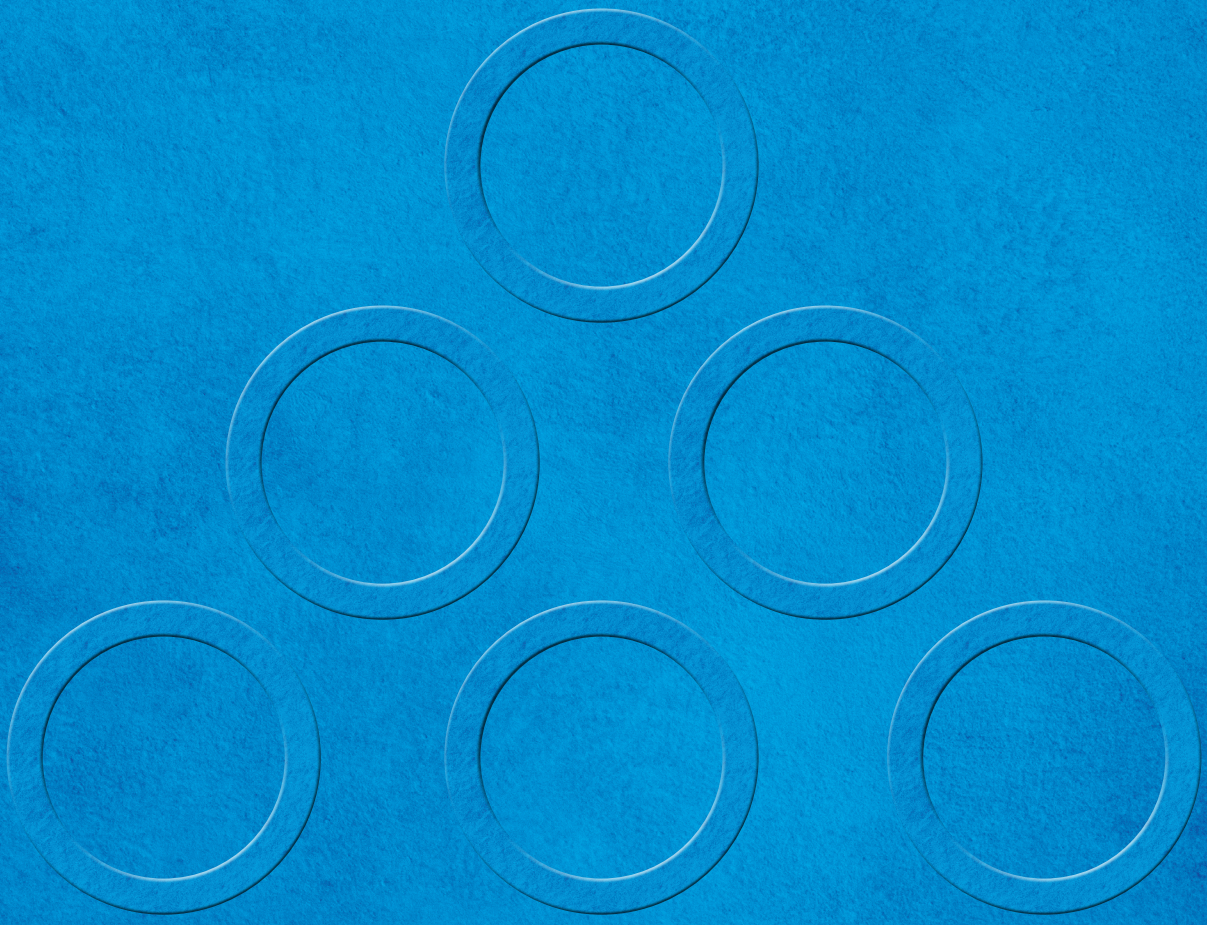
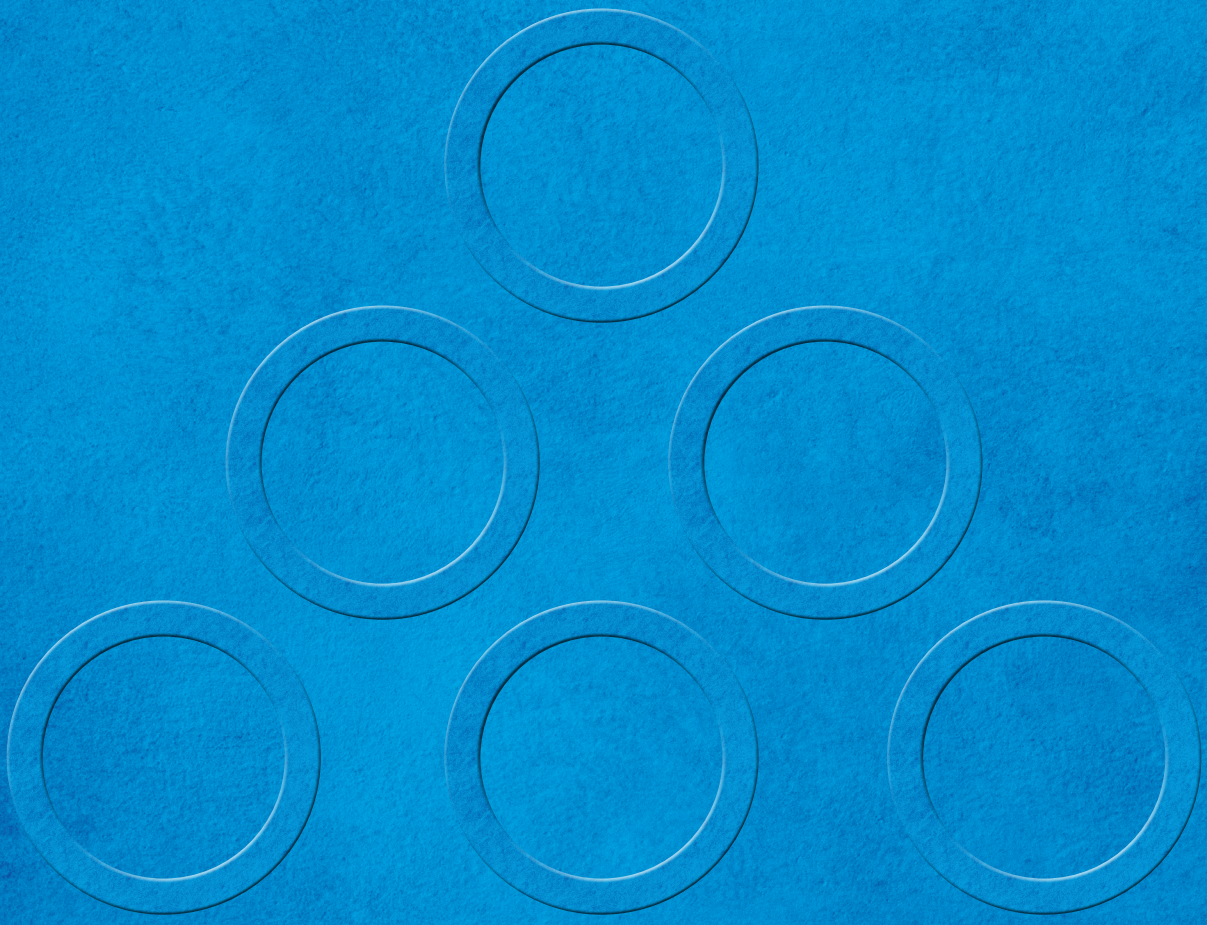
PRODUCTS 2021



KETTENBACH DENTAL
Simply intelligent



KETTENBACH**DENTAL**
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CONTENTS

SOOO INSPIRING

WITH KETTENBACH DENTAL

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CAN IT BE DONE SMARTER?

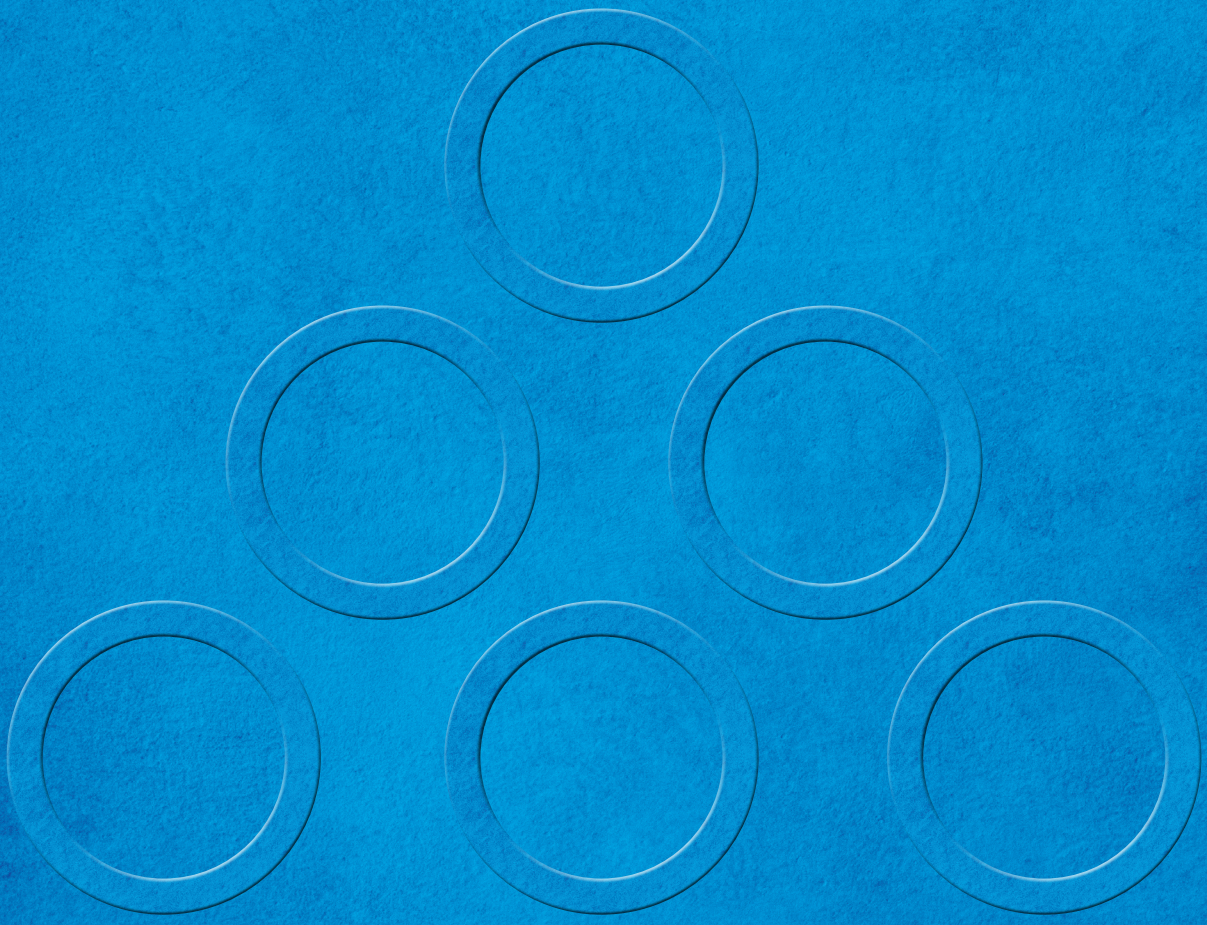
Our researchers and developers at Kettenbach Dental will not rest until the outcome is as perfect as your aspiration.

This has been driving us for over 75 years to produce exceptional innovations such as Panasil®, Identium®, Futar®, and Visalys®.

We want to simplify your life with product innovations "Made in Germany" – it's as easy as that!

Kettenbach Dental

KETTENBACHDENTAL
Simply intelligent



KETTENBACH**DENTAL**
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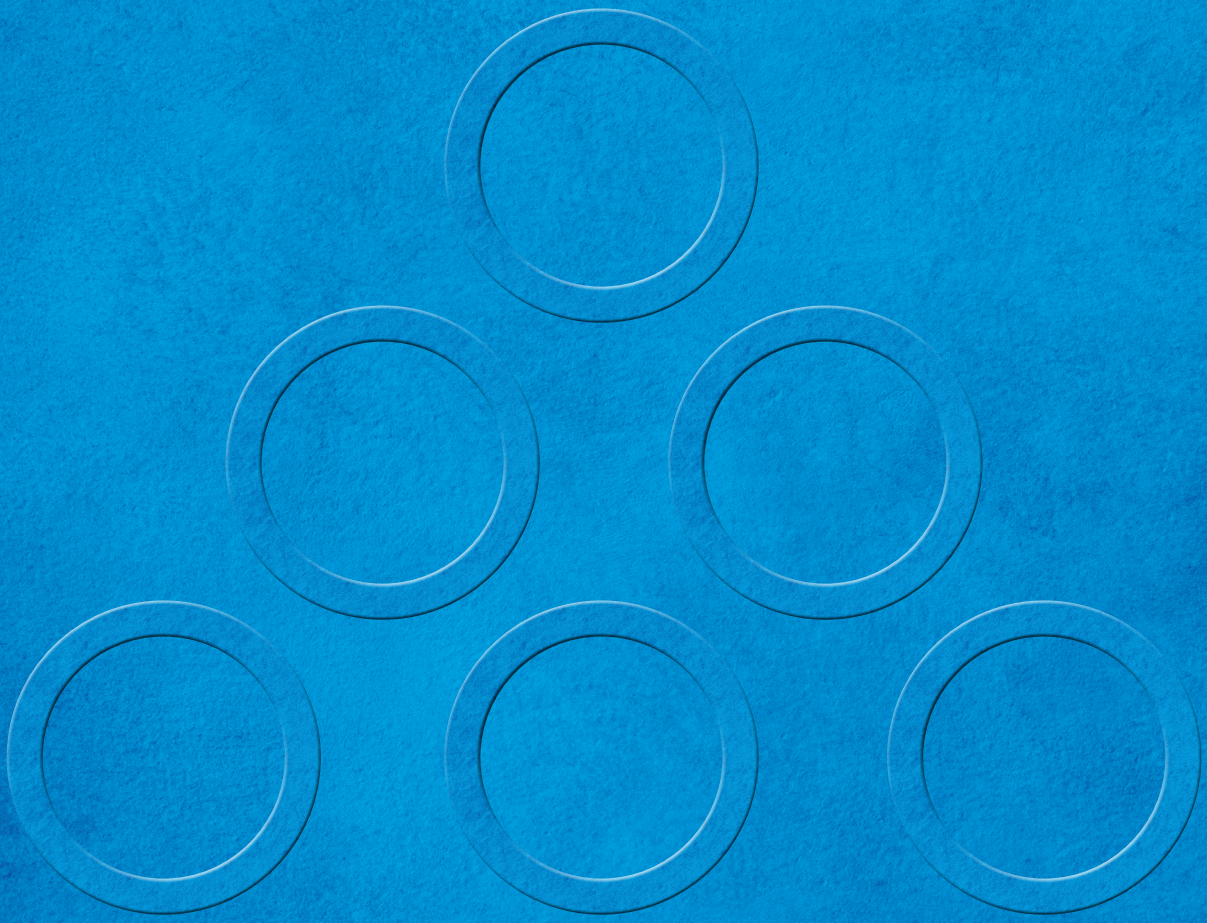
WE HAVE BEEN THINKING ABOUT PROGRESS FOR MORE THAN 75 YEARS. WITH EVERY SINGLE ONE OF OUR INNOVATIONS.

