquid, dosage spoon	
A2	7071118
A3	7071119
A3.5	7071120

50 OptiCaps® ea. 0.5 g	
A2	7071253
A3	7071254
A3.5	7071255

Harvard Applier OptiCaps®	7092000
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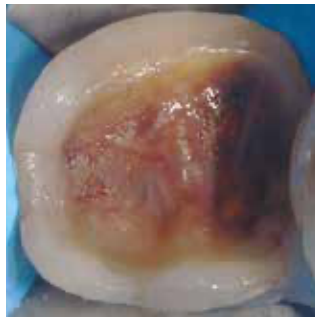
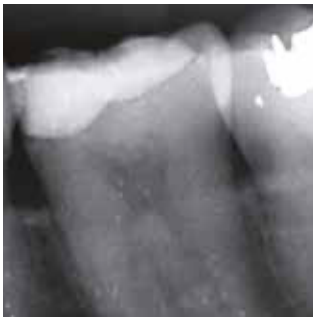
No stock item, please contact the Harvard sales team.



**Resin-  
Reinforced**

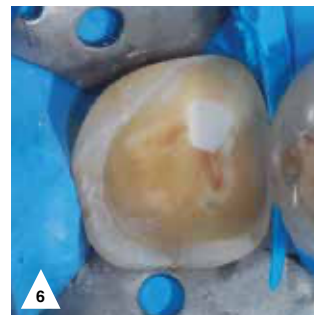
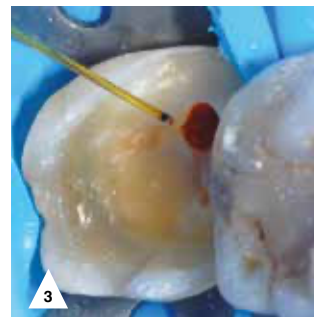
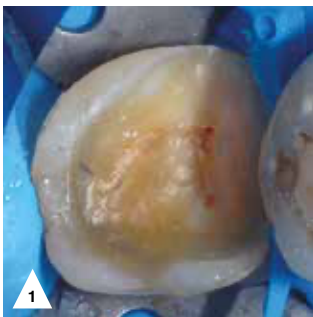


## Case



„The patient presented with secondary caries under the old restoration. The photo shows the typical active caries discoloration (brown-orange). The periapical radiograph (taken a few weeks earlier) showed no signs of apical rarefaction. According to the clinical rationale for the endodontic diagnosis, the radiographic distance between the caries and the pulp chamber was 0.67 mm, while the cold test had an intensity of 1 and a transit time of less than 30 seconds; there was no spontaneous pain. If we summarize these data, we are dealing with a probable „PULPAR HYPEREMIA“ or „REVERSIBLE PULPITE“, an indicative case for the implementation of Vital Pulp Therapy (direct pulp capping).“

## „Preservation of pulp vitality“



- 1: After removal of the carious tissue, an opening of the mesial vestibular pulp horn with a diameter of less than 1 mm can be seen
- 2: To determine the quality of the bleeding, a mini-pulpotomy was performed with a spherical tungsten carbide bur
- 3 + 4: Bleeding was controlled within 30 seconds, confirming the diagnosis of reversible pulpitis. An 810 diode laser attached to a 400-micrometer fiber was used to control the gemacium to facilitate the placement of the biocompatible coating material
- 5+6: Insertion of BioCal®-CAP onto the exposed pulp
- 7: Result

## Conclusion

„BioCal®-CAP is a viable alternative to older generation materials (MTA) for preserving the pulp when it is exposed due to carious pathology. The hybrid chemical composition of BioCal®-CAP allows the direct restoration procedure to be performed easily by reducing the time required for the procedure. The success of pulp-preserving procedures depends in advance on the clinical conditions of the case to be treated.“





## Harvard BioCal®-CAP

**Bioactive, light cure, resin-modified MTA cement**  
for direct and indirect pulp capping

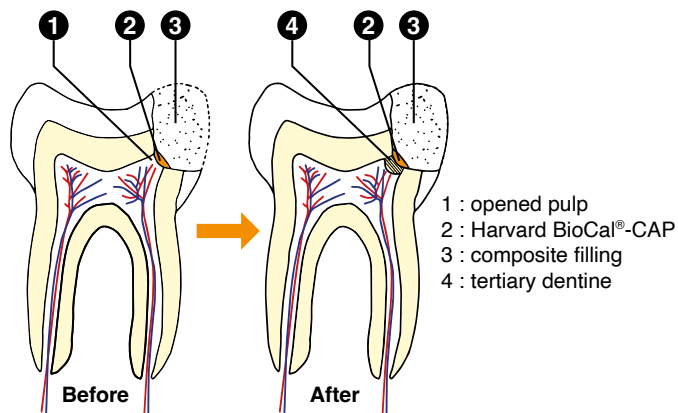
- >> For direct and indirect pulp capping in the treatment of deciduous and adult teeth
- >> Calcium release and a high pH value (pH 11) promote the formation of hydroxyapatite as well as tertiary dentine
- >> Creates an environment hostile to bacteria
- >> Moisture tolerant
- >> Virtually no solubility
- >> Good Radiopacity
- >> Fast, after light cure treatment can be continued immediately
- >> Thixotropic properties

### Order Details

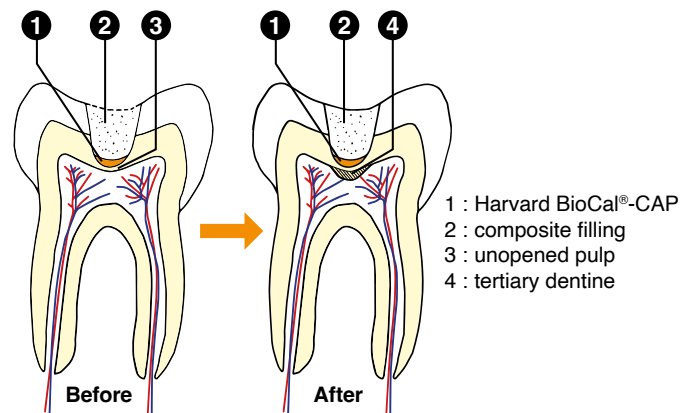
1 g syringe, 12 needle tips	7081550
4 x 1 g syringe, 50 needle tips	7081551
Harvard NeedleTips H22 Refill bag with 50 needle tips	7095162



### Direct pulp capping



### Indirect pulp capping



Significant release of bioactive calcium promotes the formation of hydroxyapatite and tertiary dentine.



