

3M Science.
Applied to Life.™

Impression Material Technique Guide

**Make accurate
implant impressions.**





Precise-fitting implants start with an accurate impression.

With a rapidly aging population, dental implants are fast becoming a preferred restoration for permanent tooth replacement. If you're among the growing number of doctors who are incorporating implants into their practice, here's good news: 3M, the worldwide leader in impression solutions, has developed products and simplified procedures to help you achieve outstanding functional and esthetic results.

Your initial impression is critical because:

- In order for you to achieve accurate fabrication of an implant-retained prosthesis, the impression must record an exact registration of the relative position and orientation of the implant to other implants, teeth and soft tissue.
- A technician uses it to create a highly precise stone model or digital impression that becomes the basis for your entire implant treatment plan.

Get the excellent detail you need for accurate implant impressions with 3M impression materials.

The implant treatment plan can only be as accurate as your impression. The performance and detail reproduction of 3M impression materials help you:

- Achieve a detailed impression on the first take. Whether using an open or closed tray technique or making implant- or abutment-level impressions, a detailed impression reduces the chance of costly retakes.
- Capture impressions of transfer copings with confidence. Ensure the precise orientation and position of the implant in the mouth.

The choice is yours. Whether you prefer polyether or VPS impression material, 3M, a global leader in impression materials, has you covered.

3M™ Impregum™ Impression Materials



Summary of advantages

- Intrinsic hydrophilicity—allows the best detail reproduction in a moist environment
- Excellent flow properties—enables intimate contact with transfer coping
- Rigidity—secures implant coping position
- Classic material - long working time for large cases
- Super Quick material—2 minute set time for small cases and an improved taste

3M™ Imprint™ 4 VPS Impression Material



Summary of advantages

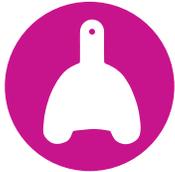
- Shortest intra-oral setting time for real time savings
- Sufficient working time for a stress-free procedure
- Super hydrophilicity for accurate detail reproduction, even in a moist environment

Achieve excellent impression results using any implant system you choose.

A number of implant companies offer excellent implant options to choose from. No matter what system you prefer, 3M impression materials can help you achieve your desired outcome using the technique you determine is best for the indication.

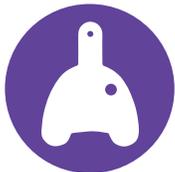
Impression Technique and Material Recommendations

There are numerous impression techniques for making implant impressions. To assist you in making this critical decision, we've highlighted three common techniques, along with impression material recommendations for each.



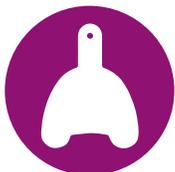
Technique: Closed Tray Indirect Transfer Impression Technique

Material: 3M™ Imprint™ 4 VPS Impression Materials 



Technique: Open Tray Direct Pick-Up Impression Technique

Material: 3M™ Impregum™ Soft Polyether Impression Materials  OR 
OR
3M™ Impregum™ Super Quick Polyether Impression Materials  OR 



Technique: Closed Tray Direct Snap-On Impression Technique

Material: Impregum Penta™ Soft Polyether Impression Materials  OR 
OR
Impregum Super Quick Polyether Impression Materials  OR 
OR
Imprint 4 VPS Impression Materials 

Impression Tray Recommendations

For cases with 1 or 2 implant units:
Use a 3M™ Impression Tray.

Self-adhesive—no tray adhesive is required

The “spoiler” on the upper arch tray—traps excess material to reduce gagging while it deflects material toward lingual tooth surfaces

Distal flow stops—help ensure you capture detail on the 2nd molars

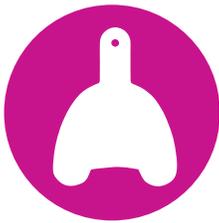


Transparent and easy to customize.

You can cut windows for open tray indications

For multiple implants or for edentulous situations, use a rigid custom tray.

