

Soft-Core® Endodontic Obturators

APPLICATION GUIDE

Soft-Core® Endodontic Obturators

Please read the following instructions before use. If you have any questions contact a Soft-Core Product Specialist at 800.355.5063.

Classification

The Soft-Core® Endodontic Obturator is a medical device; class IIA, in compliance with MDD (Medical Devices Directive) section IX. The obturators must only be used by dentists.

General precautions

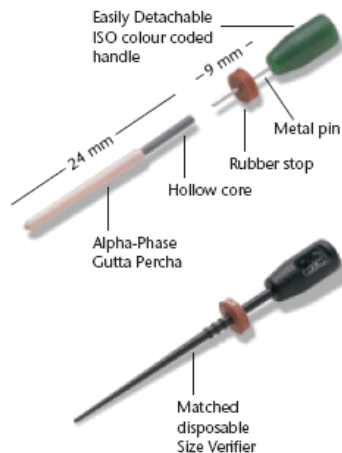
- The product should only be used by dentists.
- The product should only be used for root canal procedures in teeth.
- A deformed or defective product should never be used, but should be discarded.
- The manufacturer disclaims all responsibility and liability for injury or damage to persons or property caused by faulty and/or inappropriate use. For information on the correct use of the product please see the step-by-step guide, section 2.
- The product should be stored in the original packing.

Warning – Use of a heated obturator

- After heating the gutta percha is hot. Avoid any direct contact between the obturator and skin or mucous membranes. The obturator should be inserted directly into the root canal.
- It is always recommended to take a control x-ray. If the x-ray is not satisfactory, take another x-ray from a different angle. If the filling still cannot be satisfactorily documented, remove the obturator.

The Soft-Core® Endodontic Obturator

A Soft-Core® Endodontic Obturator is a core of biocompatible plastic, sized according to ISO standards sizes 20 to 70, coated with thermoplastic gutta percha. The obturator sizes correspond to the ISO standards of root canal files. A single obturator is all that is needed to totally obturate a root canal. The result will always be a perfectly placed root canal filling with a tight apical seal.



A Soft-Core® Endodontic Obturator consists of three parts:

1. Plastic handle with a metal insertion pin

The injection molded plastic handle is color-coded according to the size of the obturator. The stainless steel insertion pin is 9 mm long, and is permanently attached to the plastic handle. The hollow portion of the plastic core surrounds 6 mm of the pin.

2. Outer layer of thermoplastic Natural GP™ gutta percha

The gutta percha is reversible thermoplastic. This means that it becomes soft and highly adhesive when heated to temperatures above approx. 100°C. When cooled it returns to a firm rigid state. Another heating will once again make the gutta percha soft and adhesive.

3. Plastic core with endo stop

The tapered plastic core is sufficiently flexible to negotiate curved canals.

The Soft-Core® plastic core is slightly oval-shaped. This secures adequate backflow of the heated gutta percha. The length of the core is 24 mm. The coronal 6 mm of the core is hollow to accommodate the metal insertion pin. A rubber endo stop is provided to indicate the working distance measurement. The plastic core and gutta percha are radiopaque.

A step-by-step guide to the Soft-Core® Endodontic Obturator

Before using the Soft-Core® Endodontic Obturator, assure that you have achieved the following:

A. A properly cleaned and shaped canal – the key to any successful root canal filling. Utilize any technique which provides a smooth tapered form, and provides you with a coronal opening wide enough to give room for the instruments.

B. A completely dry root canal.

C. An established working length. The plastic core is flexible enough to negotiate curved canals. It is highly advised that rotary files with a higher conicity are utilized to create a sufficient taper for the obturator core. When using files with a conicity of .02, it is advised to combine them with a procedure using Gates Glidden Drills or other files which can be used to create a sufficient opening in the coronal part of the canal.

The use of size verifiers is always recommended.

STEP 1: Determine the working length and choose the proper obturator size

The working length is measured all the way to the apex. We recommend measuring the working length from the edge of the cusp. The working length can advantageously be measured by use of both x-ray, file and electronic apex locator. Soft-Core® Size Verifiers are radiopaque and can be used for working length verification.

Generally, the appropriate size Soft-Core® Endodontic Obturator will be the same size as the last file used at the apex of the canal.

Tip: For very narrow and/or highly calcified canals, it may be useful to select one size smaller than the last file used at apex. If you do not use rotary files with a taper of 4 % or more, you should always verify the size of the cleaned root canal with a size verifier before inserting the obturator.



Setting the working length on your Soft-Core® obturator

When the size verifier has a slightly loose fit in the apical third, the rubber stop is placed at the working length. Afterwards, the working length is transferred to the obturator. Soft-Core obturators and Size Verifiers are the exact same length.



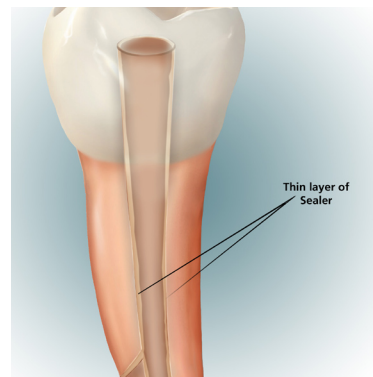
STEP 2: Heating of the obturator

Place the selected obturator in the Soft-Core® heater and activate the heater. For more information on how to use the heater, please consult the Soft-Core® Heater manual. If you do not have your manual, go to www.axisdental.com or call 800.355.5063



STEP 3: Application of sealer

While the obturator is heating, mix any heat resistant sealer with long working time (a non-eugenol sealer is recommended). Make sure that the root canal is completely dry, before applying sealer. Place a very thin coating of sealer on the wall of the canal. Too much sealer is neither desirable nor necessary. Utilize a paper point or a Soft-Core® Size Verifier to apply a thin layer of sealer on the canal walls. When obturating more than one canal, apply sealer in all canals at once.