## The plaster for the pulp.



## Harvard MTA-CAP

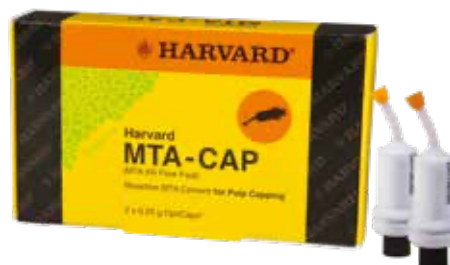
Flowable fast setting **MTA cement** in capsules

- >> Particularly suitable for pulp capping
- >> Calcium release and a high pH value (pH 12) promote the formation of hydroxyapatite and tertiary dentine
- >> Flowable consistency
- >> Extra fast setting
- >> Mixing time: 30 sec
- >> Working time: 2:00 min (from start of mixing at 23 °C (73 °F))
- >> Next treatment step: 3:00 min

Set also in humid conditions

### Order Details

2 OptiCaps® ea. 0.25 g, ea. packed in aluminum pouch	7081503
Harvard Applier OptiCaps®	7092000



2 x 0.25 g

## Harvard CalciumHydroxide

Calcium hydroxide paste

- >> Suitable for direct and indirect pulp capping
- >> Paste with perfect consistency
- >> Good price / performance ratio

### Order Details

2 ml syringe, 3 needle tips	7071261
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2 ml

**Resin-  
Free**



## Harvard MTA-PT

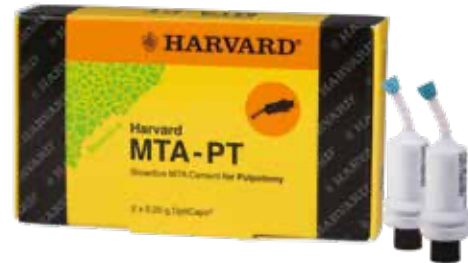
Fast cure, reinforced radiopaque MTA cement in capsules

- >> Particularly suitable for pulpotomy
- >> Calcium release and a high pH value (pH 12) promote the formation of hydroxyapatite as well as tertiary dentine
- >> Flowable consistency
- >> Particularly radiopaque
- >> Fast setting
- >> Mixing time: 30 sec
- >> Processing time: 2:00 min (from start of mixing at 23 °C (73 °F))
- >> Next treatment step: 3:00 min

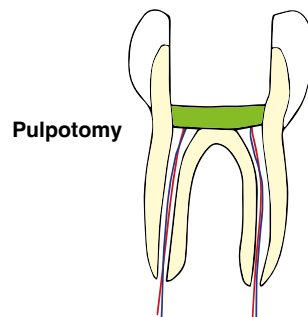
Set also in humid conditions

### Order Details

2 OptiCaps® ea. 0.25 g, ea. packed in aluminum pouch	7081512
Harvard Applier OptiCaps®	7092000

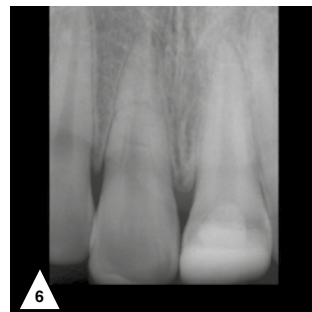
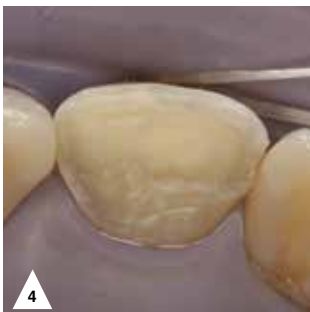
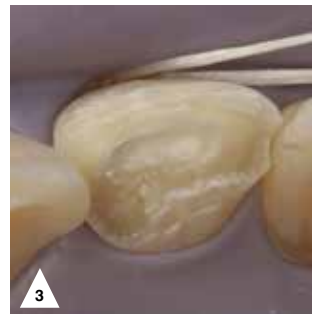
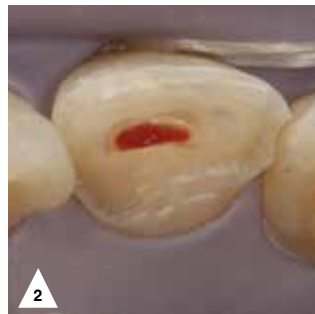


2 x 0.25 g



Pulpotomy

**Clinical case with Harvard MTA-PT (MTA XR Flow Fast) Source: Thonemann/Federlin, University Regensburg, Germany**



„Product solutions that are increasingly adapted to the individual situation in terms of technology and material consistency make work in endodontics much easier.“

1: Initial situation: Anterior tooth trauma, complicated crown fracture 21 2: Partial Pulpectomy 3: Application of Harvard MTA-PT 4: Covering with glass ionomer cement 5: 4 months after trauma: 21 vital 6: 1 year after trauma: 21 vital