Thermoplastic Obturation Systems
Introduction

CMS Dental produces the largest range of endodontic obturators for the final filling of the root canal. More than 20 million root canals have already been filled using our products. We import the raw gutta percha from Indonesia and manufacture all components of the products in Denmark.

All obturators are compatible with all file systems whether they are hand files or rotary.

Soft-Core® Regular Obturator

Soft-Core® Endodontic Obturator has been on the market since 1996 and is an advancement of the original obturator principle. We improved the concept significantly by having an easily detachable handle, leaving the coronal part of the plastic carrier hollow. As a result, creation of post space is much easier.

1. Verify and choose obturator size
2. Place obturator in root canal
3. Remove handle/insertion pin
4. Three dimensional root filling

Dr. Eugene Joffe, DDS, New York, USA

“I have worked with the Soft-Core® system for over ten years and I am familiar with all other available obturation techniques on the market. I consider the Soft-Core® system the most convenient among all others in terms of efficiency, accuracy, speed, economy, convenience, shelf life, sterility, reliability and the great company support.”
Soft-Core® Low Heat Obturator

Soft-Core® Low Heat is the latest version developed for accommodating those dentists who prefer:

1. Lower temperature of the gutta percha
2. Easier drilling in the plastic carrier
3. Added radio-opacity in the plastic carrier

For Soft-Core® Low Heat, the gutta percha and the plastic carrier are softer, requiring a lower melting point for both. This makes the heating cycle slightly more technique sensitive. Therefore it is vital that an oven made for the Low Heat program is used.

However, an in vitro study using a standardized glucose penetration model has shown that Soft-Core® Low Heat had significantly less leakage than Soft-Core® Regular (ref. 2). The assumption is that it is due to the lower temperature minimizing the amount of shrinkage when cooling.

Soft-Core® Regular and Low Heat are available in sizes: 20-25-30-35-40-45-50-55-60 and 70.

Dr. Henrik Holm, DDS, Copenhagen, Denmark

“As an experienced Soft-Core® user through 10 years, I know, that the warm gutta percha provides a completely sealed root canal, penetrating even the lateral canals. I just bought the new cordless oven, at the size of a coffee cup, and it works really well because I can have it right in front of me on the dental tray, easily movable. I have never experienced problems with preparation for post as it is easy to melt the plastic carrier using the Core Remover burs, by friction heat”.
**One-Step Obturator™**

One-Step Obturator™ is the logical next step for the obturator technique. Is a handle on the obturator really necessary? Would it not be more convenient using a tweezers when inserting the obturator into the canals rather than your fingers?

Without the handle/insertion pin and endo rubber stop, One-Step Obturator™ is aprox. 20 % less expensive compared to Soft-Core Endodontic Obturator. Another advantage is that there is far less difficulty in filling multi rooted canals because no handles are blocking your view and the entrances of the other canals.

Use the tip of the tweezer to indicate the WL.

One-Step Obturator™ is available in sizes: 20-25-30-35-40-50 and 60.

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**Dr. Tulus, DDS, Viersen, Germany**

“As an endodontic specialist, I have successfully used obturator systems for thermo plastic root canal fillings. I find the One-Step Obturator™ system to be the most interesting development of previously known obturator systems. The One-Step Obturators™ are easy to use and the concept logical. The use of a self locking tweezers instead of handles enables you to see where you are going and makes it easier to fill root canals, especially in the molar area. The specially designed self-locking tweezers in two different angles makes it possible to reach and obturate all root canals. The system has been properly tested in my clinic”.

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**Thermoplastic Obturation Systems**
Dr. Casper Boelsmand, DDS, Denmark

“I have worked with One-Step Obturator™ for the past two years. When I started using the system, I just finished school and here we were only taught using conventional lateral condensation. To my great surprise, I learned with One-Step Obturator™ how quick, easy and safely one could make a root filling. The One-Step Obturator root filling creates a complete seal and so far I have not had any retreatments of my One-Step fillings. One-Step Obturator™ works well together with my K3 files”.

There are several advantages in using an obturator from CMS Dental

Not only is this root filling technique faster than any other, but you achieve better adaptation of the root filling.

A recent in vitro study (ref.1) has shown that: Canals shaped with ProTaper/ProFile and endodontically treated with One-Step Obturator™ have aprox. 8 times less voids/sealer between the gutta percha and the canal wall, compared to lateral condensation.