STEP 4: Insertion of the obturator into the canal

When the oven indicates that the obturator is ready for use, the obturator may be removed from the oven. (For further information on heater use, please consult the Soft-Core® Heater Manual for your specific heater.)

Immediately insert the obturator into the canal to the working distance, without twisting the handle, and while using a firm and steady pressure.

Important: *The obturator should be inserted to the full working length.*

STEP 5: Removal of the handle, excess central core and gutta percha

The handle, excess core and gutta percha may be removed once the gutta percha has hardened.

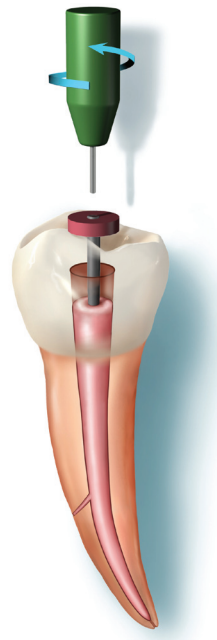
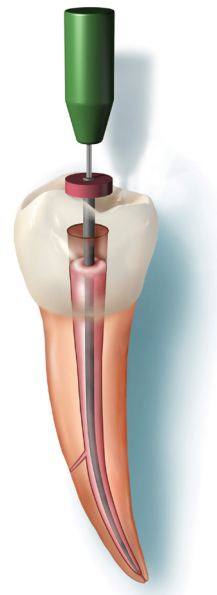
1. For canals less than 18mm: Twist the handle and plastic core to one side to break off the excess.

2. For all Canals: Stabilize the plastic core with a finger or cotton pliers, and cut away the handle and excess plastic core with a small inverted cone bur.

Important: *Be careful to prevent vertical movement of the core to minimize the chance of disturbing the apical seal. Trim away the extra gutta percha using an endo excavator or similar.*

STEP 6: Confirming radiograph

Confirm your root canal treatment by taking radiographs.



Technique tips

1. Obturating multi-rooted cases

There will almost always be more than enough gutta percha on each obturator. When obturating the canal, the gutta percha and sealer will therefore be transported to the coronal part of the tooth and in this way block the opening creating a challenge when working with multiple canals. Here is a step by step guide for obturating multiple canals.

1. Obturate the shortest canal first.
2. Place paper points or size verifiers in the other canals prior to obturation to prevent them being covered by gutta percha. Remove them as each canal is obturated.
3. While there is sufficient gutta percha on each obturator to fill even the most severe internally resorbed canal, it may be too much in some cases. If it is obvious that there will be an excess of gutta percha for the canal, use a sharp blade to trim some of the material from the coronal end of the central core prior to heating. Care must be taken not to remove too much gutta percha or fracture the obturator.

2. Post space preparation

Post space creation is accomplished by removing the coronal portion of the obturation. Since the coronal 6 mm of the plastic core is hollow, this procedure should be easier with the Soft-Core® Endodontic Obturator than with other obturation systems.

Core Remover

The Soft-Core® Core Remover is a tapered, pointed, non-cutting instrument. The Core Remover is developed specifically to ensure safe and fast removal of the plastic core and gutta percha in the coronal portion of the canal. The Core Remover is manufactured in two lengths - 25mm and 30 mm. Each package contains 6 pieces, and is available in three different packages: 6 pcs. of either 25 or 30 mm, or 3 pcs. of each length. Core Remover burs can be autoclaved.

Using Core Remover:

1. The Core Remover should be used in a high-speed hand piece with or without water coolant.

2. Choose the Core Remover length most suitable for the canal. Place the tip in the center of the hollow core. Activate the high-speed hand piece at full speed, and drill out the desired depth of the obturator core, using an intermittent pulsing technique. Start the bur – press it down – stop – pull the bur back etc..., in this way the Core Remover melts and removes the plastic core. You could start this procedure by making a center mark with a small cone bur. The Core Remover burs should only be used in the top coronal part of the filling until just below the canal opening. When using the Core Remover bur the obturator core and gutta percha will due to the friction heat, melt and be coiled out of the canal. However, the plastic core will only melt to the point where the Core Remover is placed.

3. When the desired depth has been reached using the Core Remover, use your usual post space bur. Choose a bur dimension that fits the post system and complete the post preparation. Other cutting burs may be used, but care should be taken to prevent perforation or displacement of the apical portion of the obturator core.



3. Retreatment of an obturated root canal

Removal of the obturator is relatively simple prior to the gutta percha cooling. Simply grasp the excess core with cotton pliers and remove it. Once the gutta percha has cooled, or for retreatment at a later appointment, removal is easiest achieved by using a Peeso bur, Gates, Rotary file or similar.

1. Place the bur between the canal wall and the plastic core so that the rotational direction will be counter clockwise. Use the instrument at very low speeds (250-400 rpm) and work slowly until you feel resistance. The instrument will grasp between the plastic core and the canal wall. The plastic core will be coiled out of the canal after a short time.
2. If necessary, a small dimension hand file can be worked down apically along the plastic core.
3. When the plastic core has been pulled out of the canal, the gutta percha is removed by traditional means.