2019	Introduction of Visalys® CemCore, the 2-in-1 composite: the dual-curing, adhesive material can be used for both cementation and core build-up, providing an optimized adhesive bond while also having outstanding stability.
2016	Introduction of Futar® Cut & Trim Fast, the latest bite registration material from the successful Futar® family that ensures even more efficient workflows in your practice.
2015	Introduction of Visalys® Core, the first core build-up material with the unique Active-Connect-Technology for a reliable adhesive bond with single-step and multi-step adhesives.
2012	Introduction of Visalys® Temp which sets the new benchmark for materials for temporary crowns and bridges.
2009	Introduction of Identium®. A new impression material that revolutionizes the one-step impression technique: Vinylsiloxanether®.
2008	Introduction of Silginat®, a new addition-curing silicone specifically for alginate indications.
2006	Introduction of Panasil® initial contact, the first A-silicone with very high hydrophilicity.
2002	Introduction of Panasil® binetics Putty.
1998	Launch of Mucopren ® Soft, a permanently soft relining material.
1994	Introduction of a new bite registration material based on silicone that subsequently achieves a high market position worldwide: Futar®.
1982	Market launch of Panasil®, a new class of impression material based on addition-curing silicones.
1955	Introduction of Lastic® 55, the first impression silicone in the world.
1944	Founding of Kettenbach Dental by August Kettenbach in Wissenbach on 2 May.



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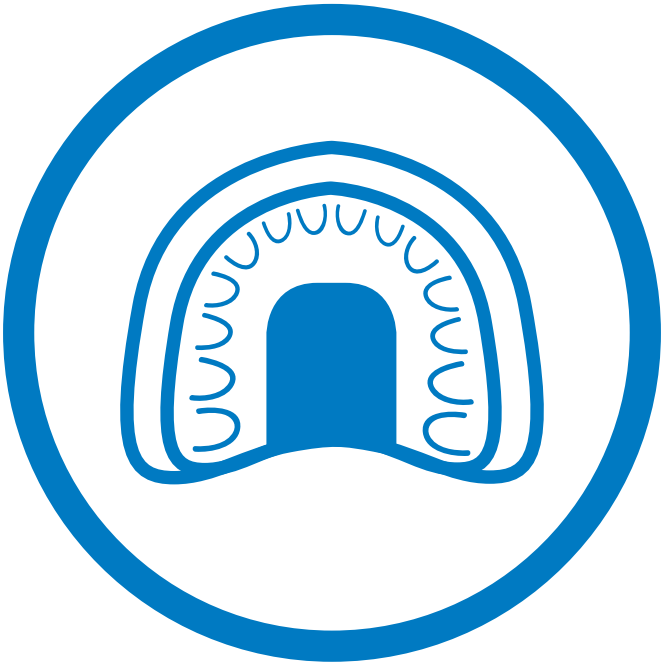
IMPRESSION MATERIALS



SO EFFICIENT

IS SILGINAT®

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SILGINAT®
SILGINAT® STRAWBERRY

Silginat® is a medium-viscosity, elastomeric A-silicone available in a large 5:1 cartridge and was specifically developed for alginate applications (such as anatomical impressions).

Stable in long-term storage and suitable for multiple pouring

- Multiple impressions created for a situation is no longer necessary

High precision thanks to the advantages of an A-silicone

- Alginate-like consistency and low breaking strength
- The material is thixotropic but still flows
- It is dimensionally stable with high resilience
- Scannable

Standardized, hygienic processes

- Clean, simple, and safe application with the 5:1 jumbo cartridge for reproducible results in terms of a quality management system.

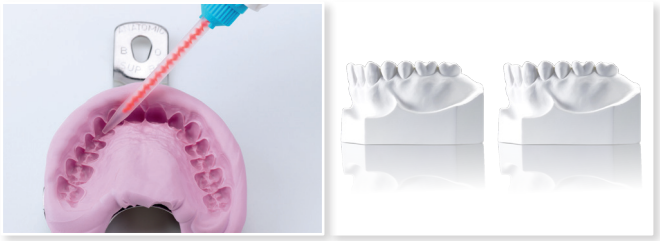
Modern setting characteristics

- Short intraoral setting time (90 seconds) for rapid workflows.
- The anatomical impression is prepared in just 3 minutes.
- Shore hardness A 45 for easy releasing.

Silginat® I Silginat® Strawberry medium viscosity

- ⊕ Anatomical impressions
- ⊕ Preparing temporary crowns and bridges
- ⊕ Opposing jaw impressions
- ⊕ Orthodontic tasks
- ⊕ Models for case studies
- ⊕ Preparation of models for constructing splints
- ⊕ Construction of simple removable prosthetic restorations

⊕ Highly recommended
⊕ Recommended



Partial impression trays: Multi Trays p. 46
Dynamic mixers p. 51
Sympress dispenser p. 53

Silginat®	760 mL **Refill pack** 5:1 2 x 380 mL cartridges	300 mL **Normal pack** 1:1 6 x 50 mL cartridges, 6 mixing tips	1200 mL **Bulk pack** 1:1 24 x 50 mL cartridges
Silginat®	REF 14713	REF 13846	REF 13847
Silginat® **Strawberry**	REF 14715	REF 13826	REF 13827

Not available in all markets.

SOOO COMFORTABLE

IS IDENTIUM®

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IDENTIUM®

Identium® combines the benefits of two established impression materials (A-silicone and polyether) working in perfect harmony. The innovative material class Vinylsiloxanether® is available in high, medium, and low viscosity with normal and fast setting variants for monophase and double-mix impressions. This enables all essential impression techniques to be covered with a single material.

Double-mix impressions

Tray material	Mixing	Working time at 23 °C	Intraoral working time	Intraoral setting time	Total setting time*	Page
Identium® Heavy		2:00 min.	–	2:30 min.	4:30 min.	15
Identium® Heavy Fast		1:15 min.	–	2:15 min.	3:30 min.	15
Identium® Medium		2:00 min.	1:20 min.	2:30 min.	4:30 min.	14
Identium® Medium Fast		1:15 min.	0:40 min.	2:15 min.	3:30 min.	14
Correction material (Light body)						
Identium® Light		2:00 min.	1:20 min.	2:30 min.	4:30 min.	16
Identium® Light Fast		1:15 min.	0:40 min.	2:15 min.	3:30 min.	16

* Total setting time (removal from the mouth) from the start of the mixing.

Monophase, fixation and pick-up impressions

Tray material	Mixing	Working time at 23 °C	Intraoral working time	Intraoral setting time	Total setting time*	Page
Identium® Medium		2:00 min.	1:20 min.	2:30 min.	4:30 min.	14
Identium® Medium Fast		1:15 min.	0:40 min.	2:15 min.	3:30 min.	14

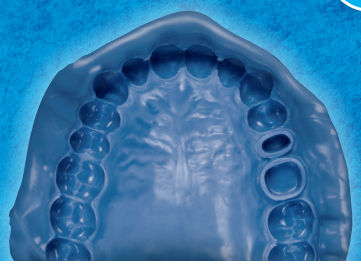
* Total setting time (removal from the mouth) from the start of the mixing.

Functional impressions

Tray material	Mixing	Working time at 23 °C	Intraoral working time	Intraoral setting time	Total setting time*	Page
Identium® Medium		2:00 min.	1:20 min.	2:30 min.	4:30 min.	14

* Total setting time (removal from the mouth) from the start of the mixing.

IDENTIUM® MEDIUM



Identium® Medium is a medium-viscosity precision impression material made of Vinylsiloxanether® for monophase impressions. Thanks to its high final hardness it is particularly well suited to implant impressions.

Greatest precision

- Perfect flow even with residual moisture enables the preparation margins to be reliably determined.
- The short intraoral setting time means there is less chance of deformation during the setting phase.

Secure retention

- The high final hardness (Shore A 60) ensures precise reproduction and secure retention of the implant posts and primary crowns.

More comfortable for user and patient

- Easy removal from the mouth thanks to high elasticity
- Low risk of breakage in model fabrication
- Neutral taste and smell
- Short intraoral setting time
- Considerably reduced gag reflex and movement

Time saving

- After just a total of 3 minutes and 30 seconds, the impression can be removed from the patient's mouth (Identium® Medium Fast).

Identium® Medium medium viscosity

- ⊕ Monophase impressions
- ⊕ Fixation impressions
- ⊕ Functional impressions
- ⊕ Pick-up impressions
- ⊕ Double-mix impressions
- ⊕ Reline impressions

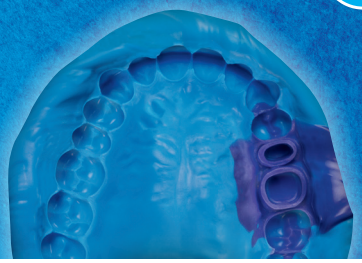
⊕ Highly recommended
⊕ Recommended

Dynamic mixers p. 51
Sympress dispenser p. 53
Identium® Adhesive p. 50

Identium®	380 mL **Intro pack** 5:1 380 mL cartridge, 10 dynamic mixers, 10 mL adhesive, 1 application syringe	760 mL **Refill pack** 5:1 2 × 380 mL cartridges
Medium	REF 14716	REF 14717
Medium **Fast**	-	REF 14719

Not available in all markets.

IDENTIUM® HEAVY



Identium® Heavy is a high-viscosity monophase precision impression material made of Vinylsiloxanether® that delivers particularly good results in the double-mix technique thanks to the optimal pressure build-up when combined with Identium® Light.

Greatest precision

- Perfect flow even with residual moisture enables the preparation margins to be reliably determined.
- The short intraoral setting time means there is less chance of deformation during the setting phase.

More comfortable for user and patient

- Easy removal from the mouth thanks to high elasticity
- Low risk of breakage in model fabrication
- Neutral taste and smell
- Short intraoral setting time
- Considerably reduced gag reflex and movement

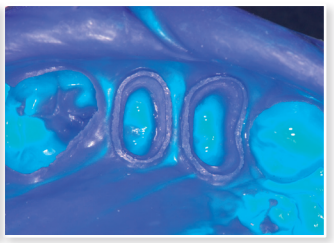
Time saving

- After just a total of 3 minutes and 30 seconds, the impression can be removed from the patient's mouth (Identium® Heavy Fast).

Identium® Heavy high viscosity

- ⊕ Double-mix impressions
- ⊕ Fixation impressions
- ⊕ Functional impressions
- ⊕ Pick-up impressions

⊕ Highly recommended
⊕ Recommended



Dynamic mixers p. 51
Sympress dispenser p. 53
Identium® Adhesive p. 50

Identium®	380 mL **Intro pack** 5:1 380 mL cartridge, 10 dynamic mixers, 10 mL adhesive, 50 mL Light body, 8 yellow mixing tips, 8 yellow intraoral tips	760 mL **Refill pack** 5:1 2 × 380 mL cartridges
Heavy	REF 14724	REF 14725
Heavy **Fast**	-	REF 14727

Not available in all markets.

IDENTIUM® LIGHT

Identium® Light is a low-viscosity precision impression material made of Vinylsiloxanether® that produces incredibly detailed impressions thanks to its high flowability even into the narrowest of sulci and even in extreme situations thanks to its high hydrophilicity.

Greatest precision

- Perfect flow even with residual moisture enables the preparation margins to be reliably determined.
- The narrowest of sulcus gaps are also precisely recorded.
- The short intraoral setting time means there is less chance of deformation during the setting phase.

More comfortable for user and patient

- The extra-long intraoral working time of 80 seconds (Identium® Light) means the material can be comfortably applied even with extensive prosthetic restorations.
- Neutral taste and smell
- Short intraoral setting time

Time saving

- After just a total of 3 minutes and 30 seconds, the impression can be removed from the patient's mouth (Identium® Light Fast).

Identium® Light low viscosity

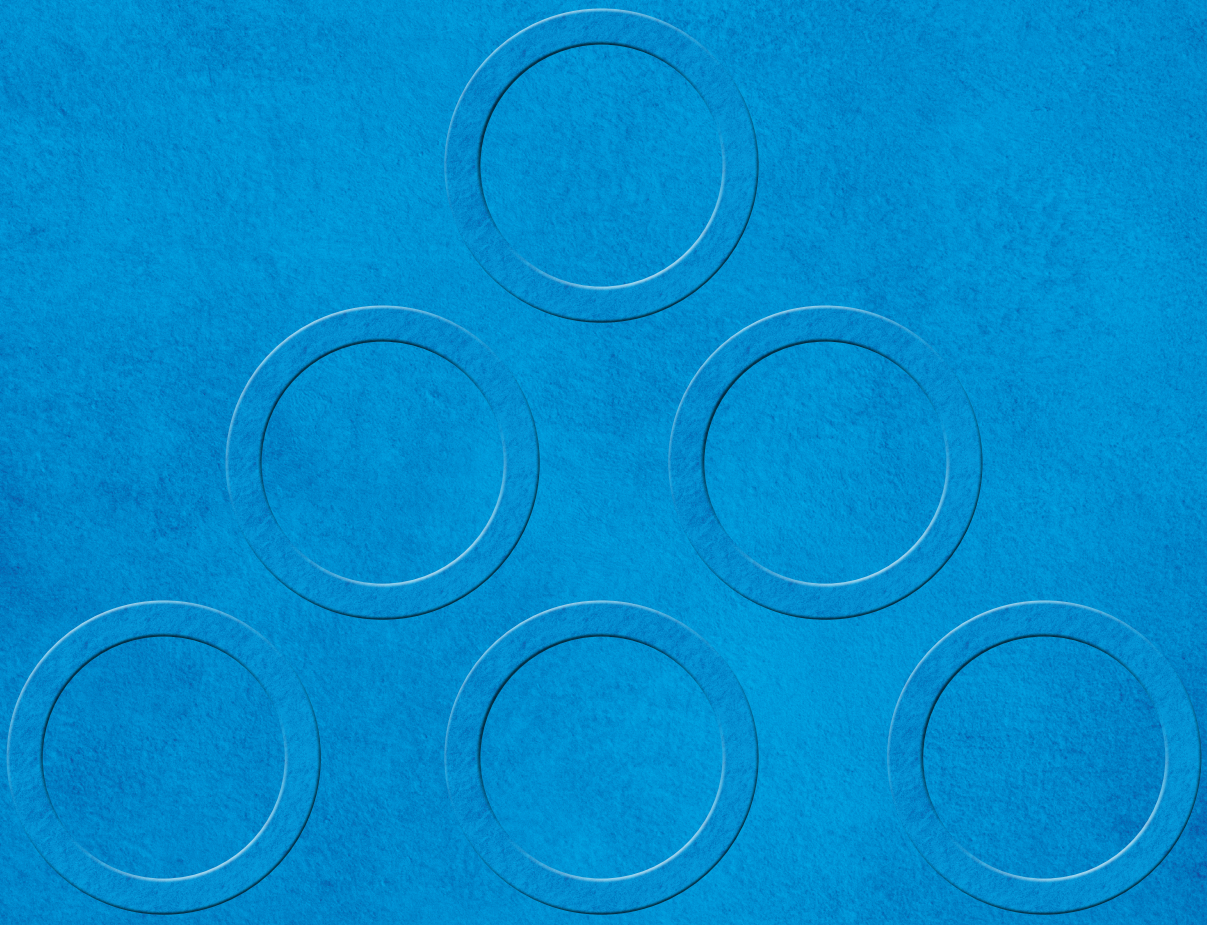
- Double-mix impressions
- Reline impressions

Highly recommended
Recommended

Mixing tips, yellow, 100 tips p. 51
Identium® tray materials p. 14-15
Applyfix® 4 dispensing gun p. 52

Identium®	100 mL Normal pack 1:1 2 × 50 mL cartridges, 8 yellow mixing tips
Light	REF 13701
Light **Fast**	REF 13711

Not available in all markets.



KETTENBACH DENTAL
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SOOO PRECISE
IS PANASIL®
KETTENBACHDENTAL
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PANASIL®

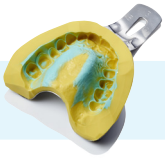
Precise with no compromises, that's what **Panasil®** stands for. The range includes the right product for all impression techniques and indications. Thanks to its impressive product properties and coordinated product combinations, impressions can even be taken in moist environments and still deliver exceptionally precise results. The Panasil® family is available in low, medium, and high viscosity precision impression materials as well as a kneadable material all based on A-silicone .

