



Science.  
Applied to Life.™



# Your source for accurate impressions

Technique Guide for Clear Aligner Impressions

# A perfect balance puts you in control

Imprint™ 4 VPS Impression Material helps you optimize your impression procedure with innovative chemistry that lets you save time AND get accurate results.



## Speed

### Fast setting time for your patients.

Choosing a fast-setting impression material minimizes the time the impression is in the mouth—this reduces stress for patients, and reduces the possibility of errors.

Imprint 4 VPS Impression Material offers the fastest intra-oral setting time among leading VPS fast-setting impression materials,<sup>1</sup> offering a real time savings. How?

### The innovative active self-warming feature accelerates setting time.

Once in the mouth, the material warms up to body temperature (37°C/98.6°F). This speeds up the setting reaction which results in a short intra-oral setting time.

## Control

### Long working time for you.

Having adequate working time is important for accurate results. Imprint 4 material gives you all the working time you need.

Due to the unique chemistry, the setting time doesn't start until the END of the working time. That means you'll have a sufficient amount of time to load and seat the tray—no stressful race against the clock.

Whether you use a 1-step or 2-step impressing technique, Imprint 4 material puts you in control of your everyday crown and bridge cases.

## Precision

### Super hydrophilicity.

Imprint 4 material is super-hydrophilic, and displaces moisture right from the start in the unset state. That allows the material to reproduce accurate details even in a moist environment—giving you ultimate precision and confidence. Choose it for:

- impressions with precise details that are easy to read, and
- precise-fitting restorations

### 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
- Clinically proven tear strength
- Fresh material colors for easier readability
- Patient-pleasing mint flavor

# Clinical step-by-step technique for clear aligner impressions

Prepare materials, equipment and review technique guidelines before beginning procedure. Try in impression trays to ensure proper fit.

## Guidelines for G

### Impression Trays

Before taking an impression, try-in the tray for proper fit. No teeth or support tissue should hit the tray during the try-in. Use proper tray size for the patient's arch. Extra large, large, medium and small trays are available. For Invisalign® cases, you must use only Invisalign branded impression trays. Trays can be altered or manipulated by using a torch to warm the plastic. You can also use a lab acrylic bur to adjust tray margins for patients who have large torri.

## Maxillary Impression Steps



1. Load impression tray with Imprint™ 4 Penta Putty starting with posterior of impression.



2. Load the impression tray while keeping the tip immersed in material to avoid air bubbles and voids. **NOTE: 1:30 working time with Imprint™ 4 Penta Putty.**



3. Using your index finger, make a trough in the putty where the maxillary teeth will be. Be sure to allow room for light body wash in the trough.



4. Pinch the putty to extend the material in the vestibule area.



5. Examine the putty in the tray to make sure you have good depth for the Imprint™ 4 Light Body Wash Material.



6. Dispense Imprint™ 4 Light Body Wash Material into the trough, making sure to keep the tip immersed in the material while dispensing.



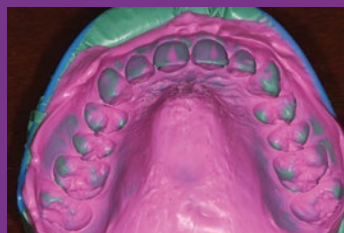
7. Apply an even amount of Imprint™ 4 Light Body Material in order to get a good detailed impression. **NOTE: 1:00 working time with Imprint™ 4 Light Body.**



8. Seat the impression straight up to avoid any drags or scrapes. Make sure the handle is always aligned up with the patient's midline.



9. Always hold the impression tray in the pre-molar area for stability. **NOTE: 2:30 intra-oral set time. Keep in patient's mouth 2:30.**



10. Final maxillary impression with Imprint™ 4 Penta Putty and Imprint™ 4 Light Body Wash Material. Disinfect the impression and package for shipment for aligner fabrication.

