

# GuttaFlow<sup>®</sup>

Double safety level.

Bioactive sealing and filling.

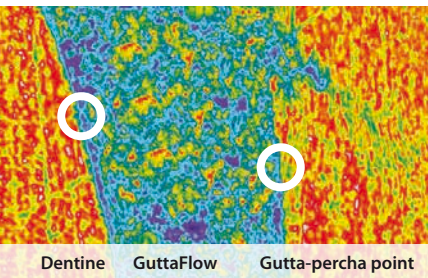
- Reliable cold filling system for root canals
- Gutta-percha and sealer in a single application
- **NEW:** Bioactivity for the healing process



## COLTENE – Your endo specialist

COLTENE stands for excellence in the manufacturing of reliable endodontic materials. Paper and gutta-percha points, GuttaFlow, RoekoSeal, ParaPost and ParaCore are clinically proven products that ensure successful endodontic therapy.

## Dual effect



**GuttaFlow shows an excellent fit to dentine and gutta-percha.**

Professor Jorge and Norma Uribe Echevarría,  
Faculty of Odontology, Córdoba, Argentina

## Two in One - Cold filling system for root canals

GuttaFlow 2 is an innovative filling system for root canals that combines two products in one: gutta-percha in powder form with a particle size of less than 30  $\mu\text{m}$ , and sealer. This new filling system works with cold free-flow gutta-percha.

## Expansion meets adhesion!

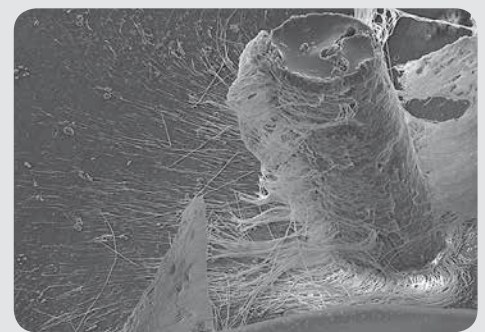
**Tight seal due to expansion and adhesion.**

GuttaFlow is the first flowable, non-heated gutta-percha that does not shrink, but expands slightly. The slight expansion of the material leads to an excellent seal. GuttaFlow also shows excellent adhesion to the gutta-percha point (masterpoint) as well as to the dentine wall.

## Qualities of GuttaFlow®

### Excellent flow properties

Ensures optimum distribution throughout the root canal. GuttaFlow is also thixotropic, meaning that the viscosity diminishes under pressure. The material therefore flows into the smallest canals.



Dentine tubules filled with GuttaFlow and dentine removed with acid.

Professor Halina Pawlicka, University of Lodz  
Dr. Johannes Ebert, University of Erlangen

### Nearly insoluble\*

Through the contact with body fluids, materials may dissolve over the years, creating space for bacterial colonisation. Conventional root canal sealer materials are soluble to a varying degree. The solubility of GuttaFlow 2 is virtually zero. In fact, tests according to ISO 6876:2001 show a solubility of 0.0%\*. This results in a dimensionally stable and impervious root canal filling.

Thanks to GuttaFlow bioseal's activity, the solubility of this material is higher (0.8%\*\*).

\* acc. to ISO 6876:2001  
Dental root canal sealing materials,  
Source: NIOM Nordic Institute for Dental Material Testing

\*\* Source: internal measurements

## The simple way to root canal obturation

- Flowable Two in One cold filling system
- Expansion – no time-consuming condensation required
- Adhesion to gutta-percha point and dentine wall
- The use of additional sealers is not required
- Excellent flow properties
- Allows for excellent post preparation
- Solubility is virtually zero
- Optimum protection against re-infection
- Excellent radiopacity
- Tight seal of the root canal

## Very good biocompatibility

In the case of endodontic filling materials that remain in the body for many years, it is important that there are no adverse effects. In studies, conventional materials demonstrate toxic characteristics ranging from “marginally toxic”, “moderately toxic” to “severely toxic”, which has an effect on the tissue biocompatibility of the materials. Numerous studies have confirmed that GuttaFlow is extremely biocompatible with tissue.