Size Verifiers

After cleaning and shaping, a size verifier is used to determine the obturator size to be used. The selected size verifier should match the size of the last instrument used to the working length.

One-Step Size Verifiers

The One-Step size verifiers are stainless steel, autoclavable and re-usable. The shape of the size verifier is identical to k-files, but the One-Step size verifier differs in taper. The taper matches the taper of the plastic carrier of One-Step Obturator™ and therefore use of the One-Step size verifiers for proper fitting/selection of obturator size is very important.

Soft-Core Size Verifiers

The Soft-Core size verifiers are made of bio-compatible polymer, are flexible and intended for single use. The size verifier is made of plastic and has the exact dimension as the same size obturator carrier. Both the obturator and the size verifier have a rubber stop to indicate working distance measurement.
**Thermoplastic Obturation Systems**

**Accessories**

**Core Removers**

The Core Remover is a tapered, pointed, non-cutting instrument which is developed specifically to ensure safe and rapid removal of the plastic core and gutta percha in the coronal portion of the canal for post space preparation. They are available in lengths of 25mm and 30mm.

**Tweezers**

The One-Step tweezers are specially designed for using the One-Step Obturator™ system. They are used for placing the obturators in the root canal and while heating the obturator in the One-Step oven. There are two different types of tweezers available, each with two different angles. The different angulations are to ensure easy and proper access in difficult to reach canals.

**Packaging**

All obturators and size verifiers are packed in a 12-pack hard plastic box. The 12-pack can be severed into two identical 6-packs. Each obturator is in an individually sealed compartment to prevent cross-contamination and all boxes are gamma irradiated after packaging.
Ovens

**Soft-Core® DT Oven**
The DT Oven is a small easy to use oven (14 x 6.5 x 6 cm – L x W x H).

- You may heat 4 obturators at a time.
- After the heating cycle has completed, the obturator may remain in the oven for 15 minutes.
- The top is autoclavable and can easily be removed for cleaning.
- The oven has a visual and audible indicator letting you know when the oven is ready for use and when the obturator is sufficiently heated.
- Can be used for either Soft-Core® Regular or Soft-Core® Low Heat.

**One-Step DT Oven**
The DT Oven is a small easy to use oven (14 x 6.5 x 6 cm – L x W x H).

- You may heat as many as 8 obturators at a time. The slots in the “corners” are intended for the “old style” One-Step tweezers, while the slots in the middle are intended for the “new style” One-Step tweezers.
- After the heating cycle has completed, the obturator may remain in the oven for 15 minutes.
- The top is autoclavable and can easily be removed for cleaning.
- The oven has a visual and audible indicator letting you know when the oven is ready for use and when the obturator is sufficiently heated.
CMS Dental profile

Mission
We develop, produce and distribute specialised high quality products for dentists who value innovative solutions; equipment and materials, which make the work at the clinic easier and provides the patient a better prognosis, shorter treatment time and reduced pain.

Vision
Our aim is to offer the most innovative high quality products at reasonable prices so that dentists and their patients throughout the world can benefit from the latest advances.

Development
CMS Dental was established in 1986 by two doctors Jimmie Kert and Lisbeth Rose. From the beginning their interest has been focused on new treatment methods and the development of new products to benefit both patients and dentists.

Obturators from CMS Dental – high tech and precision
From the very beginning, both Soft-Core® Endodontic Obturator and One-Step Obturator™ have been manufactured using the most advanced production methods of injection molding. CMS Dental injection molds both plastic carrier and gutta percha, which means that you will always have a uniform layer of gutta percha covering the plastic carrier. From the apical part to the coronal part, the plastic carrier will always be centered right in the middle.

All plastic carriers are visually inspected before they enter the next stage in the manufacturing process. After the gutta percha injection molding, all obturators are visually inspected once more before packaging.

CMS Dental believes that even small portions of heavy metals should not be an ingredient in dental materials and therefore we make our gutta percha Cadmium-free while using only Natural GP.


Ref. 2: An ex vivo analysis of the sealing ability of two different Soft-Core obturators: M. Z. Sitarz, L. W. M. van der Sluis, H. Shemesh, P. R. Wesselin, Department of Cariology Endodontology Pedodontology, Academic Center for Dentistry Amsterdam (ACTA), Louwesweg 11066 EA Amsterdam, The Netherlands.

CMS Dental exports its products throughout the world.

Our objective is new advances to benefit patients and dentists.