**Note:** To complete this impression technique with a Heavy Body/Light Body material combination (instead of putty material), complete steps 1, 2 and 6 – 10. Instead of dispensing Light Body material into the trough of the impression (steps 6 and 7) you'll dispense Light Body material across the top of the Heavy Body material.



# ood Impressions

## Impression Material

Use only VPS/PVS materials — do not use polyether, alginate or alginate alternative materials. Cases submitted do require both an upper and lower impression. It is important to remember that impressions will not be returned. If needed, take a second set of impressions for your records.

## Expiration Date and Temperature

Always check the expiration date on both tray and injected impression materials. Expired impression material may not set properly. Impression materials must be stored at room temperature (73°F). Storing at lower temperatures will prolong setting times and storing at an elevated temperature will reduce setting times.

## Inadequate Mix

After removing the impression material cartridge cap, extrude or bleed the material before applying mix tip. This will ensure even flow for dispensing material. Do not substitute mixing tips. Always use the supplied manufacturer mixing tips and follow instructions for use.

## Follow Manufacturers Directions

Ensure mix tip is correctly attached. Impression tips are different in size and color. Check the manufacturer's directions for which tip should be used. When using a putty or hand-mix impression material, always use the supplied measuring scoop to ensure proper ratios of material.

## Mandibular Impression Steps



1. Load impression tray with Imprint™ 4 Penta Putty starting with posterior of impression.



2. Load the impression tray while keeping the tip immersed in material to avoid air bubbles and voids. **NOTE: 1:30 working time with Imprint™ 4 Penta Putty.**



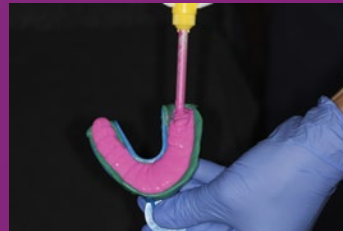
3. Using your index finger, make a trough in the putty where the maxillary teeth will be. Be sure to allow room for light body wash in the trough.



4. Pinch the putty to extend the material in the vestibule area.



5. Dispense Imprint™ 4 Light Body Wash Material into the trough, making sure to keep the tip immersed in the material while dispensing.



6. Apply an even amount of Imprint™ 4 Light Body Material in order to get a good detailed impression. **NOTE: 1:00 working time with Imprint 4 Light Body.**



7. Seat the impression straight down over arch while pulling out the patient's cheek.



8. Move around behind the patient holding down the impression in the pre-molar area with thumbs for stability while gently holding the mandible with fingers. **NOTE: 2:30 intra-oral set time. Keep in patient's mouth 2:30.**

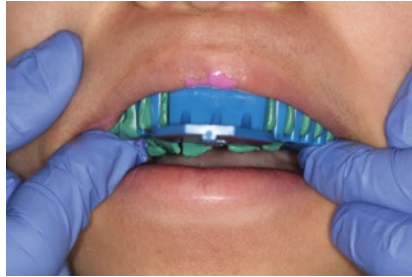


9. Final maxillary impression with Imprint™ 4 Penta Putty and Imprint™ 4 Light Body. Disinfect the impression and package for shipment for aligner fabrication.

**NEVER** ask the patient to hold tray  
ask the patient to bite together  
have the patient bite on cotton rolls

# Tips for success

Insert the tray straight up. Once the tray is stabilized after seating, avoid any movements. Patients should close their mouth as much as possible without biting down on the tray to avoid deformation of the mandible and, thus, errors in the impression. Do not try to correct the position of the tray after insertion.



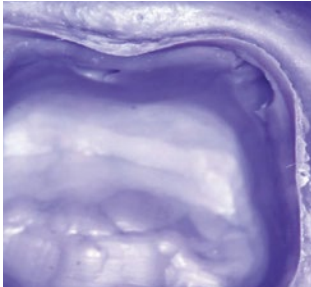

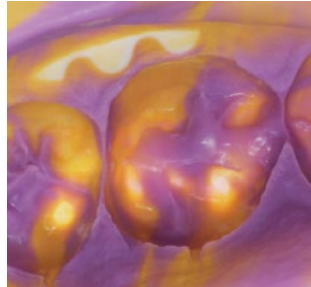

Upper jaw impression.