Two-step impressions

Tray material	Mixing	Working time at 23 °C	Intraoral working time	Intraoral setting time	Total setting time*	Page
Panasil® binetics Putty Fast		1:30 min.	–	2:30 min.	4:00 min.	21
Panasil® binetics Putty Soft		2:00 min.	–	3:00 min.	5:00 min.	21
Panasil® tray Fast Heavy		1:20 min.	–	2:00 min.	3:20 min.	23
Panasil® Putty Fast		1:30 min.	–	2:00 min.	3:30 min.	22
Panasil® Putty Soft		2:00 min.	–	2:00 min.	4:00 min.	22
Panasil® Putty		2:00 min.	–	2:00 min.	4:00 min.	22
Correction material (X-Light body)						
Panasil® initial contact X-Light		1:30 min.	1:00 min.	2:30 min.	4:00 min.	25
Panasil® initial contact X-Light Fast		1:00 min.	0:30 min.	2:00 min.	3:00 min.	25
Panasil® contact plus X-Light		2:00 min.	1:00 min.	2:00 min.	4:00 min.	26

* Total setting time (removal from the mouth) from the start of the mixing.

Double-mix impressions



Tray material	Mixing	Working time at 23 °C	Intraoral working time	Intraoral setting time	Total setting time*	Page
Panasil® tray Soft Heavy		2:00 min.	–	2:00 min.	4:00 min.	23
Panasil® tray Soft Heavy		2:00 min.	–	2:00 min.	4:00 min.	23
Panasil® tray Fast Heavy		1:00 min.	–	2:00 min.	3:00 min.	23
Panasil® tray Soft Heavy Fast		1:00 min.	–	2:00 min.	3:00 min.	23
Correction material (Light body)						
Panasil® initial contact Light		1:30 min.	1:00 min.	2:30 min.	4:00 min.	25
Panasil® initial contact Light Fast		1:00 min.	0:30 min.	2:00 min.	3:00 min.	25
Panasil® contact two in one Light		2:00 min.	1:00 min.	2:00 min.	4:00 min.	26

* Total setting time (removal from the mouth) from the start of the mixing.

PANASIL®

Sandwich impressions

Tray material	Mixing	Working time at 23 °C	Intraoral working time	Intraoral setting time	Total setting time*	Page
Panasil® binetics Putty Soft		2:00 min.	–	3:00 min.	5:00 min.	21
Panasil® Putty Soft		2:00 min.	–	2:00 min.	4:00 min.	22
Correction material (Medium body)						
Panasil® initial contact Regular		1:30 min.	1:00 min.	2:30 min.	4:00 min.	25

* Total setting time (removal from the mouth) from the start of the mixing.

Monophase, fixation and pick-up impressions

Tray material	Mixing	Working time at 23 °C	Intraoral working time	Intraoral setting time	Total setting time*	Page
Panasil® monophase Medium		2:00 min.	1:00 min.	2:00 min.	4:00 min.	24

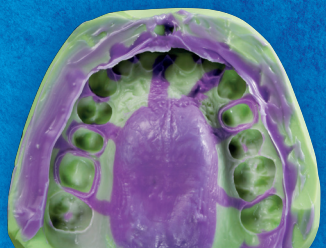
* Total setting time (removal from the mouth) from the start of the mixing.

Functional impressions

Tray material	Mixing	Working time at 23 °C	Intraoral working time	Intraoral setting time	Total setting time*	Page
Panasil® monophase Medium		2:00 min.	1:00 min.	2:00 min.	4:00 min.	24

* Total setting time (removal from the mouth) from the start of the mixing.

PANASIL® BINETICS PUTTY FAST AND PUTTY SOFT



Panasil® binetics Putty is a genuinely kneadable putty based on A-silicone for precision impressions available in a 5:1 jumbo cartridge (380 mL).

Easy processing

- Good trimming properties thanks to the appropriate hardness
- Easy extrusion from the convenient 5:1 cartridge with all common mixing devices
- Consistent quality thanks to exact, reproducible dosage from the convenient Jumbo cartridge

Security thanks to precision

- High viscosity for sufficient pressure build-up
- Easy removal from the mouth based on ideal elasticity
- Dimensionally stable elastic recovery
- Low salivation thanks to odor and taste neutrality

Always the right product

- binetics Putty Fast – short intraoral setting time (end of setting 4 min.), high final hardness (Shore A 63)
- binetics Putty Soft – reduced final hardness (Shore A 56) for even easier removal from the mouth

Panasil® binetics Putty Fast short intraoral setting time

- ⊕ Two-step impressions
- ⊕ Foil impressions

Panasil® binetics Putty Soft reduced final hardness

- ⊕ One-step putty-wash impressions
- ⊕ Functional margin contouring
- ⊕ Two-step impressions
- ⊕ Foil impressions

⊕ Highly recommended
⊕ Recommended

Panasil® light body materials	p. 25-26
Dynamic mixers	p. 51
Sympress dispenser	p. 53
Panasil® Adhesive	p. 50

Panasil®	380 mL **Intro pack** 5:1 380 mL cartridge, 10 dynamic mixers	760 mL **Refill pack** 5:1 2 × 380 mL cartridges
binetics Putty **Fast**	REF 14700	REF 14701
binetics Putty **Soft**	REF 14702	REF 14703

Not available in all markets.

PANASIL® PUTTY, PUTTY FAST AND PUTTY SOFT

Panasil® Putty is a classic kneadable precision impression material available in a jar. Thanks to continuous refinement, you benefit from more than 35 years of experience, quality, and reliability.

Easy processing

- Accustomed handling without additional equipment
- Smooth kneading without sticking

Precise and cost effective

- Hardness and elasticity in harmony for easy removal from the mouth
- Extra high dynamic pressure for optimal flow
- Dimensionally accurate
- Outstanding value for money

Always the right product

- Putty Soft – reduced final hardness (Shore A 60) for even easier removal from the mouth
- Putty Fast – fast setting (end of setting 3:30 min.)
- Putty – Final hardness Shore A 66 (end of setting 4:00 min.)

Panasil® Putty Fast short intraoral setting time

- ⊕ Two-step impressions
- ⊕ Foil impressions

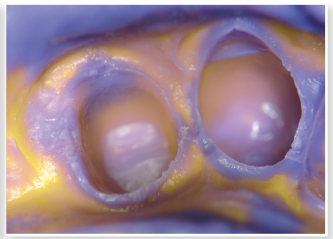
Panasil® Putty Soft reduced final hardness

- ⊕ One-step putty-wash impressions
- ⊕ Functional margin contouring
- ⊕ Two-step impressions
- ⊕ Foil impressions

Panasil® Putty high dynamic pressure

- ⊕ Two-step impressions
- ⊕ Foil impressions
- ⊕ One-step putty-wash impressions
- ⊕ Functional margin contouring

⊕ Highly recommended
⊕ Recommended

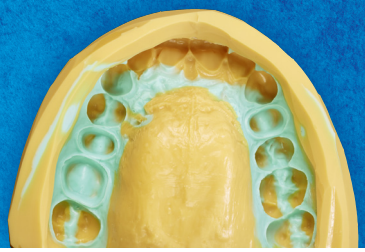


Panasil® light body materials p. 25-26
Panasil® Adhesive p. 50

Panasil®	400 mL **Intro pack** 1:1 200 mL catalyst paste, 200 mL base paste, 2 dispensing scoops	900 mL **Normal pack** 1:1 1 × 450 mL catalyst paste, 1 × 450 mL base paste, 2 dispensing scoops	3600 mL **Economy pack** 1:1 4 × 450 mL catalyst paste, 4 × 450 mL base paste, 2 dispensing scoops
Putty **Fast**	REF 11140	REF 11141	REF 11143
Putty **Soft**	REF 11120	REF 11121	REF 11123
Putty	–	REF 11101	REF 11103

Not available in all markets.

PANASIL® TRAY FAST HEAVY AND SOFT HEAVY



Panasil® tray is a high-viscosity, stiff Heavy body based on A-silicone for precision impressions available in the 5:1 jumbo cartridge.

Easy processing

- Consistent quality thanks to exact, reproducible dosage from the convenient Jumbo cartridge

Security thanks to precision

- High dynamic pressure
- Dimensionally stable elastic recovery
- Good trimming properties of the tray Fast Heavy material, so it is also suitable for two-step impressions

Always the right product

- tray Fast Heavy – short intraoral setting time (end of setting 3:20 min.), high final hardness (Shore A 62)
- tray Soft Heavy – reduced final hardness (Shore A 55) for even easier removal from the mouth

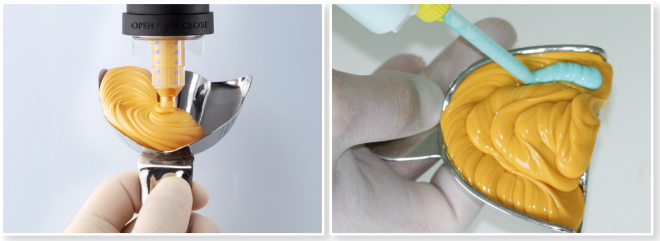
Panasil® tray Fast Heavy short intraoral setting time

- ⊕ Two-step impressions
- ⊕ Double-mix impressions

Panasil® tray Soft Heavy reduced final hardness

- ⊕ Double-mix impressions
- ⊕ Functional impressions

⊕ Highly recommended
⊕ Recommended



Panasil® light body materials p. 25-26
Dynamic mixers p. 51
Sympress dispenser p. 53
Panasil® Adhesive p. 50

Panasil®	380 mL **Intro pack** 5:1 380 mL cartridges, 10 dynamic mixers	760 mL **Refill pack** 5:1 2 × 380 mL cartridges	100 mL **Normal pack** 1:1 2 x 50 mL cartridges, 6 green mixing tips
tray **Fast Heavy**	REF 14704	REF 14705	REF 13551
tray **Soft Heavy**	REF 14706	REF 14707	REF 13541
tray **Soft Heavy Fast**	–	–	REF 13561

Not available in all markets.

PANASIL® MONOPHASE MEDIUM

Panasil® monophase Medium is a medium-viscosity monophase impression material based on A-silicone. It is available in the comfortable 5:1 jumbo cartridge (380 mL) as well as the familiar 50 mL cartridge and is characterized by a particularly high initial hydrophilicity for precision in extreme situations.

Precise impressions

- Strong thixotropy combined with exceptional hydrophilicity enables first-class application.
- Optimal flow, which also ensures reliability and precision in difficult oral situations.

Rapidly fixed, reliably transferred

- High final hardness (Shore A 60) allows optimal retention and thus perfect and precise reproduction of primary parts.
- Practical processing and setting time (each 2:00 min.) guarantees you reliability.

Universally applicable

- Just as suitable for preparing crowns/bridges, inlays/onlays, and veneers as for fixation impressions.

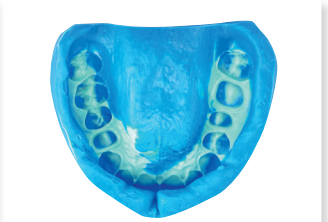
Patient-friendly

- The odorless and tasteless material with a short intraoral setting time contributes to lower patient stress.

Panasil® monophase Medium medium viscosity

- ⊕ Monophase impressions
- ⊕ Fixation impressions
- ⊕ Functional impressions
- ⊕ Pick-up impressions
- ⊕ Double-mix impressions
- ⊕ Reline impressions

⊕ Highly recommended
⊕ Recommended



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Mixing tips, green, 100 tips	p. 51
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Panasil® Adhesive	p. 50

760 mL **Refill pack** 5:1
2 × 380 mL cartridges

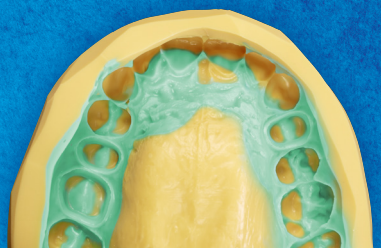
REF 14709

100 mL **Normal pack** 1:1
2 × 50 mL cartridges, 6 green mixing tips

REF 13501

Not available in all markets.

PANASIL® INITIAL CONTACT X-LIGHT, LIGHT AND REGULAR



Panasil® initial contact is a Light body based on A silicone with a particularly high initial hydrophilicity for precision impressions – it is ideally matched to the Panasil® tray materials. The three material variants (X-Light - very low viscosity, Light - low viscosity and Regular - medium viscosity) are each available as fast-setting Fast variants – simply always the right product.

Precision

- Optimal flow based on exceptional initial hydrophilicity ensures reliability and precision even in difficult oral situations, e.g. problematic hemostasis.
- Dimensionally stable elastic recovery

Convenient and simple processing and working

- Fast and easy to apply using all conventional dispensing guns such as Applyfix® 4 for impression materials
- Outstanding flowability and highly toxicotropic: flows into narrow gaps and does not drip from the tooth

Panasil® initial contact X-Light very low viscosity, purple

- ⊕ Two-step impressions
- ⊕ Reline impressions
- ⊕ Double-mix impressions
- ⊕ One-step putty-wash impressions

Panasil® initial contact Light low viscosity, light green

- ⊕ Double-mix impressions
- ⊕ Reline impressions
- ⊕ Foil impressions
- ⊕ Two-step impressions
- ⊕ One-step putty-wash impressions

Panasil® initial contact Regular medium viscosity, gray

- ⊕ One-step putty-wash impressions
- ⊕ Foil impressions
- ⊕ Double-mix impressions
- ⊕ Reline impressions

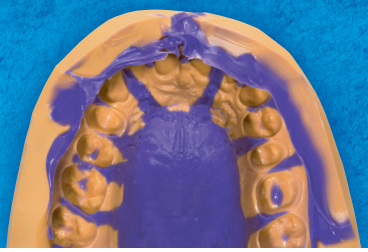
⊕ Highly recommended
⊕ Recommended

Mixing tips, yellow, 100 tips p. 51
Mixing tips, green, 100 tips p. 51
Panasil® tray materials p. 21-23
Applyfix® 4 dispensing gun p. 52

Panasil®	100 mL **Normal pack** 1:1 2 × 50 mL cartridges, 8 yellow mixing tips (Regular: 6 green mixing tips)	500 mL **Bonus pack** 1:1 10 × 50 mL cartridges, 40 yellow mixing tips
initial contact **X-Light**	REF 13401	REF 28300
initial contact **X-Light Fast**	REF 13461	–
initial contact **Light**	REF 13411	REF 28310
initial contact **Light Fast**	REF 13471	–
initial contact **Regular**	REF 13431	–

Not available in all markets.

PANASIL® CONTACT PLUS X-LIGHT, TWO IN ONE LIGHT



Panasil® contact is a Light body based on A silicone for precision impressions. The setting characteristics of both products are impressive: end of setting can be achieved after only 2 minutes.