- Prepare the tray with the appropriate tray adhesive to ensure reliable adhesion of the impression material

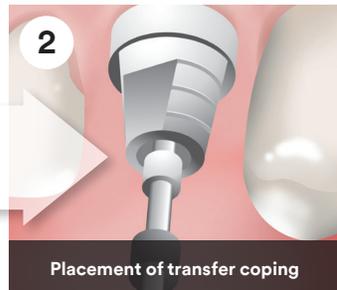


Closed Tray Indirect Transfer Impression Technique

In this technique, the indirect transfer coping remains on the implant during removal of the set impression from the mouth. Once the impression has been removed, the coping is removed from the implant and connected with the implant analog. The coping/analog assembly is then indexed (transferred) back into its corresponding position in the impression.



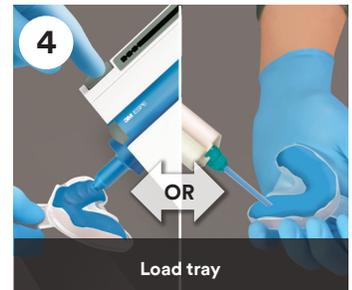
- Remove healing abutment
- Confirm prosthetic platform is free of bone debris or soft tissue



- Seat the coping and secure it—using the method recommended by the implant manufacturer
- Verify correct seating of the coping with a radiograph
- Block out hex-hole with material of choice



- Try-in the tray
- Ensure there is appropriate clearance for entire arch
- Evaluate tray-coping fit, ensuring there is no impingement/interference



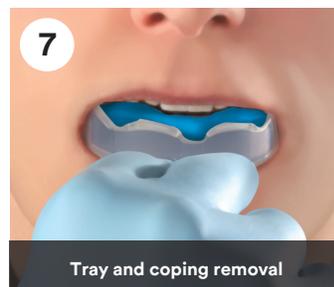
- Load the tray material after using proper bleeding technique
- Keep the mix tip submerged in the tray material to prevent voids
- Do not under-fill the tray



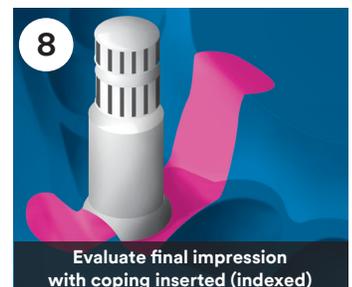
- While loading the tray, syringe the wash material around the coping and ensure continuous flow around the entire coping
- Keep the mix tip submerged in the wash material at all times to avoid trapping air bubbles



- Insert the loaded tray straight and evenly into mouth—avoid rotation
- Don't let patient bite down on tray
- Immobilize the tray using passive pressure
- Follow the recommended setting time in the mouth using a timer



- Remove tray from mouth carefully after end of setting time
- Remove coping assembly from implant after tray has been removed, following implant manufacturer's instructions
- Replace healing abutment immediately to prevent soft tissue collapse
- Assemble coping with implant analog



- Rinse impression before inspection
- Evaluate the impression for correct transfer and common impression errors (see the tips below)
- Insert coping assembly into impression
- Ensure the coping is properly aligned (indexed) within the impression
- Dry and disinfect impression before shipping



- Apply a layer of 3M™ Imprint™ 4 VPS Bite Registration Material with a thickness of approximately 5mm occlusal-incisally to the entire lower arch
- Have patient bite into proper occlusion
- Disinfect prior to shipping
- Make an impression of the opposing arch and submit it with case

Recommended material:

 3M™ Imprint™ 4 VPS Impression Material

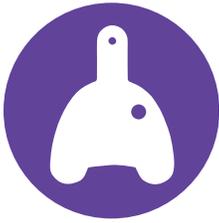
Implant Impression Tips

Common causes for retakes:

Distorted impression:
To prevent distortion, stabilize the tray while material is setting