Lower jaw impression.

3M's Imprint™ 4 VPS Impression Material has the fastest intra-oral setting time which means less time for unintended movements.

# Impression troubleshooting

Problem	 <p>Voids on the margin</p>	 <p>Facial-oral flow defects</p>	 <p>Show-through of tray</p>	 <p>Poor bond between tray and wash material</p>
Causes	<ul style="list-style-type: none"> <li>• Air trapped in Intra-Oral Syringe</li> <li>• Air trapped while filling impression tray</li> </ul>	<ul style="list-style-type: none"> <li>• Exceeding working time</li> <li>• Tray movement after initial seating</li> <li>• Tray doesn't support flow of material</li> </ul>	<ul style="list-style-type: none"> <li>• Tooth contact on sides or bottom of impression tray</li> <li>• Insufficient amount of material utilized</li> <li>• Missing dentition in posterior</li> </ul>	<ul style="list-style-type: none"> <li>• Exceeding working time</li> <li>• Improper mix of material</li> <li>• Impression material was not bled prior to use</li> </ul>
Solutions	<ul style="list-style-type: none"> <li>• Properly bleed filled syringe</li> <li>• Keep mixing tip immersed in material when filling</li> <li>• Use adequate material</li> </ul>	<ul style="list-style-type: none"> <li>• Follow manufacturer guidelines for working/setting time</li> <li>• Don't move tray following seating</li> <li>• Use proper tray selection</li> </ul>	<ul style="list-style-type: none"> <li>• Identify correct tray size prior to taking impression</li> <li>• Use sufficient material</li> <li>• Check tray length prior to impression</li> </ul>	<ul style="list-style-type: none"> <li>• Follow manufacturer suggested working/setting times</li> <li>• Use correct mix tips</li> <li>• Always bleed a small amount of material before starting</li> </ul>

# Ordering Information

Item #	Product Information
<b>Intro Kits</b>	
<b>71494</b>	<b>Imprint™ 4 Penta™ Heavy Intro Kit</b> Kit includes: 1 – 300ml base paste; 1 – 60ml catalyst; 1 – 50ml Light cartridge; 1 – 50ml Regular cartridge; 1 – Penta™ cartridge; 10 – Penta™ mixing tips, red; 5 – 3M™ ESPE™ Intra-Oral Syringes, green; 5 – mixing tips, yellow; 5 – intra-oral tips, yellow; 1 – VPS tray adhesive
<b>71495</b>	<b>Imprint™ 4 Penta™ Super Quick Heavy Intro Kit</b> Kit includes: 1 – 300ml base paste; 1 – 60ml catalyst; 1 – 50ml Super Quick Light cartridge; 1 – 50ml Super Quick Regular cartridge; 1 – Penta™ cartridge; 10 – Penta™ mixing tips, red; 5 – 3M™ ESPE™ Intra-Oral Syringes, green; 5 – mixing tips, yellow; 5 – intra-oral tips, yellow; 1 – VPS tray adhesive
<b>71536</b>	<b>Imprint™ 4 Penta™ Putty Intro Kit</b> Kit includes: 1 – 300ml base paste; 1 – 60ml catalyst; 1 – 50ml Super Quick Light cartridge; 1 – 50ml Regular cartridge; 1 – Penta™ cartridge; 10 – Penta™ mixing tips, red; 5 – 3M™ ESPE™ Intra-Oral Syringes, green; 5 – mixing tips, yellow; 5 – intra-oral tips, yellow; 1 – VPS tray adhesive
<b>71534</b>	<b>Imprint™ 4 Intro Kit</b> Kit includes: 2 – 50ml Heavy cartridges; 1 – 50ml Light cartridge; 1 – 50ml Regular cartridge; 10 – mixing tips, green; 10 – 3M™ ESPE™ Intra-Oral Syringes, green; 1 – VPS tray adhesive
<b>71535</b>	<b>Imprint™ 4 Super Quick Intro Kit</b> Kit includes: 2 – 50ml Super Quick Heavy cartridges; 1 – 50ml Super Quick Light cartridge; 1 – 50ml Super Quick Regular cartridge; 10 – mixing tips, green; 10 – 3M™ ESPE™ Intra-Oral Syringes, green; 1 – VPS tray adhesive
<b>Penta™ Refills—Tray Materials</b> Each refill includes: 2 – 300ml base pastes; 2 – 60ml catalysts	
<b>71484</b>	Imprint™ 4 Penta™ Heavy
<b>71485</b>	Imprint™ 4 Penta™ Super Quick Heavy
<b>71486</b>	Imprint™ 4 Penta™ Putty
<b>Refills—Tray Materials</b> Each refill includes: 4 – 50ml cartridges; 10 – mixing tips, green	
<b>71492</b>	Imprint™ 4 Heavy
<b>71493</b>	Imprint™ 4 Super Quick Heavy