Flexible setting characteristics

- Flexible working time up to 2 minutes
- Always the same short intraoral setting time of 2 minutes
- < 2 min. working time
  + 2 min. intraoral setting time

  > 2 min. end of setting

Convenient and simple working

- Fast and easy to apply using all conventional dispensing guns such as Applyfix® 4 for impression materials
- Low viscosity and stable at the same time
- Dimensionally stable elastic recovery

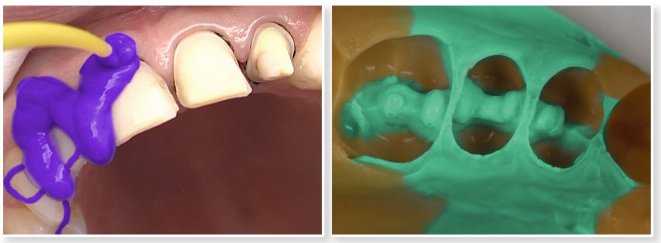
Panasil® contact plus X-Light very low viscosity, purple

- ⊕ Two-step impressions
- ⊕ Reline impressions
- ⊕ Double-mix impressions
- ⊕ One-step putty-wash impressions

Panasil® contact two in one Light low viscosity, light green

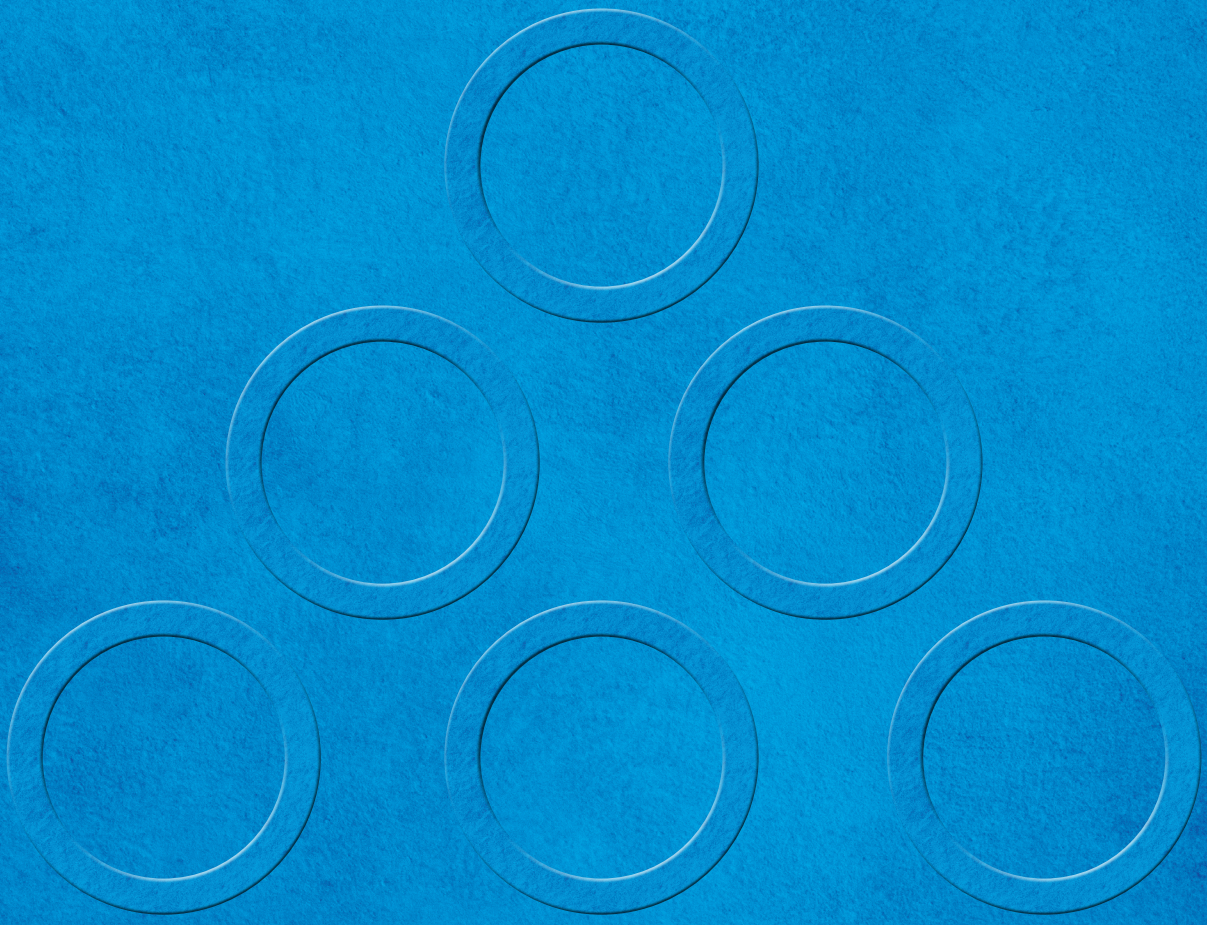
- ⊕ Double-mix impressions
- ⊕ One-step putty-wash impressions
- ⊕ Foil impressions
- ⊕ Reline impressions

⊕ Highly recommended
⊕ Recommended



Panasil®	100 mL Normal pack 1:1 2 × 50 mL cartridges, 8 yellow mixing tips	100 mL Normal pack 1:1 2 × 50 mL cartridges, 6 green mixing tips
contact plus **X-Light**	REF 11892	–
contact two in one **Light**	–	REF 11781

Not available in all markets.



KETTENBACH DENTAL
Simply intelligent

SOOO SUPER

WITH FUTAR®

KETTENBACH DENTAL
Simply intelligent

FUTAR®

The **Futar®** family of products includes six syringeable elastomeric materials for bite registration to create precise impressions of the occlusal situation.

All the materials are A-silicones and are impressive thanks to their high final hardness and high level of comfort. The Futar® family has a bite registration material suitable for every requirement.

Dental arch

Bite registration material	Mixing	Working time at 23 °C	Intraoral setting time	Total setting time*	Special feature	Page
Futar®		0:30 min.	1:30 min.	2:00 min.	Hard material	30
Futar® D		0:30 min.	1:30 min.	2:00 min.	Especially hard material	31
Futar® D Slow		1:30 min.	3:00 min.	4:30 min.	Especially hard material with a long processing time	33

* Total setting time (removal from the mouth) from the start of the mixing.

Segment

Bite registration material	Mixing	Working time at 23 °C	Intraoral setting time	Total setting time*	Special feature	Page
Futar® Fast		0:15 min.	0:45 min.	1:00 min.	Hard material, rapid setting	30
Futar® D Fast		0:15 min.	0:45 min.	1:00 min.	Especially hard material, rapid setting	31
Futar® Cut & Trim Fast		0:15 min.	0:45 min.	1:00 min.	Especially hard, flexible processing, scannable	32

* Total setting time (removal from the mouth) from the start of the mixing.

FUTAR®
FUTAR® FAST

Futar® is a syringeable elastomeric A-silicone for bite registration with high final hardness.

Precision

- The high final hardness (Shore A 90) minimizes compression when mounting the models in the laboratory.

Easy to work with

- Easy to handle and easy to process with a scalpel

Stable

- Highly thixotropic so it does not flow away into the interdental spaces but remains stable on the tooth, easy to remove from the mouth

Modern setting characteristics

- Regular set: comfortable processing time (30 seconds), short intraoral setting time (90 seconds) for ease of use
- Fast set: short processing time (15 seconds), extra short intraoral setting time (45 seconds): the registration is ready in just one minute

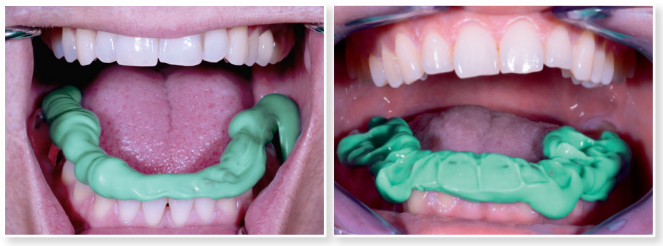
Futar® 30-second processing time

- ⊕ Bite registration (full dental arch)
- ⊕ Loading the bite fork
- ⊕ Registration (general)
- ⊕ Registration in orthodontics
- ⊕ Bite registration (segment)

Futar® Fast 15-second processing time

- ⊕ Bite registration (segment)
- ⊕ Loading the bite fork
- ⊕ Registration (general)
- ⊕ Registration in orthodontics
- ⊕ Bite registration (full dental arch)

⊕ Highly recommended
⊕ Recommended



Mixing tips, green, 100 tips  p. 51
Applyfix® 4 dispensing gun p. 52

Futar®	100 mL **Normal pack** 1:1 2 × 50 mL cartridges, 6 green mixing tips	500 mL **Bonus pack** 1:1 10 × 50 mL cartridges, 30 green mixing tips
Futar®	REF 11912	REF 28277
Futar® **Fast**	REF 11926	REF 28276

Not available in all markets.

FUTAR® D
FUTAR® D FAST

Futar® D is a syringeable elastomeric A-silicone for bite registration with high final hardness.

Precision

- The extra high final hardness (Shore D 43) prevents springing when aligning the models in the laboratory.

Easy to work with

- Easy to handle and easy to mill

Stable

- Highly thixotropic so it does not flow away into the interdental spaces but remains stable on the tooth, easy to remove from the mouth

Modern setting characteristics

- Regular set: comfortable processing time 30 seconds), short intraoral setting time 90 seconds) for ease of use
- Fast set: short processing time (15 seconds), extra short intraoral setting time (45 seconds): the registration is ready in just one minute

Futar® D 30-second processing time

- ⊕ Bite registration (full dental arch)
- ⊕ Loading the bite fork
- ⊕ Registration (general)
- ⊕ Registration in orthodontics
- ⊕ Bite registration (segment)

Futar® D Fast 15-second processing time

- ⊕ Bite registration (segment)
- ⊕ Loading the bite fork
- ⊕ Registration (general)
- ⊕ Registration in orthodontics
- ⊕ Bite registration (full dental arch)

⊕ Highly recommended
⊕ Recommended

Mixing tips, green, 100 tips  p. 51
Applyfix® 4 dispensing gun p. 52

Futar® D	100 mL **Normal pack** 1:1 2 × 50 mL cartridges, 6 green mixing tips	500 mL **Bonus pack** 1:1 10 × 50 mL cartridges, 30 green mixing tips
Futar® D	REF 11932	REF 28278
Futar® D **Fast**	REF 11961	REF 28279

Not available in all markets.

FUTAR® CUT & TRIM FAST

Futar® Cut & Trim Fast is an extra hard, extra fast setting A-silicone for bite registration.

Precision

- The extra high final hardness (Shore D 35) prevents springing when aligning the models in the laboratory.

Flexible to work with

- Whether with a bur or a scalpel – Futar® Cut & Trim Fast is easy and simple to work with
- Scannable for using with CAD/CAM

Saves time

- 15-second processing time for documenting the teeth with an extra fast setting time of 45 seconds: The bite registration is prepared in just one minute.

Less material discarded

- By using the shorter yellow mixing tips, an additional three registrations can be prepared per cartridge

Futar® Cut & Trim Fast 15-second processing time

- ⊕ Bite registration (segment)
- ⊕ Loading the bite fork
- ⊕ Scannable bite registration
- ⊕ Registration in orthodontics
- ⊕ Bite registration (full dental arch)

⊕ Highly recommended
⊕ Recommended

Mixing tips, yellow, 100 tips  p. 51
Applyfix® 4 dispensing gun p. 52

100 mL **Normal pack** 1:1
2 × 50 mL cartridges, 8 yellow mixing tips

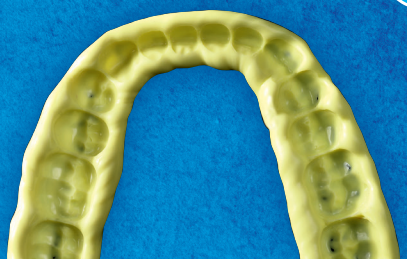
Fast REF 11975

500 mL **Bonus pack** 1:1
10 × 50 mL cartridges, 40 yellow mixing tips

Fast REF 28275

Not available in all markets.

FUTAR® D SLOW



Futar® D Slow is a syringeable elastomeric A-silicone for bite registration with an extra high final hardness and an extra long processing time.

Precision

- The extra high final hardness (Shore D 43) prevents springing when aligning the models in the laboratory.

Easy to work with

- Easy to handle and easy to mill

Stable

- Highly thixotropic so it does not flow away into the interdental spaces but remains stable on the tooth

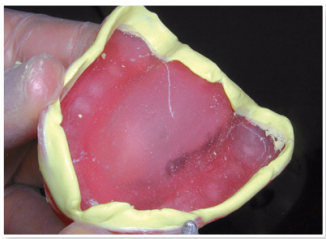
Wide range of possible uses

- With a 90-second processing time, Futar® D Slow ensures plenty of time for myocentric bite registration, custom margin contouring, for use as an insulating agent or fixation material combined with other A-silicones in implant dentistry or anywhere where a particularly hard A-silicone is used in the clinic or laboratory

Futar® D Slow 90-second processing time

- ⊕ Bite registration (time consuming)
- ⊕ Myocentric bite registration
- ⊕ Functional margin contouring
- ⊕ Bite registration (full dental arch)
- ⊕ Registration (general)
- ⊕ Registration in orthodontics

⊕ Highly recommended
⊕ Recommended

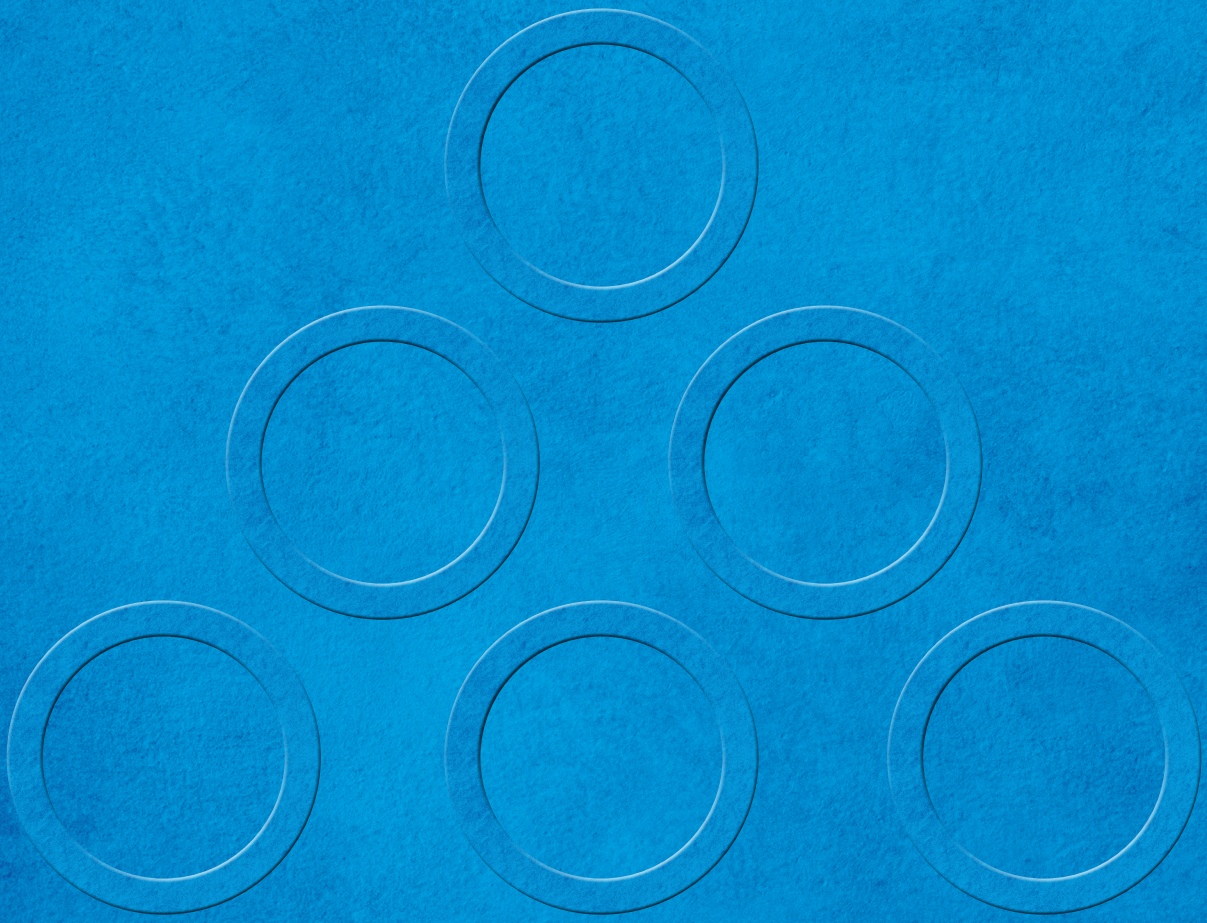


100 mL **Normal pack** 1:1
2 × 50 mL cartridges, 6 green mixing tips

REF 11951

Mixing tips, green, 100 tips p. 51
Applyfix® 4 dispensing gun p. 52

Not available in all markets.