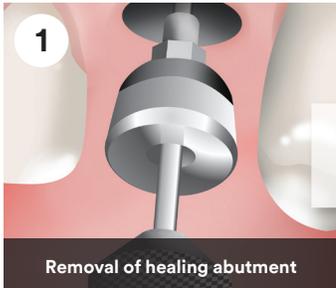
Voids and bubbles:
Use enough material and keep tip submerged in extruded material

Insufficient capture of detail around coping:
Syringe material without creating air bubbles around copings by keeping mix tip submerged



Open Tray Direct Pick-Up Impression Technique

In this technique, the direct transfer coping gets “picked up” and remains in the set impression upon removal from the mouth. Once the impression has set, the screw holding the coping on the implant is accessed through the hole above/below the implant in the open tray and unscrewed to allow removal of the impression from the mouth. Once outside of the mouth, the implant analog is connected to the transfer coping prior to pouring the stone model.



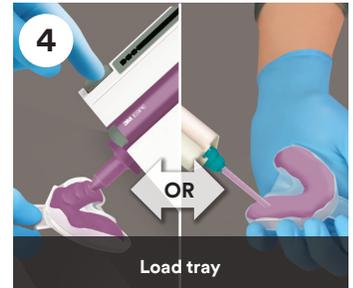
- Remove healing abutment
- Confirm prosthetic platform is free of bone debris or soft tissue



- Seat the coping and secure it—using the method recommended by the implant manufacturer
- Verify correct seating of the coping with a radiograph



- Try-in the tray and create access window
- Ensure there is appropriate clearance for entire arch with no contact between tray and tissue
- Evaluate tray-coping fit, ensuring there is enough clearance for coping to fit easily through window in tray



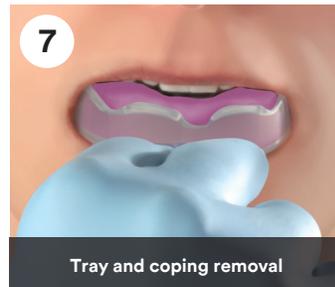
- Load the tray material after using proper bleeding technique
- Keep the mix tip submerged in the tray material to prevent voids
- Do not under-fill the tray



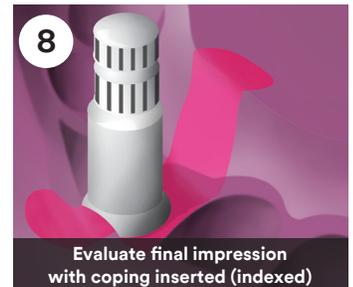
- While loading the tray, syringe the wash material around the coping, and ensure continuous flow around the entire coping
- Keep the mix tip submerged in the wash material at all times to avoid trapping air bubbles



- Insert the loaded tray straight and evenly into mouth—avoid rotation
- Don't let patient bite down on tray
- Immobilize the tray using passive pressure
- Follow the recommended setting time in the mouth using a timer



- Once impression material has set, remove screw holding coping in place, following implant manufacturer's instructions
- Remove tray from mouth carefully, with coping embedded in the set impression
- Replace healing abutment immediately to prevent soft tissue collapse



- Rinse impression before inspection
- Evaluate the impression for correct transfer and common impression errors (see the tips below)
- Attach the implant analog to coping embedded in the impression
- Dry and disinfect impression before shipping



- Apply a layer of 3M™ Imprint™ 4 VPS Bite Registration Material with a thickness of approximately 5mm occlusal-incisally to the entire lower arch
- Have patient bite into proper occlusion
- Disinfect prior to shipping
- Make an impression of the opposing arch and submit it with case

Recommended material:

- 3M™ Impregum™ Penta™ Soft Polyether Impression Material
- OR
- 3M™ Impregum™ Super Quick Polyether Impression Material

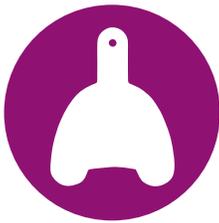
Implant Impression Tips

Common causes for retakes:

Distorted impression:
To prevent distortion, stabilize the tray while material is setting