## Modern obturation method

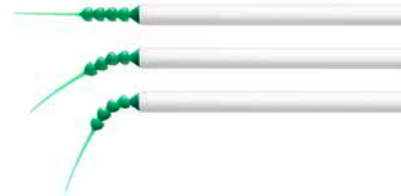
A reliable obturation is the ideal basis for successful endodontic treatment. An important factor for an impervious filling with long-lasting stability is the complexity of the existing root canal system.

In the following case, Dr Chaniotis uses negative pressure to obturate even the tiniest lateral canals simply and effectively:



Source: Dr. Antonis Chaniotis

The smart assistant:  
**Surgitip-endo**



## GuttaFlow<sup>®</sup> 2



WORKING TIME:  
**10 - 15 min.**  
CURING:  
**25 - 30 min.**

## GuttaFlow<sup>®</sup> bioseal



WORKING TIME:  
**5 min.**  
CURING:  
**12 - 16 min.**



WORKING TIME: **10 - 15 min.**  
CURING: **25 - 30 min.**



WORKING TIME: **4 - 5 min.**  
CURING: **8 - 10 min.**

# Everything clinically tested

Successful healing with **GuttaFlow**<sup>®</sup>

## Clinical study

Clinical investigations on the conventional GuttaFlow<sup>®</sup> are organised in the framework of a multi-centre study under the direction of NIOM (Nordic Institute for Dental Material Testing) and conducted in clinics in Germany, Norway and the USA. The preliminary closing study report shows excellent healing results. On the basis of the PAI Scoring system, success rates of 0.7 - 0.8 were measured which were documented over a period of one year.

Pictures: Professor Ricardo Caicedo,  
University of Louisville, Louisville, Kentucky, USA



Pre-op

obturation

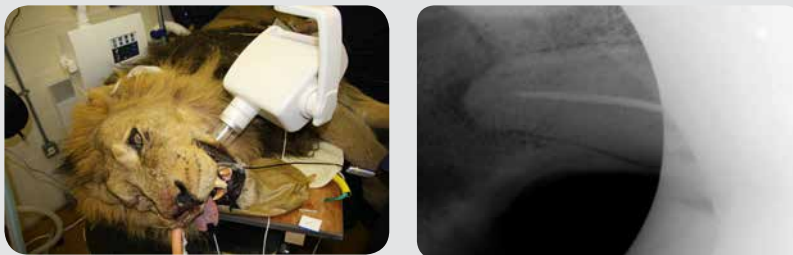
12 months

## Clinical cases



Case 1 - Dr. Antonis Chaniotis

## Obturation under extreme conditions



Every endodontic treatment is different. But when the patient weighs over 150 kg, the canines are 14 cm long and the treating physician has a half an hour to work before he risks his life, GuttaFlow literally saves him from the mouth of the lion.

## Further studies

A number of other studies on GuttaFlow<sup>®</sup> have already been conducted.  
[www.guttaflow.com](http://www.guttaflow.com).



Case 2 - Dr. Thomas Rieger

# Not just for filling, also for healing

GuttaFlow bioseal actively supports regeneration in the root canal

## Bioactive obturation material

With GuttaFlow bioseal, COLTENE is launching an intelligent obturation material onto the market that can do more than seal and fill the root canal. Upon contact with fluids, the bioactive material provides natural repair constituents such as calcium and silicates. It also activates biochemical processes that provide additional support for regeneration in the root canal. The idea is remarkably simple: after curing, the new GuttaFlow bioseal forms hydroxylapatite crystals on the surface. The crystals significantly improve adhesion and also stimulate natural triggers, especially the regeneration of bone and dentine tissue. Using this catalytic effect helps both ENDO experts

and novices create long-lasting solutions for their patients, thus constituting a further breakthrough on the way to optimum endodontic treatment.

To date only dental materials such as MTA or bioglass have exhibited similar regenerative and supportive properties. However, the major disadvantages of these materials involved the long curing time and complicated handling. As with the proven GuttaFlow 2 system, GuttaFlow bioseal also combines free-flow gutta-percha with an appropriate sealer at room temperature.