Customer Care Center: 1-800-634-2249



**3M Oral Care**  
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St. Paul, MN 55144-1000 USA

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Web 3M.com/Imprint4

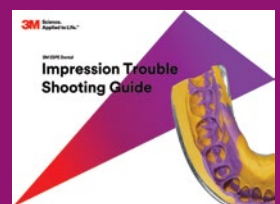
**3M Canada**  
Post Office Box 5757  
London, Ontario N6A 4T1  
Canada

Phone 1-888-363-3685

Item #	Product Information
<b>Economy Packs—Tray Materials</b> Each Economy Pack includes: 10 – 50ml cartridges	
<b>71531</b>	Imprint™ 4 Heavy Economy Pack
<b>71532</b>	Imprint™ 4 Super Quick Heavy Economy Pack
<b>Refills—Wash Materials</b> Each refill includes: 4 – 50ml cartridges; 5 – mixing tips, yellow; 5 – 3M™ ESPE™ Intra-Oral Syringes, green	
<b>71488</b>	Imprint™ 4 Light
<b>71487</b>	Imprint™ 4 Regular
<b>71490</b>	Imprint™ 4 Super Quick Light
<b>71489</b>	Imprint™ 4 Super Quick Regular
<b>Cartridges for Pentamix™ 3 Automatic Mixing Unit</b>	
<b>77784</b>	Imprint™ 4 Heavy
<b>77785</b>	Imprint™ 4 Super Quick Heavy
<b>77786</b>	Imprint™ 4 Penta™ Putty
<b>Cartridges for Pentamix™ 2 Automatic Mixing Unit</b>	
<b>77781</b>	Imprint™ 4 Heavy
<b>77782</b>	Imprint™ 4 Super Quick Heavy
<b>77783</b>	Imprint™ 4 Penta™ Putty
<b>Accessories</b>	
<b>77949</b>	<b>Penta™ Mixing Tips – Red</b> (50 – mixing tips)
<b>71452</b>	<b>Garant™ VPS Mixing Tips – Yellow</b> (50 – mixing tips)
<b>71462</b>	<b>Garant™ VPS Intra-Oral Mixing Tips – Yellow</b> (50 – intra-oral tips)
<b>71450</b>	<b>Garant™ VPS Mixing Tips – Green</b> (50 – mixing tips)
<b>71506</b>	<b>3M™ ESPE™ Intra-Oral Syringe – Green</b> (50 – intra-oral syringes)

## Make better impressions.

Nothing compares to a good first impression. Experience the superior results for your patients by selecting impressioning materials from 3M ESPE Dental, the worldwide leader in impression materials.



The 3M Impression Trouble Shooting Guide identifies common problems and offers solutions. To get your FREE copy, download it now from our website — [www.3MESPE.com/GreatImpressions](http://www.3MESPE.com/GreatImpressions).

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