Voids and bubbles:
Use enough material and keep tip submerged in extruded material

(Pick-up technique) Tray-abutment contact:
Widen implant windows in tray

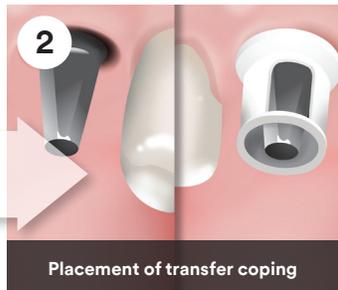


Closed Tray Direct Snap-On Impression Technique

The snap-on procedure is best described as a hybrid between the two techniques shown previously. In this closed tray procedure, the direct transfer coping “snaps on” to the top of the implant abutment in the mouth. Once the impression has set, the coping becomes embedded in the impression and is pulled off of the implant abutment when the set impression is removed from the mouth. Once outside of the mouth, the implant analog is connected to the transfer coping prior to pouring the stone model.



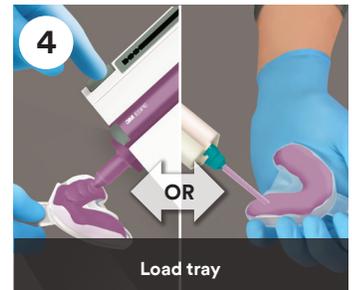
- Remove healing abutment
- Confirm prosthetic platform is free of bone debris or soft tissue



- Seat the abutment and secure it using the method recommended by the implant manufacturer
- Attach the snap-on transfer coping assembly (see completed assembly in step 5)



- Try-in the tray
- Ensure there is appropriate clearance for entire arch
- Evaluate tray-coping fit, ensuring there is no impingement/interference



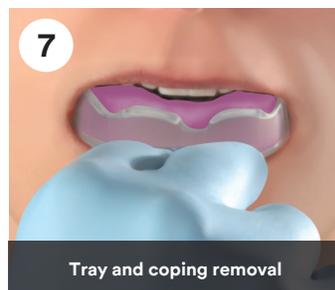
- Load the tray material after using proper bleeding technique
- Keep the mix tip submerged in the tray material to prevent voids
- Do not under-fill the tray



- While loading the tray, syringe the wash material around the coping and ensure continuous flow around the entire coping
- Keep the mix tip submerged in the wash material at all times to avoid trapping air bubbles



- Insert the loaded tray straight and evenly into mouth—avoid rotation
- Don't let patient bite down on tray
- Immobilize the tray using passive pressure
- Follow the recommended setting time in the mouth using a timer



- Remove tray from mouth carefully, with snap-on coping embedded in the set impression
- Depending on the implant system used, either
 - A) Replace healing abutment immediately to prevent soft tissue collapse, OR
 - B) Create the appropriate temporary restoration to protect the abutment
- Assemble coping with implant analog



- Rinse impression before inspection
- Evaluate the impression for correct transfer and common impression errors (see the tips below)
- Dry and disinfect impression before shipping



- Apply a layer of 3M™ Imprint™ 4 VPS Bite Registration Material with a thickness of approximately 5mm occlusal-incisally to the entire lower arch
- Have patient bite into proper occlusion
- Disinfect prior to shipping
- Make an impression of the opposing arch and submit it with case

Recommended material:

-  OR  3M™ Impregum™ Penta™ Soft Polyether Impression Material
- OR
-  OR  3M™ Impregum™ Super Quick Polyether Impression Material
- OR
-  3M™ Imprint™ 4 VPS Impression Material

Implant Impression Tips

Common causes for retakes:

Distorted impression:
To prevent distortion, stabilize the tray while material is setting

Voids and bubbles:
Use enough material and keep tip submerged in extruded material

(Snap-on technique) Coping-tray contact:
Try-in the tray prior to making impressions and ensure proper size