KETTENBACH DENTAL
Simply intelligent

RESTORATION

SO UNBREAKABLE IS VISALYS® TEMP

KETTENBACH DENTAL
Simply intelligent

VISALYS® TEMP

Visalys® Temp is a temporary crown and bridge material for exceptionally stable and fracture-resistant short- and long-term temporary restorations based on a multifunctional acrylic composite. Visalys® Temp is suitable for fabricating temporary crowns, partial crowns, bridges, inlays, onlays, and veneers.

Exceptionally stable and fracture resistant

- Particularly high values for impact strength, flexural strength, diametrical tensile strength, and elastic modulus
- Satisfied customers thanks to noticeably fewer fractures/repairs
- Can also be used for long-term temporary restorations (> 4 weeks)

Easy to use

- Saves valuable time: smooth surface and high luster even without polishing
- Comfortable processing: minimal smear layer, precise milling, minimal dust

High aesthetics

- Tooth-like translucency and opalescence ensure optimal integration into the existing dentition thanks to the chameleon effect
- Natural fluorescence; available in six shades
- Also suitable for very challenging anterior teeth temporary restorations

Visalys® Temp

- Highly recommended
- Recommended

Mixing tips, blue-orange, 50 tips p. 51
Applyfix® 6 dispensing gun p. 52

Visalys® Temp	50 mL **Normal pack** 1:10 50 mL cartridge, 15 blue-orange mixing tips	250 mL **Bonus pack** 1:10 5 × 50 mL cartridges, 15 blue-orange mixing tips
Shade **A1**	REF 13780	–
Shade **A2**	REF 13781	REF 13794
Shade **A3**	REF 13782	REF 13795
Shade **A3.5**	REF 13790	–
Shade **B1**	REF 13784	–
Shade **BL**	REF 13788	–

Not available in all markets.

SOOO 2 IN 1

IS VISALYS® CEMCORE

KETTENBACH DENTAL
Simply intelligent

VISALYS® CEMCORE

Visalys® CemCore is a dual-curing, adhesive cementation and core build-up composite. The unique Active-Connect-Technology (ACT) provides an optimized adhesive bond and at the same time Visalys® CemCore has outstanding stability thanks to the special network former, even without matrices.

2 in 1: 1 product, 2 indications

- For cementation of all restorations, even in the highly esthetic anterior region
- For core build-ups, also in difficult situations

Permanently strong adhesive bond and reliable core build-up

- Despite the hydrophobicity required for a core build-up material, the unique Active-Connect-Technology (ACT) with the integrated phase-transfer catalyst ensures a permanently strong adhesive bond
- Special network formers provide Visalys® CemCore with high stability for core build-ups while at the same time very good flowability when positioning the restoration

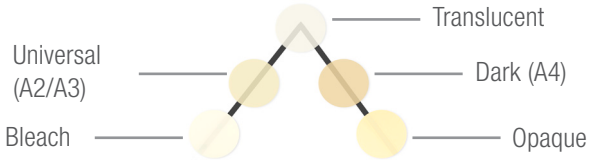
Effortless work

- Visalys® CemCore is dual-curing, ensuring reliable curing even in sites with no light access
- Core build-ups are problem free, even without matrices
- Flows during cementation to form a thin layer under the restoration and any excess can be easily removed thanks to the fine control of the initial light curing
- Visalys® CemCore has a higher radiopacity than enamel and dentin and is thus easily visible
- And of course, free of bisphenol A

Visalys® CemCore

- Cementation
- Core build-up

Highly recommended
Recommended



Mixing tips, blue, blunt, 50 tips p. 51
Mixing tips, blue, pointed, 50 tips p. 51
Intraoral tips, transparent p. 51
Endo tips, transparent p. 51

Visalys® CemCore	Starter pack 2.5-mL-automix-syringe, 2 mL Tooth Primer, 2 mL Restorative Primer, blue mixing tips, blunt/tapered, 5 tips each, 3 Intraoral tips, 2 endo tips	Normal pack 5-mL-automix-syringe, blue mixing tips, blunt/tapered, 10 tips each, 6 intraoral tips, 4 endo tips	Visalys® CemCore Try In Paste 1.4-mL-syringe, 5 application tips
Universal (A2/A3)	REF 13570	REF 13572	REF 13592
Opaque	–	REF 13573	REF 13593
Translucent	–	REF 13574	REF 13590
Bleach	–	REF 13575	REF 13591
Dark (A4)	–	REF 13576	REF 13594

Not available in all markets.

Visalys® Tooth Primer
1 × 4-mL-bottle
REF 13580

Visalys® Restorative Primer
1 × 4-mL-bottle
REF 13581

SOOO STABLE

IS VISALYS® CORE

KETTENBACH DENTAL

Simply intelligent

VISALYS® CORE

Visalys® Core is a dual-curing, radiopaque, fluoride-containing composite for core build-up and cementing root posts with a unique Active-Connect-Technology (ACT).

Reliable adhesive bond for durable restorations

- The unique Active-Connect-Technology (ACT) provides a reliable adhesive bond even with light-curing single-step adhesives
  Visalys® Core adheres exceptionally well to light-curing or dual-curing single-step or multi-step adhesives–you can still use your preferred adhesive
- Superstructures with Visalys® Core are strong in compression and stable and form a reliable monoblock with root post and core build-up

Success even in difficult situations

- Visalys® Core is dual-curing, ensuring that superstructures are solid even in sites with no light access

Two indications, one material

- For core build-up and root post cementation

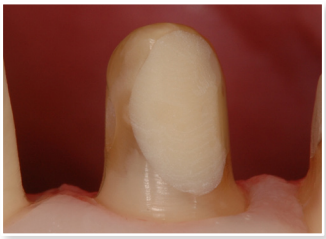
Makes work easier

- Visalys® Core can be easily applied directly into the cavity with minimal application force.
- Visalys® Core flows easily into the root canal but for core build-up still has excellent stability and can be easily modeled–also without matrices.
- Visalys® Core is precise and can be ground similar to dentin. Light curing in only 20 seconds.

Visalys® Core

- ⊕ Core build-up
- ⊕ Root post cementation

⊕ Highly recommended
⊕ Recommended



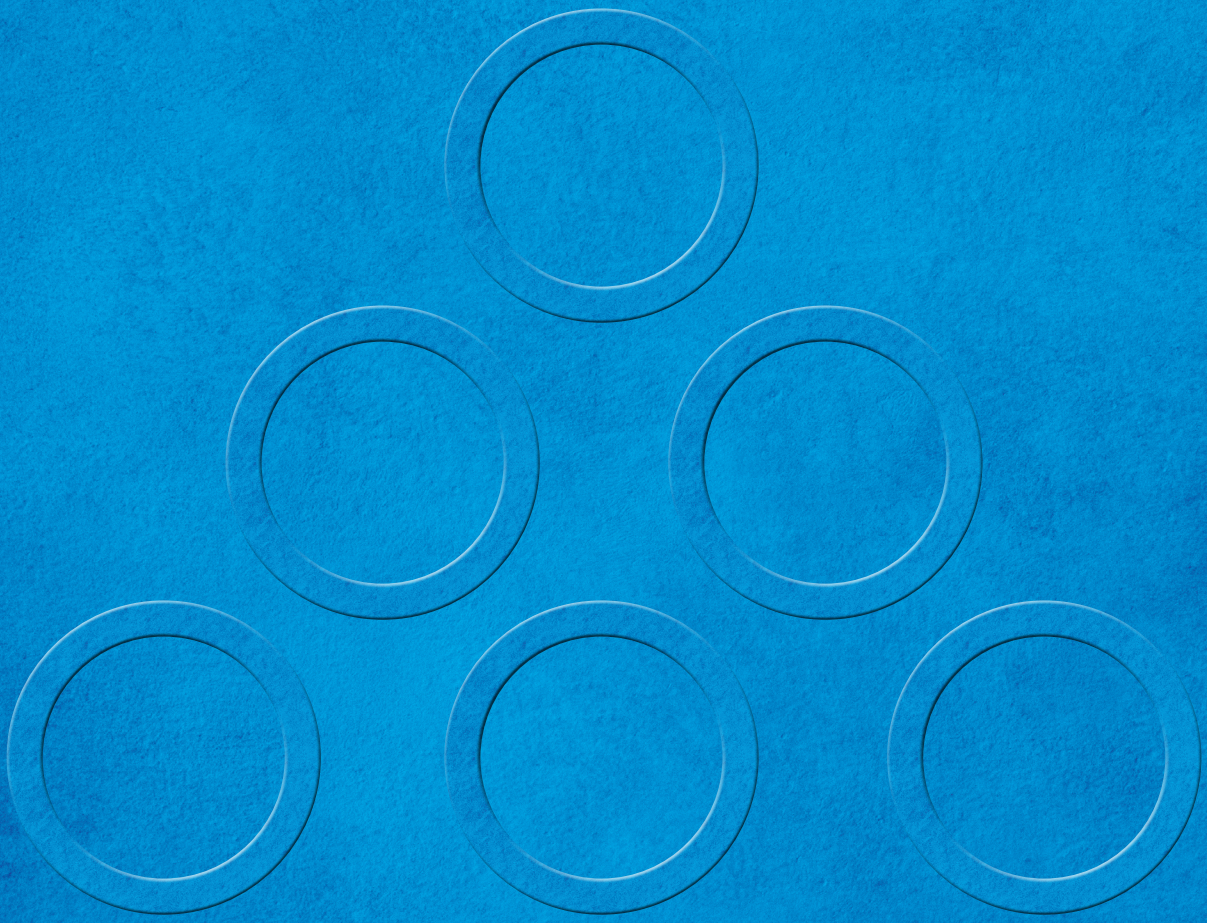
Mixing tips, brown, 50 tips p. 51
Mixing tips, yellow, short, 50 tips p. 51
Endo tips, transparent p. 51
Intraoral tips, transparent
Intraoral tips, yellow p. 51
Applyfix® 8 dispensing gun p. 52

ACTIVE CONNECT TECHNOLOGY

100% BPA FREE Free of Bisphenol A

	Automix syringe		Cartridge
Visalys® Core	5 mL **Intro pack** 1:1 1 × 5-mL-automix-syringe, 10 brown mixing tips, 5 intraoral tips, 5 endo tips	10 mL **Normal pack** 1:1 2 × 5-mL-automix-syringe, 20 brown mixing tips 10 intraoral tips, 10 endo tips	25 mL **Normal pack** 1:1 1 × 25-mL-cartridge, 20 yellow mixing tips, 20 intraoral tips
White	REF 13866	REF 13860	REF 13870
Dentin	REF 13865	REF 13861	REF 13871

Not available in all markets.



KETTENBACH DENTAL
Simply intelligent

OTHER PRODUCTS

SOOO ADHERENT

IS **MUCOPREN®** SOFT

KETTENBACH DENTAL

Simply intelligent

OTHER PRODUCTS

MUCOPREN® SOFT

Mucopren® Soft is a permanently soft durable relining material for removable dentures based on vinyl polysiloxane.

Comfortable processing

- Can be used chairside and is applied in just a few minutes
- Mucopren® Soft can be easily processed with scalpel and bur

Very comfortable for patients

- The particularly smooth, hydrophobic silicone surface offers protection against microbial contamination
- Permanently elastic

Durable

- Outstanding adhesion, does not detach from the prosthesis
- High tear resistance, long service life

Mucopren® Soft

- Direct relining
- Indirect relining

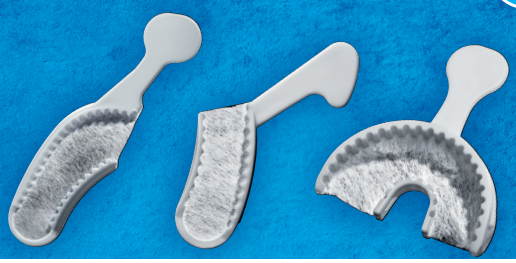
Highly recommended
Recommended

Mixing tips, green, 100 tips p. 51
Mixing tips, blue, 60 tips p. 51
Applyfix® 4 dispensing gun p. 52

Mucopren® Soft		Silicone sealant	Adhesive
Base set 50 mL Mucopren® Soft, 50 mL Mucopren® silicone sealant, 10 mL Mucopren® Adhesive, 7 green mixing tips, 20 blue mixing tips, 1 brush holder, 20 single-use brushes, 1 steel bur, accessories	100 mL **Normal pack** 1:1 2 × 50 mL Mucopren® Soft, 6 green mixing tips	50 mL **Normal pack** 1:1 1 × 50 mL Mucopren® silicone sealant, 10 blue mixing tips	10 mL **Normal pack** 10 mL Mucopren® Adhesive
REF 28105	REF 15687	REF 15686	REF 14203

OTHER PRODUCTS

MULTI TRAYS



Partial impression trays made of plastic for single use for anatomical and/or precision impressions.

Saves time and money

- Combines three steps in one (impression, opposing dentition impression, and bite registration)
- No additional adhesive required
- Scannable

Simple and varied handling

- Suitable for inlays/onlays or single crowns
- Stable, grooved tray sides for high strength; thin, mobile, tear-proof gauze for precise impression results

Silginat® / Silginat® Strawberry: p. 11
Identium®: p. 12-16
Panasil® monophase Medium: p. 24
Panasil® tray: p. 23

Anterior

Posterior

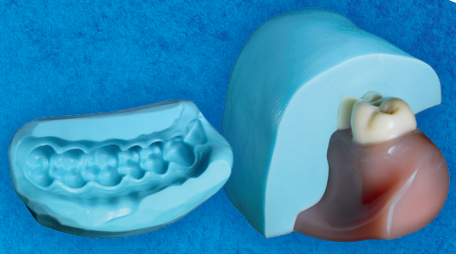
Quadrant

Anterior	Posterior	Quadrant
30 pieces	50 pieces	30 pieces
REF 17752	REF 17750	REF 17753

Not available in all markets.

OTHER PRODUCTS

PANASIL® LAB PUTTY



Panasil® lab Putty is a kneadable, addition-curing overcast material based on vinyl polysiloxane with a high final hardness and is therefore ideal for use as an overcast and bite index material. Other laboratory work such as model fabrication for fracture and crack repairs can be easily carried out.

Effective use

- Clean and easy dosage
- Non-sticky, smooth kneading

All the advantages of an A silicone

- Dimensional stability
- High detail reproduction
- Linear dimensional change ≤ -0.1%

Easy to process

- Very short setting time (6 minutes at 23°C)
- Precise retention of the teeth in the overcast thanks to the high final hardness (Shore A 85)

Panasil® lab Putty

- ⊕ Overcast material
- ⊕ Bite index material
- ⊕ Fracture repairs
- ⊕ Crack repairs

⊕ Highly recommended
⊕ Recommended

10 kg **Economy pack** 1:1
1 × 5 kg catalyst paste, 1 × 5 kg base paste,
2 × dispensing scoops

REF 11153

Not available in all markets.

ORTHOSKAVIDENT® C

Orthoskavident® C is a conditioning fluid for cleaning and drying prepared cavities and tooth stumps. Can be used for all external applications in the dental practice that require a clean and oil-free surface.

Easy to handle

- Orthoskavident® C in the 150 mL glass bottle is easy to use and simple to process

Wide range of uses

- For all external applications that require a clean and oil-free surface such as removing the smear layer on the surface of prepared teeth before attaching a fixed dental restoration or inserting fillings; replacing or repairing damaged veneers in the mouth
- Sealing teeth; adhering brackets in orthodontics, etc.

Orthoskavident® C

- Cleaning and drying prepared cavities and tooth stumps

Highly recommended
Recommended

150 mL **Normal pack** 150 mL bottle	450 mL **Economy pack** 3 × 150 mL bottle
REF 13063	REF 13065

Not available in all markets.

ACCESSORIES

ADHESIVES

To ensure the best possible adhesion between the impression tray and the impression material, it is recommended to use an adhesive that is appropriate for the chemical composition of the impression material.