### Step 1 (direct protection)

Protection already at filling, eg. with bioactivity due to possible residual moisture in the root canal

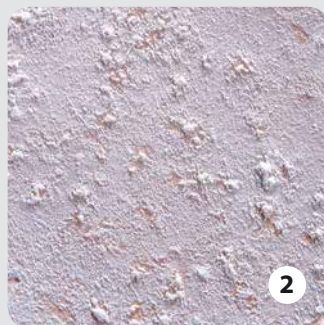


### Step 2 (sleeping protection)

Regenerative protection against possible moisture ingress, eg. by cracks

GuttaFlow<sup>®</sup> 2

GuttaFlow<sup>®</sup> bioseal



**Fig. 1**

3.5 × magnification of the surface of GuttaFlow 2

**Fig. 2**

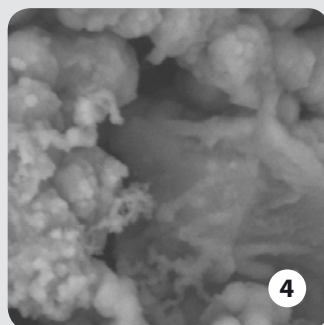
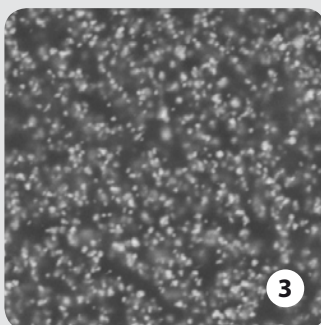
3.5 × magnification of the surface of GuttaFlow bioseal. Recognisable formation of hydroxylapatite crystals.

**Fig. 3**

2500 × magnification of the surface of GuttaFlow 2 under a scanning electron microscope.

**Fig. 4**

2500 × magnification of the hydroxylapatite crystals on the surface of GuttaFlow bioseal under a scanning electron microscope.



Source: internal tests



# GuttaFlow® 2 and accessories

## Capsules

### ROEKO GuttaFlow® 2 Introkit (capsules)

REF	Quantity	Content
6001 3702	20	Capsules GuttaFlow® 2
	20	Canal Tips + Stops
	3	Adapters for RotoMix™*
	1	Dispenser
	100	Retention Points ISO 30-60
	60	Gutta-percha points Greater Taper 0.04 20-45



### Refill packs capsules and accessories

REF	Quantity	Content
6001 3704	20	Capsules GuttaFlow® 2
	20	Canal Tips + Stops
6001 3706	20	Capsules GuttaFlow® 2 FAST
	20	Canal Tips + Stops
6001 3707	1	GuttaFlow® 2 Dispenser
349 132	20	Canal Tips + Stops
349 134	20	Combi Tips + Stops
349 133	3	Adapters for RotoMix™*



## Syringe

### ROEKO GuttaFlow® 2 Standard Set

REF	Quantity	Content
6001 3701	1	Dual-barrel syringe
	12	Mixing tips
	1	Mixing pad



### ROEKO GuttaFlow® 2 Refill pack syringe

REF	Quantity	Content
6001 3745	1	Dual-barrel syringe

### ROEKO GuttaFlow® 2 Refill pack mixing tips

REF	Quantity	Content
6001 3719	24	Mixing tips

\* RotoMix™ is not a trademark of Coltène/Whaledent

# GuttaFlow® bioseal and accessories



### ROEKO GuttaFlow® bioseal Standard Set

REF	Quantity	Content
6001 9560	1	Dual-barrel syringe
	12	Mixing tips
	1	Mixing pad

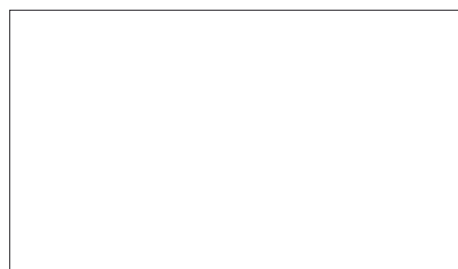
### ROEKO GuttaFlow® bioseal Refill pack syringe

REF	Quantity	Content
6001 9561	1	Dual-barrel syringe

### ROEKO GuttaFlow® bioseal Refill pack mixing tips

REF	Quantity	Content
6001 9562	24	Mixing tips

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