Ordering Information

3M™ Impregum™ Soft Polyether Impression Material

Item # Product Information

Refills and Cartridges

31741	3M™ Impregum™ Penta™ Soft Heavy Body Refill Pack Includes: 2 – 300ml base paste; 2 – 60ml catalyst
31769	3M™ Impregum™ Penta™ Soft Quick Step Heavy Body Refill Pack Includes: 2 – 300ml base paste; 2 – 60ml catalyst
31731	3M™ Impregum™ Penta™ Soft Medium Body Refill Pack Includes: 2 – 300ml base paste; 1 – 60ml catalyst
31765	3M™ Impregum™ Penta™ Soft Quick Step Medium Body Refill Pack Includes: 2 – 300ml base paste; 2 – 60ml catalyst
31746	3M™ Impregum™ Penta™ Soft Light Body Refill Pack Includes: 1 – 300ml base paste; 1 – 60ml catalyst
31785	3M™ Impregum™ Garant™ Soft Tray Material Refill – Mint MB Includes: 4 – 50ml cartridges; 10 Garant™ mixing tips, purple
31788	3M™ Impregum™ Garant™ Soft QS Tray Material Refill – Mint MB Includes: 4 – 50ml cartridges; 10 Garant™ mixing tips, purple
31752	3M™ Impregum™ Garant™ Soft Light Body Mint Flavor Refill, Pink Includes: 4 – 50ml Garant™ Soft Light Body Cartridges; 10 Garant™ mixing tips, white; 5 – 3M™ Impregum™ Intra-Oral Syringes, purple
31767	3M™ Impregum™ Garant™ Soft QS Light Body Mint Flavor Refill, Pink Includes: 4 – 50ml Garant™ Cartridges; 10 Garant™ mixing tips, white; 5 – 3M™ Impregum™ Intra-Oral Syringes, purple
P3794	3M™ Impregum™ Penta™ Cartridge, Soft Heavy Body
P3774	3M™ Impregum™ Penta™ Cartridge, Soft Quick Step Heavy Body
P3788	3M™ Impregum™ Penta™ Cartridge, Soft Medium Body
P3776	3M™ Impregum™ Penta™ Cartridge, Soft Quick Step Medium Body
P3796	3M™ Impregum™ Penta™ Cartridge, Soft Light Body

Accessories

77580	3M™ Cartridge Dispenser 1:1/2:1 (1 cartridge)
77949	3M™ Penta™ Mixing Tips – Red (50 mixing tips)
71451	3M™ Garant™ Polyether Mixing Tips, White (50 mixing tips)
71454	3M™ Garant™ Polyether Tray Mixing Tips, Purple (50 mixing tips)
71461N	3M™ Garant™ Polyether Intra-Oral Tips, White (50 intra-oral tips)
71508	3M™ Intra-Oral Syringe – Purple (50 intra-oral syringes)
30600	3M™ Polyether Tray Adhesive (1 – 17ml bottle)
71209	3M™ Elastomeric Syringe with Filling Device (1, metal)

3M™ Impregum™ Super Quick Polyether Impression Material

Item # Product Information

Refills

69385	3M™ Impregum™ Penta™ Super Quick Medium Body 2 base pastes – 300 ml each, 2 catalysts – 60 ml each
69379	3M™ Impregum™ Super Quick Light Body 4 cartridges – 50 ml each, 5 – 3M™ Intra-oral Syringes Purple, 5 – 3M™ Garant™ Mixing Tips purple
69406	3M™ Impregum™ Penta™ Super Quick Heavy Body 2 base pastes – 300 ml each, 2 catalysts – 60 ml each

Accessories

69387	3M™ Impregum™ Penta™ Super Quick Medium Body Cartridge
69401	3M™ Impregum™ Penta™ Super Quick Heavy Body Cartridge
69408	3M™ Polyether Contact Tray Adhesive (1 bottle – 17 ml)