Available in 1 x 10 ml glass bottles:

- Easy to apply
- Quick drying time
- Good visual inspection

Best possible retention of the impression in the impression tray

- Adhesive and impression material are coordinated in terms of their chemistry.

Identium® Adhesive

- Specifically for Vinylsiloxanether® impression material (Identium®).

Panasil® Adhesive

- Specifically for all addition-curing impression materials (A-silicones) such as Panasil®.

Mucopren® Adhesive

- Optimal adhesion of Mucopren® Soft to acrylic dentures.
- Prevents the formation of gaps between the denture acrylic and the reline silicone.

Identium® Adhesive	Panasil® Adhesive	Mucopren® Adhesive
10 mL bottle	10 mL bottle	10 mL bottle
REF 14204	REF 14101	REF 14203

Not available in all markets.

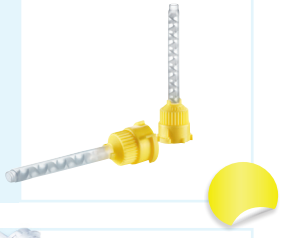
MIXING SYSTEMS

Impression materials / Bite registration material

Mixing tips yellow, Ø 4.2 mm
Impression materials:
- Panasil® initial contact X-Light/-Fast,
- Panasil® initial contact Light/-Fast,
- Panasil® contact plus X-Light/-Fast,
- Identium® Light
- Identium® Light Fast

Bite registration materials:
- Futar® Cut & Trim Fast

100 tips **REF 17240**
500 tips **REF 17242**



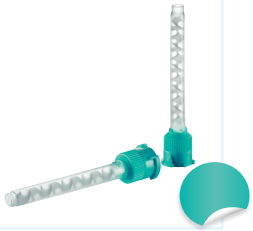
Dynamic mixer blue for:
380 mL jumbo cartridges

45 Stück **REF 17900**

Mixing tips green, Ø 6.5 mm
Impression materials:
- Panasil® monophase Medium,
- Panasil® initial contact Regular,
- Panasil® contact two in one Light

Bite registration materials:
- Futar®,
- Futar® Fast,
- Futar® D,
- Futar® D Fast,
- Futar® D Slow

50 tips **REF 17234**
100 tips **REF 17235**
500 tips **REF 01139**



Restoration material

Mixing tips blue-orange, Ø 3.2 mm
Temporary crown/bridge material:
- Visalys® Temp

50 tips **REF 13789**

Mixing tips blue, Ø 2.5 mm
Cementation and core build-up composite:
- Visalys® CemCore

50 tips, tapered **REF 17236**
50 tips, blunt **REF 17238**

Mixing tips brown, Ø 2.5 mm
Core build-up composite (5-mL automix syringe):
- Visalys® Core

50 tips **REF 17232**

Mixing tips yellow, short, Ø 4.2 mm
Core build-up composite (25-mL cartridge):
- Visalys® Core

50 tips **REF 17230**

Soft relining material

Mixing tips green, Ø 6.5 mm
- Mucopren® Soft

50 tips **REF 17234**

Mixing tips light blue, Ø 3.2 mm
- Mucopren® Silicone sealant

50 tips **REF 17217**

Intraoral tips und Endo tips

Intraoral tips transparent, Ø 1,0 mm
for mixing tips green, Ø 6,5 mm

96 tips **REF 17221**

Intraoral tips transparent, Ø 1,2 mm
for mixing tips blue blunt / brown, Ø 2.5 mm

50 tips **REF 17223**

Intraoral tips yellow, Ø 0,6 mm
for mixing tips yellow, Ø 4,2 mm

50 tips **REF 17225**
96 tips **REF 17222**

Endo tips transparent, Ø 0.9 mm
for mixing tips blue blunt / brown, Ø 2.5 mm

50 tips **REF 17224**

Not available in all markets.

APPLYFIX®

Applyfix® are manual dispensing guns and syringes for dosing and applying modern impression materials. The plastic products can be easily disinfected to satisfy the most stringent hygiene requirements and have a compact ergonomic design, which makes them easy and efficient to use.

Applyfix® 4

- Plastic dispensing gun for 50 mL cartridges with a 1:1/2:1 ratio. **Suitable for: Identium®, Silginat®, Panasil®, Futar® and Mucopren® Soft.**

Applyfix® 5

- Plastic application syringe (with syringe tips) for precise application of syringeable impression materials. **Suitable for: Identium®, Panasil®.**

Applyfix® 6

- Plastic dispensing gun for 50 mL cartridges with a 4:1/10:1 ratio. **Suitable for: Visalys® Temp.**

Applyfix® 8

- Plastic dispensing gun for 25 mL cartridges with a 1:1/2:1 ratio. **Suitable for: Visalys® Core.**

Applyfix® 4	Applyfix® 5	Applyfix® 6	Applyfix® 8	Syringe tips
for 50 mL cartridges 1:1/2:1	2 application syringes made of plastic, 12 syringe tips + accessories	for 50 mL cartridges 4:1/10:1	for 25 mL cartridges 1:1/2:1	for Applyfix® 5, 50 tips
REF 17203	REF 17204	REF 17208	REF 17212	REF 17207

Not available in all markets.

SYMPRESS DISPENSER

Electrical dosing and mixing device for automated mixing of impression materials in the Kettenbach Dental **Plug & Press® system** and related systems in a mixing ratio of 5:1 (impression materials in foil bags or jumbo cartridges).

Precise and homogeneous dispensing

- Bubble-free mixing for precise impression results
- Precise dispensing of the required quantity of material: just the material that's needed

Hygienic and reproducible

- Standardized dosing and mixing at the touch of a button, independent of the operator
- Simple and hygienic with electronic processes replacing manual operation

Adjustable extrusion speed

- Automated advance/withdrawal
- Different extrusion speeds for trays or syringe filling

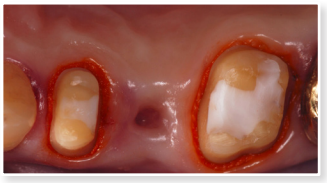
Guaranteed reliable technology

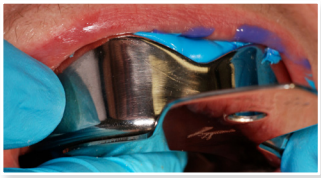
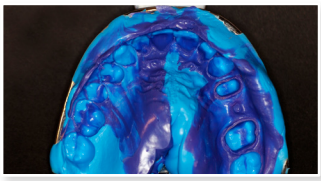
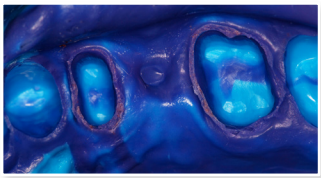
- Simple and safe operation
- Device is based on the latest state of the art with a 3 year manufacturer's warranty

Sympress dispenser	Wall mounting bracket	Unit cover	Pressure plate	Base
REF 35910	REF 35908	REF 35905	REF 35906	REF 35907

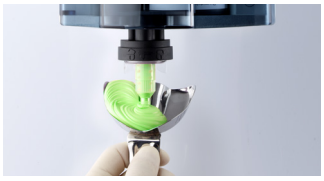
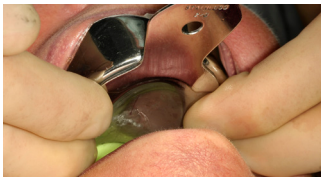
Not available in all markets.

APPLICATION OF **IDENTIUM**® HEAVY AND **IDENTIUM**® LIGHT

1	**Select the impression tray** The width at the maxillary tuber in the upper jaw and at the mandibular alveolar tuberculum in the lower jaw are determined.			Preferably use a closed tray. The distance between the tray wall and the tooth equator should be at least 3 times greater than the depth of the undercut.
2	**Prepare the impression tray** Apply adhesive 5 min before taking the impression. (Follow the manufacturer's instructions!)		**Identium**® Adhesive (for Vinylsiloxanether®)	**Warning:** Use only the adhesive that is recommended for the impression material. For perforated trays, also use adhesive!
3	**Assess the oral situation** Block out any large undercut areas (e.g., bridge elements, wide interdental spaces).		Wax or other block-out materials	
4	**Ensure good conditions for taking the impression** Expand the sulcus and stop any bleeding. For subgingival preparation margins, use retraction cords.			**Warning:** When using astringents and other solutions, beware of any interactions. Test beforehand where applicable.
5	**Clean the prepared stumps** Remove any residual blood, clean and dry.		**Sugi**® or pellet with **Orthoskavident**® C	Soak a cotton pellet with **Orthoskavident**® C.
6	**Mix the impression material** Homogeneously mix the **Identium**® Heavy and fill the tray. Leave the mixing tip in the material when doing so.		**Identium**® Heavy, Sympress	When using the cartridge for the first time, ensure that the mixture is homogeneous. At least the first 3 cm should be discarded once.
7	**Fill the impression tray completely with the material** **Important:** Also cover the hard palate in the upper jaw tray with material or insert stops.		Place stops made of wax, for example.	Note the processing time!

8	**Remove the retraction cords** If retraction cords have been placed, remove them now.			
9	**Inject around the preparation** Apply low-viscosity material into the sulcus and around the stump. The tooth surfaces are immediately wetted.		**Identium**® Light	When using a 50-mL cartridge for the first time, extrude a small amount of impression material until both materials are uniformly forced out. Note the total processing time!
10	**Insert into the patient's mouth** Insert the filled impression tray into the patient's mouth vertical to the occlusal plane while slowly applying pressure and hold in position.			**Warning:** Do not fully depress the tray! Do not hand the impression tray over to others! Note the setting time of the material!
11	**Remove from the mouth** After the material has completely set, remove the impression and then rinse and dry it.			Remove the impression in the same direction as the tooth axis. Tilting the tray too much can cause permanent deformations.
12	**Check the impression** Check that the preparation margins and surrounding mucosal areas have been fully transferred. Assess any imperfections.		**Sugi**® or pellet with **Orthoskavident**® C	
13	**Disinfect the impression** Follow the manufacturer's instructions.			It is recommended to carry out an immersion disinfection, which involves wetting the surface entirely. A contact time of 10 minutes must be adhered to.

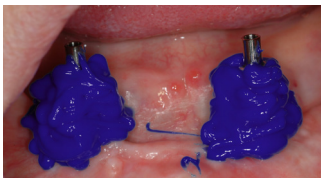
APPLICATION OF **PANASIL**® BINETICS PUTTY FAST WITH **PANASIL**® INITIAL CONTACT X-LIGHT

1	**Select the impression tray** The width at the maxillary tuber in the upper jaw and at the mandibular alveolar tuberculum in the lower jaw are determined.			Preferably use a closed tray. The distance between the tray wall and the tooth equator should be at least 3 times greater than the depth of the undercut.
2	**Prepare the impression tray** Apply adhesive onto a clean and dry impression tray 5 minutes before taking the impression. (Follow the manufacturer's instructions!)		**Panasil**® Adhesive (for A-silicones)	**Warning:** Use only the adhesive that is recommended for the impression material. For perforated trays, also use adhesive!
3	**Assess the oral situation** Block out any large undercut areas (e.g., bridge elements, wide interdental spaces).		Wax or other block-out materials	
4	**Ensure good conditions for taking the impression** Expand the sulcus and stop any bleeding. For subgingival preparation margins, use retraction cords.			**Warning:** When using astringents and other solutions, beware of any interactions. Test beforehand where applicable.
5	**Clean the prepared stumps** Remove any residual blood, clean and dry.		**Sugi**® or pellet with **Orthos-kavident**® C	Soak a cotton pellet with **Orthoskavident**® C.
6	**Mix the impression material** Homogeneously mix the **Panasil**® binetics Putty Fast, leaving the mixing tip in the material.		**Panasil**® binetics Putty Fast, Sympress	When using the cartridge for the first time, ensure that the mixture is homogeneous. At least the first 3 cm should be discarded once.
7	**Fill the impression tray completely with the material** **Important:** Also cover the hard palate in the upper jaw tray with material or insert stops.		**Panasil®** binetics Putty Fast	Exert a slight counter pressure with the tray against the extruded material during the filling so that the putty strands coalesce.
8	**Insert into the patient's mouth** Insert the filled impression tray into the patient's mouth while applying slight pressure and hold in position.			**Warning:** Do not fully depress the tray to the base! Note the setting time of the material.

9	**Remove and trim the preliminary impression** Carefully remove undercuts, interdental septa, and excess from the edge of the tray. Add outlet channels and identify the middle of the jaw.		Interdental knife	Before carrying out the correction impression, check that the impression can be repositioned perfectly in the mouth. Then rinse again with water and dry.
10	**Remove the retraction cords** Remove any retraction cords that have been placed before the correction impression. Only the last cord placed is removed with the double-cord technique.			
11	**Apply the correction material** Place a strip of the very low-viscosity material into the preliminary impression.		**Panasil**® initial contact X-Light	When using a 50-mL cartridge for the first time, extrude a small amount of impression material until both materials are uniformly forced out. The opening of the mixing or application tip should always remain in the material to prevent inclusion of air.
12	**Inject and reposition** Apply low-viscosity material into the sulcus and around the stump. The tooth surfaces are immediately wetted. Reposition the preliminary impression.		**Panasil**® initial contact X-Light	After successfully injecting around the stump, the preliminary impression must be immediately repositioned. The oral temperature accelerates the setting.
13	**Remove from the mouth** After the material has completely set, remove the impression and then rinse and dry it.			Remove the impression in the same direction as the tooth axis. Tilting the tray too much can cause permanent deformations.
14	**Check the impression** Check that the preparation margins and surrounding mucosal areas have been fully transferred. Assess any imperfections.			Ensure that the preparation margins and adjacent areas are reproduced in detail.
15	**Disinfect the impression** Follow the manufacturer's instructions.			It is recommended to carry out an immersion disinfection, which involves wetting the surface entirely. A contact time of 10 minutes must be adhered to.

APPLICATION OF **IDENTIUM**® MEDIUM

1	**Construct a custom-made tray**			When using the open tray technique, note the outlets for the fixation screws for the impression posts. Reinforce the outlets with a surrounding sheath.
2	**Fix the impression posts on the implant**			When using an open tray, the fixation screws should protrude sufficiently through the perforations to ensure good access to the screws once the impression has been taken.
3	**Prepare a custom-made tray** Apply adhesive 5 min before taking the impression. (Follow the manufacturer's instructions!)		**Identium**® Adhesive (for Vinylsiloxanether®)	**Warning:** Use only the adhesive that is recommended for the impression material.
4	**Assess the oral situation** With residual teeth, block out any severe undercuts.		Wax or other block-out materials	
5	**Fill application syringe** Pass the filled application syringe to the clinician and immediately continue with step 6.		**Applyfix**® 5	Avoid air inclusions when filling. When using an application syringe, ensure that no impression material residue remains in the syringe. After injection of the material, the filled impression tray must be inserted immediately. The oral temperature accelerates the setting of the material.
6	**Mix the impression material** Homogeneously mix the **Identium**® Medium and fill the custom-made tray. Leave the mixing tip in the material to prevent bubbles.		**Identium**® Medium, Sympress	When using the cartridge for the first time, ensure that the mixture is homogeneous. At least the first 3 cm should be discarded once.

7	**Inject around the impression posts** The posts must be completely surrounded by the material.		**Identium**® Medium	Note the total processing time. Leave the application tip in the material to prevent bubbles.
8	**Insert into and remove from the patient's mouth** Insert the filled impression tray into the patient's mouth and hold in position until the material has set. With the open tray technique, loosen the fixation screws of the transfer posts before removal. Clean and dry the impression.			**Warning:** Do not hand the impression tray over to others! Note the setting time of the material! Do not fully depress the tray to the base.
9	**Check and, if necessary, reposition the impression posts** Check that the transfer posts are correctly positioned.			
10	**Disinfect the impression** Follow the manufacturer's instructions.			It is recommended to carry out an immersion disinfection, which involves wetting the surface entirely. A contact time of 10 minutes must be adhered to.

APPLICATION OF **VISALYS**® TEMP

1 Take an anatomical impression

Before the preparation, determine the initial situation using an anatomical impression (if possible). Select an appropriate impression tray and impression material.

Impression tray (we recommend torsion-resistant trays with no perforations to maintain the dynamic pressure), impression material

The use of an A-silicone such as **Silginat**® is recommended (unlimited storage, can be poured out repeatedly, that is, only 1 anatomical impression has to be prepared! The high elastic recovery properties ensure exceptionally precise results.). For smaller tasks, partial trays (e.g., the Multi Trays from Kettenbach Dental) save time and are cost effective.

2 Process the anatomical impression

Trim back the anatomical impression with a scalpel; shorten any disruptive interdental septa; check whether the impression can be repositioned without any difficulties.

Scalpel

Cut out any interdental septa in the impression; if necessary, place a central line between the incisors by marking with a notch. Cover any adjacent existing restorations made of composite with petroleum jelly, for example, to prevent adhesion.

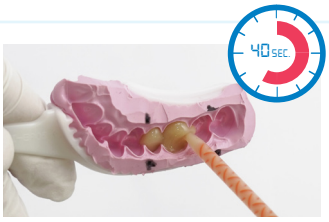
3 Initial use and application

When activating the cartridge for the first time, it must be ensured that both components are extruded at the same time. Ensuring uniform extrusion is only necessary for the first use and subsequently material no longer needs to be discarded.

After each change of mixer, before filling the impression ensure that a small quantity of the temporary plastic is applied to ensure the correct mixing ratio.

4 Application into the impression

Fill from the occlusal surface outwards. The end of the mixing tip should always remain in the material to prevent inclusion of air. The quantity of material should not go beyond the gingival margin.

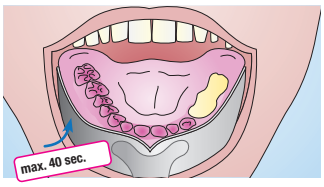


Visalys® Temp, **Applyfix**® 6 dispensing gun, blue-orange mixing tips

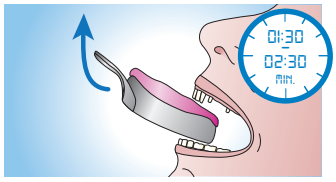
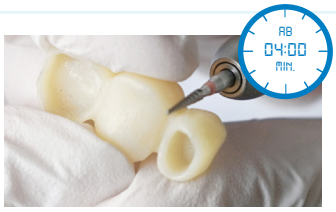
Tip: Start the stopwatch before filling the impression so that the processing time can be checked.

5 Insert into the patient's mouth

Place into the patient's mouth, applying slight pressure, within 40 seconds of starting the mixing.



Stopwatch

6	**Check the correct removal time** Check the level of hardness in the patient's mouth using excess material.		Check using a probe or similar	Earliest removal from the mouth after 1:30 min. including working time! **Visalys**® Temp reaches an optimal elastic phase for easy removal on average 2:00 min. after the start of mixing.
7	**Remove from the patient's mouth** Remove the temporary restoration from the patient's mouth during the elastic phase between 1:30 and 2:30 min. after the start of mixing.		Stopwatch	Early removal (temporary restoration is still very elastic): with severe undercuts and large bridge spans. Later removal (temporary restoration is already relatively hard): for smaller tasks and those with few undercuts.
8	**Repairs** Repairs (e.g., due to air bubbles or fracture sites) can be made directly with **Visalys**® Temp or a flowable composite. The oxygen inhibition layer (smear layer) should not be removed before carrying out repairs.		**Visalys**® Temp or flowable composite	For older temporary restorations that were inserted into the patient's mouth several days earlier, the surface must first be mechanically roughened. A self-etching (enamel/dentin) bonding agent should be used in addition to the composite.
9	**Finish** 4:00 min after starting mixing, **Visalys**® Temp has set completely and the temporary restoration can be finished.		Cross-cut stainless steel bur; narrow bur; disc	Before finishing the temporary restoration, the oxygen inhibition layer (smear layer) should be removed because otherwise the bur will rapidly become clogged and blunt. Swabs soaked in alcohol or disinfectant swabs are suitable for this purpose.
10	**Polish** Polishing the temporary restoration creates a smoother surface with higher luster that makes the accumulation of plaque more difficult and also feels more pleasant for the patient.		Composite polishers, cotton buff, goat hair brush	Generally, the surface of **Visalys**® Temp is already sufficiently smooth that additional polishing can usually be omitted altogether.
11	**Cement** The temporary fixation cement should, with a brush or spatula if necessary, be applied in a thin layer to all internal walls of the temporary restoration.		Temp. cement	Eugenol may impair the curing of luting composites; if composite materials are planned for the permanent restoration, a eugenol-free temporary luting cement should be used to cement the temporary restoration.

APPLICATION OF **VISALYS**® CEMCORE CEMENTATION

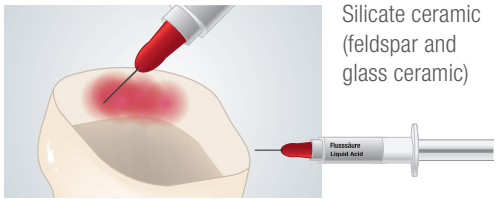
1

Pre-treatment

In each case, note the information provided by the manufacturer of the restoration material.

Metal and oxide ceramic

Sandblast with aluminum oxide (≤ 50 µm), rinse, and dry. Do not use phosphoric acid gel!



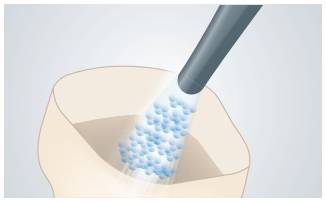
Silicate ceramic (feldspar and glass ceramic)

Apply liquid acid as per the information from the product manufacturer.

2

Apply **Visalys**® Restorative Primer. Wait for 60 seconds.

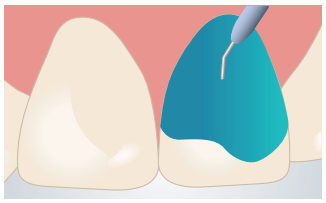
3



5 seconds: Dry the adhesive surfaces.

4

Procedure after cleaning and drying



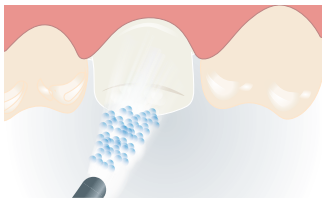
Enamel etching

Only necessary with cementation of veneers, adhesive bridges, and always for uncut enamel.

5

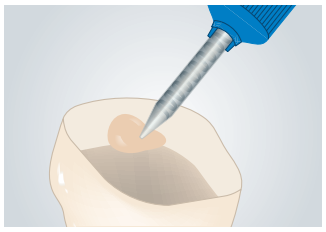
Rub in **Visalys**® Tooth Primer for 20 sec.

6



Dry.

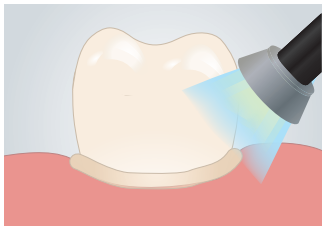
7

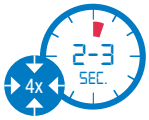


Apply **Visalys**® CemCore.

8a

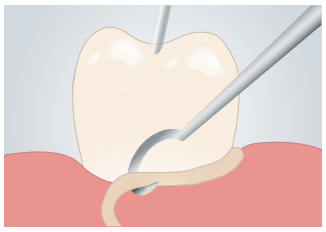
PROCEDURE 1:
Excess removal





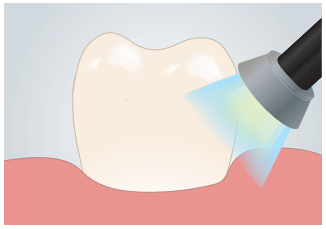
Cure with light.
(Alternatively: self-cure until soft-elastic state develops).

9a



Remove excess.

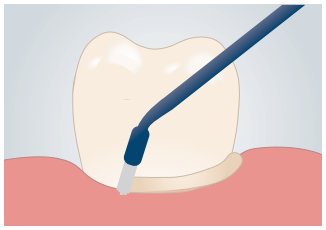
10a



20 seconds: Final curing.

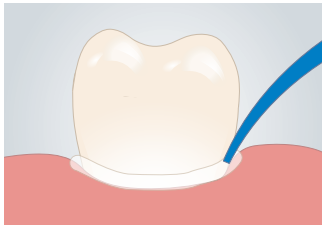
8b

PROCEDURE 2:
Excess removal



Immediately remove excess, for example, using a brush.

9b



Apply glycerin gel or a polyethylene glycol paste (**Visalys**® CemCore Try In Paste). Allow to cure for 2 min.

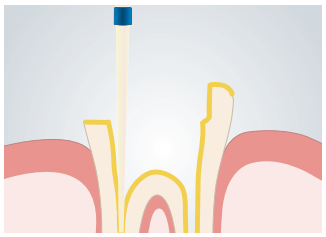
APPLICATION OF **VISALYS**® CEMCORE ROOT POST CEMENTATION

1

Pre-treatment
of the post bed and the remaining hard tooth structure after rinsing and drying.

Rub **Visalys**® Tooth Primer onto the surface including the coronal parts for 20 seconds.

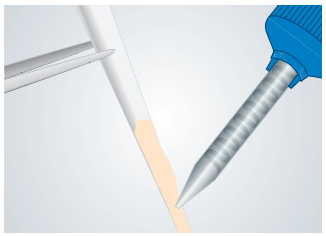
2



Remove the excess primer and dry the surfaces.

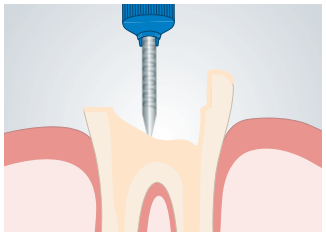
3

Pre-treatment of the post
In each case, note the information provided by the manufacturer of the post material.



Apply **Visalys**® CemCore to the prepared post,...

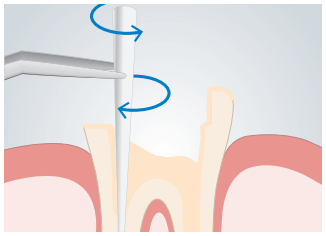
4



...into the root canal, and the remaining surfaces of the hard tooth structure.
DO NOT USE LENTULO!

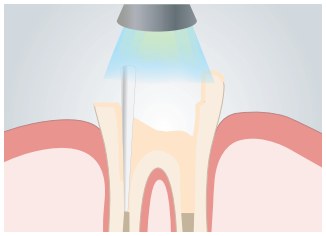
5

Pre-treatment of the post
In each case, note the information provided by the manufacturer of the post material.



Insert the post using rotating movements.

6



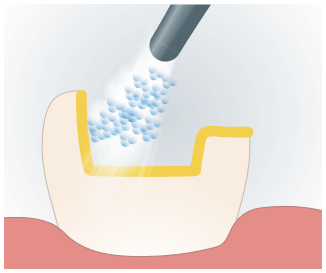
Cementation with brief light curing.

APPLICATION OF **VISALYS**® CEMCORE CORE BUILD-UP

1 **Procedure**
after cleaning and drying.

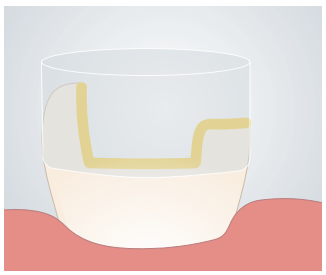
Rub **Visalys**® Tooth Primer onto the surface for 20 seconds.

2



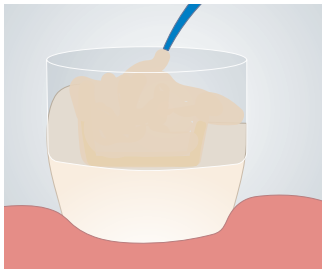
Dry the adhesive surfaces.

3



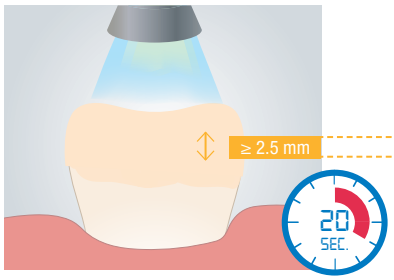
Apply matrices.

4



Apply **Visalys**® CemCore.

5



Light cure for 20 seconds.
Depth of cure up to 2.5 mm.

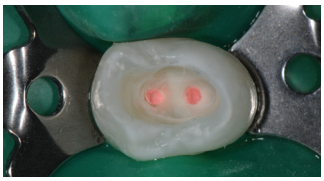
With a layer thickness of ≥ 2.5 mm, wait until the chemical curing process is complete before the preparation.

5
MIN.

APPLICATION OF **VISALYS**® CORE

1 Preparation

Remove any root filling with appropriate instruments or a reamer down to the desired depth.



2 Prepare the post bed

E.g., with the instruments from the Erlanger system (Komet)

To create an apical seal, a root filling of about 3-4 mm should be left [1] with the post bed ideally having a total length of 2/3 of the root length but it should be at least the length of the clinical crown [1, 2].

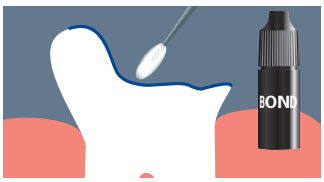
3 Adjust the root post

The preparation of the post bed should be carried out until all residual root filling material is removed from the walls and the root posts that fit the selected system drill can be inserted into the canal with slight friction.

Cleaning and disinfection of the post bed is carried out using 95% ethanol, for example. Then remove any excess ethanol from the post bed with paper points.

4 Adhesive cementation of the post

The root posts (depending on the choice and the manufacturer) can be cemented with conventional dental cements or adhesively with dual- or self-polymerizing composites (such as **Visalys**® Core). Any excess bonding material must be removed with a gentle air jet.



Selected root post; follow the root post manufacturer's instructions for preparation.

Unlike conventional cementation, adhesive cementation has the advantage of producing a single unit made up of tooth, post, and core build-up. With adhesive insertion the risk of micro leaks along the cement seam and the associated risk of bacterial invasion is also reduced or prevented.

5 Fill the root canal

Now fill the post bed with **Visalys**® Core. Insert the root posts into the canals while rotating slightly.

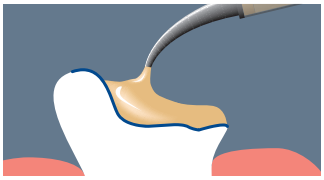
The material is initially light cured for 20 seconds (chemical curing after 5 minutes).

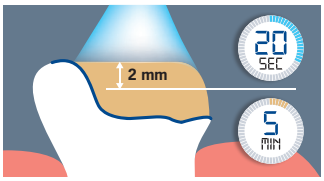
Visalys® Core in the 5 mL syringe with an endo tip; polymerization lamp

Endo tips make application into the root canal easier; the good flow properties of **Visalys**® Core allow the root post to be easily inserted.

6 Core build-up

The core can be prepared in the form of a build-up with **Visalys**® Core, producing a fixed unit of tooth, post, and build-up filling.



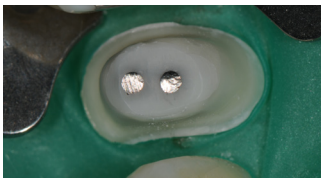


Visalys® Core (5 mL syringe with an endo tip or 25 mL cartridge), polymerization lamp

Visalys® Core is flowable and adjusts optimally to the situation but is also stable enough to freely build up a core. 20 seconds light curing for a polymerization depth of 2 mm. 5 minutes chemical curing for unlimited polymerization depth.

7 Prepare the tooth

After the build-up has set, the preparation can be carried out in line with the planned final restoration.