3M™ Imprint™ 4 VPS Impression Material

Item # Product Information

Refills and Cartridges

3M™ Penta™ Refills—Tray Materials Each refill includes: 2 – 300ml base pastes; 2 – 60ml catalysts	
71484	3M™ Imprint™ 4 Penta™ Heavy
71485	3M™ Imprint™ 4 Penta™ Super Quick Heavy
71486	3M™ Imprint™ 4 Penta™ Putty
Refills—Tray Materials Each refill includes: 4 – 50ml cartridges; 10 – mixing tips, green	
71492	3M™ Imprint™ 4 Heavy
71493	3M™ Imprint™ 4 Super Quick Heavy
Economy Packs—Tray Materials Each Economy Pack includes: 10 – 50ml cartridges	
71531	3M™ Imprint™ 4 Heavy Economy Pack
71532	3M™ Imprint™ 4 Super Quick Heavy Economy Pack
Refills—Wash Materials Each refill includes: 4 – 50ml cartridges; 5 – mixing tips, yellow; 5 – 3M™ Intra-Oral Syringes, green	
71488	3M™ Imprint™ 4 Light
71487	3M™ Imprint™ 4 Regular
71490	3M™ Imprint™ 4 Super Quick Light
71489	3M™ Imprint™ 4 Super Quick Regular
Cartridges for 3M™ Pentamix™ 3 Automatic Mixing Unit	
77784	3M™ Imprint™ 4 Heavy
77785	3M™ Imprint™ 4 Super Quick Heavy
77786	3M™ Imprint™ 4 Penta™ Putty
Cartridges for 3M™ Pentamix™ 3 Automatic Mixing Unit	
77784	3M™ Imprint™ 4 Heavy
77785	3M™ Imprint™ 4 Super Quick Heavy
77786	3M™ Imprint™ 4 Penta™ Putty
Accessories	
77949	3M™ Penta™ Mixing Tips – Red (50 mixing tips)
71452	3M™ Garant™ VPS Mixing Tips – Yellow (50 mixing tips)
71462	3M™ Garant™ VPS Intra-Oral Mixing Tips – Yellow (50 intra-oral tips)
71450	3M™ Garant™ VPS Mixing Tips – Green (50 mixing tips)
71506	3M™ Intra-Oral Syringe – Green (50 intra-oral syringes)
76994	Universal 3M™ Penta™ Cartridge for 3M™ Pentamix™ 2

3M™ Impression Tray

Directed Flow Disposable Impression Tray

Item # Product Information

3M™ Impression Tray Refill Pack — Upper	
71615	10 Trays, Size Small (S), Upper
71616	10 Trays, Size Medium (M), Upper
71617	10 Trays, Size Large (L), Upper
3M™ Impression Tray Refill Pack — Lower	
71618	10 Trays, Size Small (S), Lower
71619	10 Trays, Size Medium (M), Lower
71620	10 Trays, Size Large (L), Lower



Choose from a wide range of products designed for the way you like to work.

For every implant indication, you'll find a 3M polyether or VPS impression material to suit your technique and procedure. You'll choose from a wide range of viscosities and setting/working times—in both cartridge and 3M™ Penta™ deliveries.

Knowledge and communication are key

- Understand the specific details of the material you are using
- Make sure assistants understand the timing considerations for the materials

Use 3M as a resource

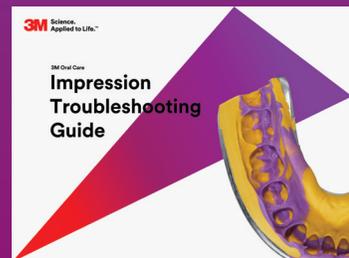
- Impression guides and troubleshooting
- Lunch and Learn programs for you, your staff and lab

Make better impressions

3M gives you exactly what you need to simplify the process and achieve consistent clinical results.

How you get there:

With products that set fast yet give you enough working time. Ingenious tools that streamline the procedure. And troubleshooting tips to help you ace every impression, so restorations fit.



Download 3M's tips at www.3M.com/GreatImpressions

3M.com/GreatImpressions



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