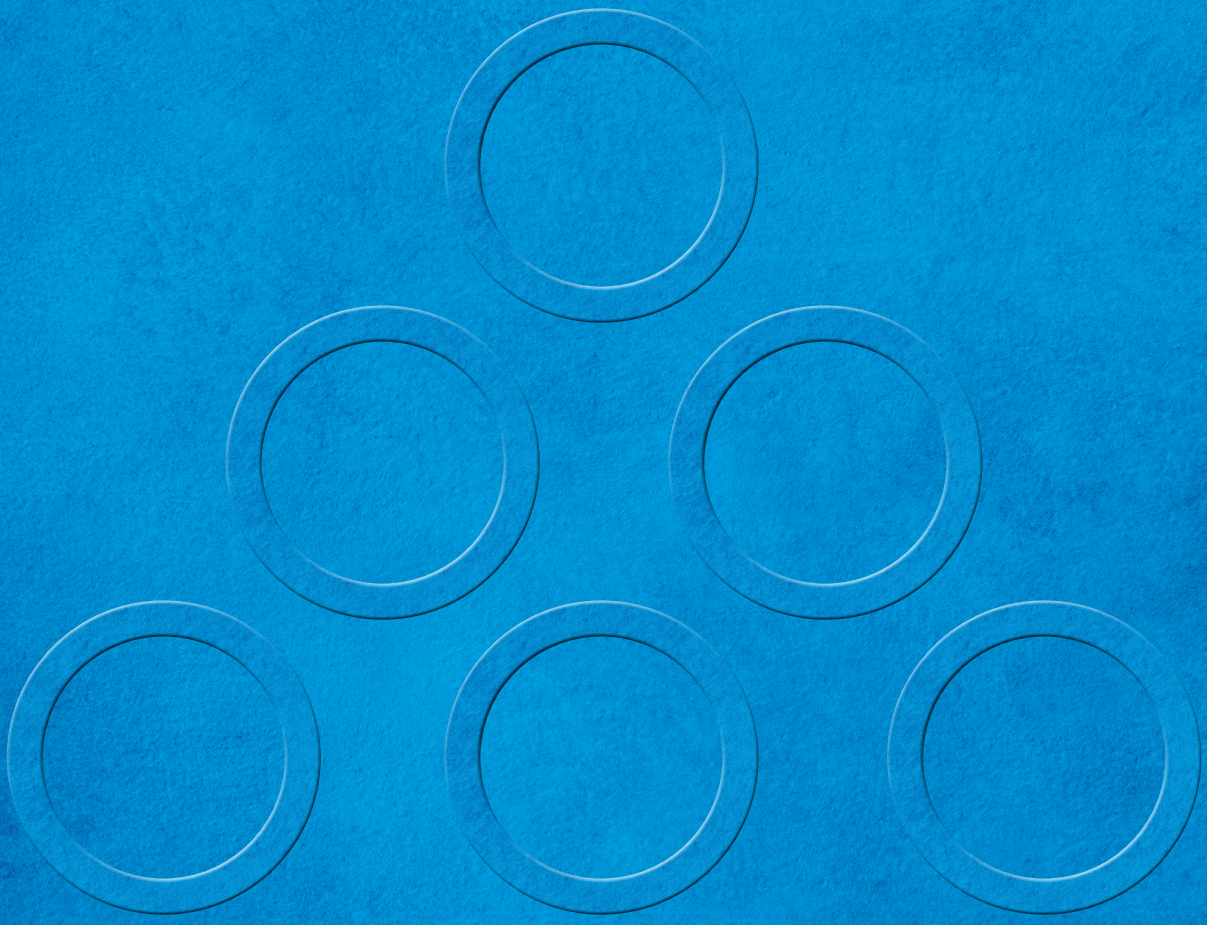
The preparation margins should lie completely in the dentin in the form of a ferrule design to ensure better force transmission to prevent root fractures [1–5].

Example images

Images illustrate the use by Dr Marco Dziwak based on a correctly performed endodontic pretreatment that was carried out elsewhere.

Literature:

1. DGZMK statement. "Build-up of endodontically treated teeth." (2003). http://www.dgzmk.de/uploads/tx_szdgzmkdocuments/Aufbau_endodontisch_behandelter_Zaehne.pdf
2. Sorensen J.A., Martinoff J.T. „Clinically significant factors in dowel design." The Journal of Prosthetic Dentistry 52.1 (1984): 28–35.
3. Milot P., Stein R. S. „Root fracture in endodontically treated teeth related to post selection and crown design." The Journal of prosthetic dentistry 68.3 (1992): 428-435.
4. Hemmings K. W., King P. A., Setchell D. J. „Resistance to torsional forces of various post and core designs." The Journal of prosthetic dentistry 66.3 (1991): 325-329.
5. Barkhordar R. A., Radke R., Abbasi J. „Effect of metal collars on resistance of endodontically treated teeth to root fracture." The Journal of prosthetic dentistry 61.6 (1989): 676-678.



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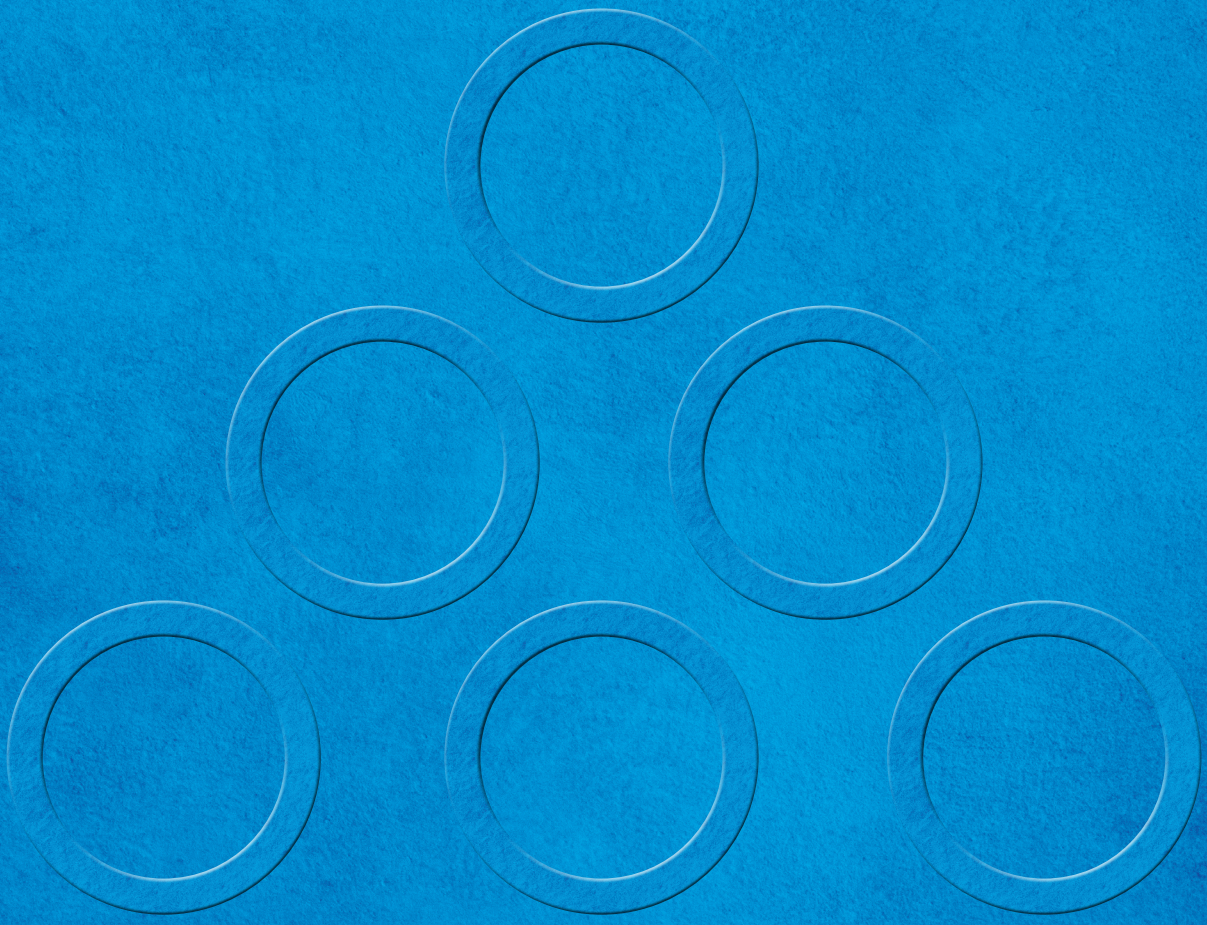

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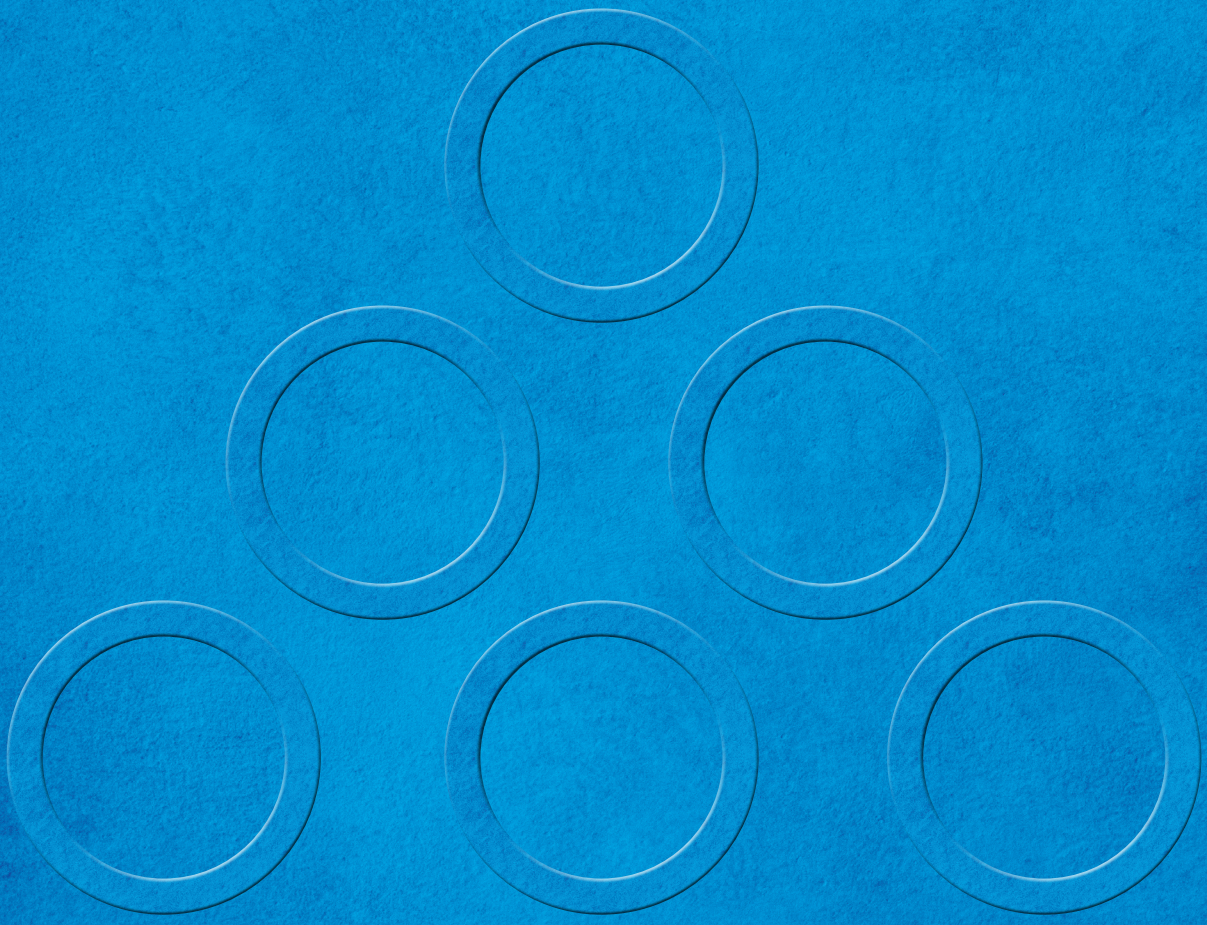

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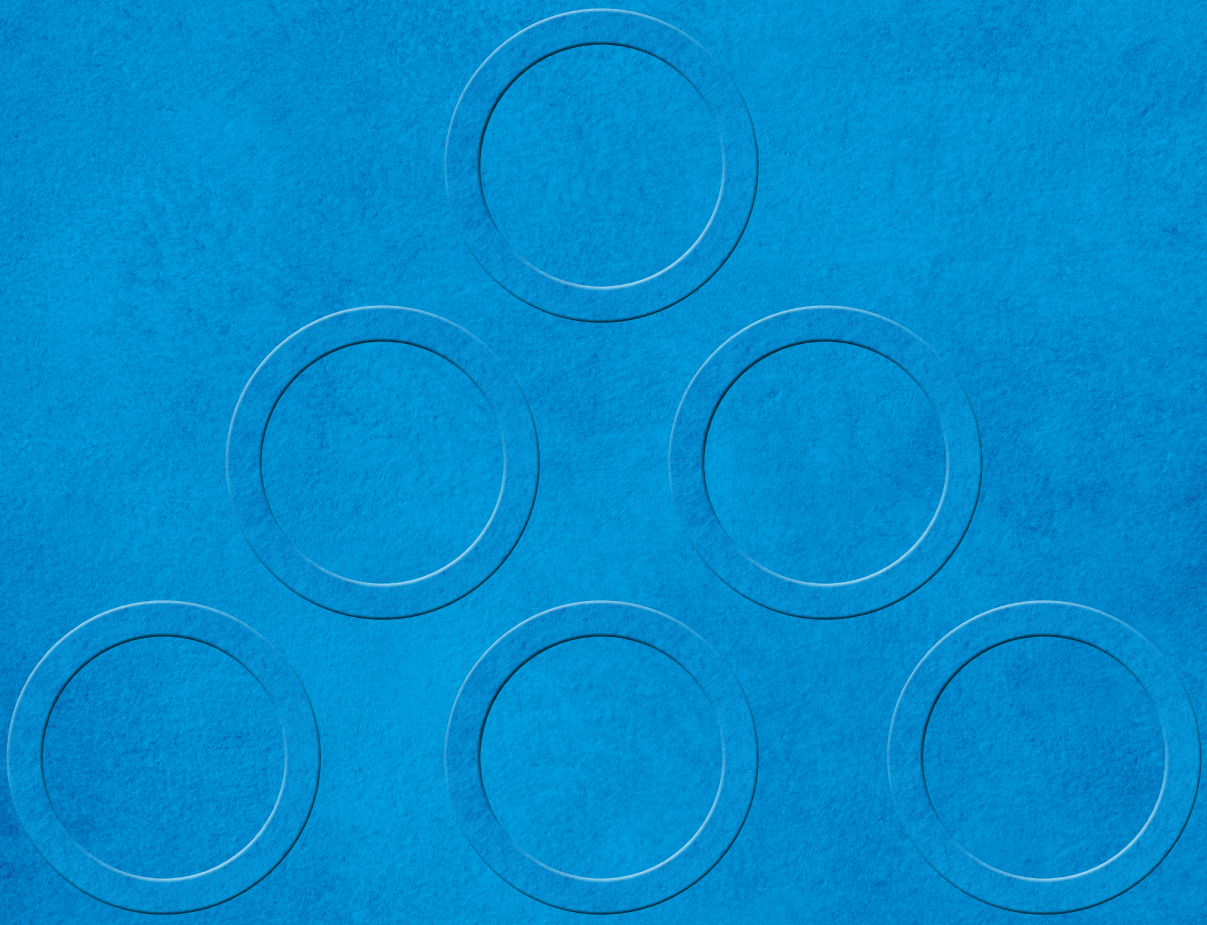

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