

Frequently Asked Questions

General

▼ **Is 3M™ Impregum™ Super Quick Polyether Impression Material a true 3M polyether material?**

Impregum Super Quick Material is a real 3M polyether impression material but with a faster setting time. The base monomer and the setting mechanism are still the same. In 3M™ Penta™ Materials, the initiator has been modified resulting in faster setting and improved taste while keeping typical polyether benefits.

▼ **Impregum Super Quick Material is improved with respect to setting speed. What about other properties?**

Impregum Super Quick Material is at least at the same performance level as other Impregum impression materials for all clinically relevant properties.

▼ **My dentist does not like fast setting materials and wonders if Impregum Super Quick Material is too quick for his liking.**

The setting time is significantly reduced while maintaining a sufficient working time of 45 seconds. This is comparable to other fast setting VPS materials. If a dentist prefers longer working times, 3M offers alternatives within the polyether impression material portfolio.

▼ **Are you planning to substitute a current material with Impregum Super Quick Material?**

No, with the launch of Impregum Super Quick Material 3M extends the polyether impression material portfolio. All current Impregum and Impregum Quick Materials will be kept in the portfolio.

▼ **How about the compatibility with other impression materials, also from competitors?**

Impregum Super Quick Material is chemically compatible with other 3M polyether impression materials but cannot be used with VPS or hybrid materials. VPS materials will not set on Impregum surfaces. That needs to be considered especially by dental labs when selecting a gingiva mask material.

▼ Are there specifics to be considered regarding the allergy potential of 3M™ Impregum™ Super Quick Material?

Based on the biocompatibility evaluation, which included an evaluation for the sensitization potential of the product, the sensitization potential of Impregum Super Quick Material was found to be low and not different from that of other 3M impression materials.

▼ What safety data supports Impregum Super Quick Impression Material?

Impregum Super Quick Material was evaluated using international standards for biocompatibility – specifically, the evaluation was structured according to ISO 10993 (Biological evaluation of medical devices – Part 1: Evaluation and testing within a risk management process) and ISO 7405 (Dentistry – Evaluation of biocompatibility of medical devices used in dentistry). These standards provide a framework of toxicological endpoints that must be included in a product evaluation based on the nature and duration of body contact. For impression materials, the toxicological endpoints include: cytotoxicity, irritation and sensitization (ability to cause an allergic reaction). The result of the biocompatibility evaluation, which was conducted by a board-certified toxicologist, indicates that the product is safe for its intended use.

Indications and compatibility with other impression procedure products

▼ Is Impregum Super Quick Material indicated for implant impressions?

Yes, Impregum Super Quick Material is indicated for implant impressions. There are no constraints but it is especially suited for single-unit implant cases.

▼ What is our recommendation for Clear Tray Aligner impressions? Can Impregum Super Quick Material be used?

Impregum Super Quick Material is not recommended for Clear Tray Aligner impressions, but 3M™ Imprint™ 4 VPS Impression Material is excellently suited for Clear Tray Aligner impressions. The materials should be chosen depending on the technique the dentist wants to use.

▼ What kinds of impression trays are suitable for Impregum Super Quick Impression Material?

All impression trays, full arch, quadrant and dual-arch impression trays generally used for precision impressions are suitable (metal and plastic trays, non-perforated and perforated trays, stock and custom trays). Generally, 3M recommends the use of rigid trays. Usage of a polyether tray adhesive is recommended unless using the 3M™ Impression Tray where a retention fleece makes the usage of tray adhesives unnecessary.

▼ Does 3M™ Astringent Retraction Paste influence the setting of impression materials?

As with all astringents, Astringent Retraction Paste may inhibit the setting of Impregum Super Quick Material. The paste must be completely rinsed off with air-water spray and suction prior to impression taking.

▼ Are there specific limitations to consider when using 3M™ Impregum™ Super Quick Material (retraction, gloves)?

Since Impregum Super Quick Material is based on proven 3M polyether chemistry, there are no specific limitations. Retraction solutions have to be rinsed with water thoroughly before applying Impregum Super Quick Material.

▼ Is Impregum Super Quick Material compatible with other dental materials such as cements and fillings?

There are no specific effects expected for Impregum Super Quick Material, similar to other 3M polyether or VPS impression materials. Use caution with VPS gingival mask materials, they can be used only with a separator that forms a sealed solid waxy layer (Sherasepal-U®, Shera®). Separating materials can be applied with a brush, to insulate areas that are necessary.

Storage/preparation**▼ During summer, it becomes very warm in my practice, what shall I do?**

In general, the working time of polyether impression materials is shortened at higher temperature. In this case the materials should be stored at a cooler place (but not below 18°C/64°F) or a regular-set version instead of a super quick setting material should be used. The setting reaction of polyether is less temperature sensitive compared to a VPS. According to the instructions for use, Impregum Super Quick Material as well as all other 3M impression materials should be stored at 18°C/64°F – 25°C/77°F.

▼ Can Impregum Super Quick Material be stored in the fridge?

Storage conditions are given in the instructions for use (18°C/64°F – 25°C/77°F). The material must not be stored in the fridge.

▼ What should I do in winter times when Impregum Super Quick Material has been stored below 18 °C/64 °F?

- Do not use 3M™ Penta™ Impression Materials that have been stored at temperatures below 18 °C/64 °F, the viscosity of the pastes will increase to such an extent that there may be mixing problems in the unit. They can be used after storing for one day at a minimum temperature of 18 °C/64 °F. This will re-establish the usual handling characteristics without compromising quality.
- 50 ml cartridge materials: If the material is stored at temperatures below 18 °C/64 °F, it needs to be discarded. Precise dosing and mixing can no longer be guaranteed even if subsequently kept at room temperature for a longer period.

▼ Which mixing devices can be used with 3M™ Impregum™ Penta Super Quick Impression Material?

Manufacturer	Mixing device	3M™ Pentamix™ 2 cartridge	3M™ Pentamix™ 3 cartridge
Zhermack	Modulmix	✓	✓
DMG	Mix Star emotion	✓	✓
Heraeus	Dynamix	✓	✗
Heraeus	Dynamix Speed	✓	✓
Kettenbach	Sympress	✓	✓
Dentsply-Sirona	Duomix	✓	✗
Dentsply-Sirona	Duomix II	✓	✓

Heraeus, Kettenbach and Dentsply-Sirona are using the Renfert device.

- ✗ Cartridge can be inserted; however the cover cannot be closed and therefore the mixing process cannot be started.
- ✓ Cartridge is fully compatible.

▼ How to use the tray adhesive?

For sufficient adhesion, it is important to apply a thin layer of 3M™ Polyether Adhesive, at least 1 minute before you intend to fill the tray.

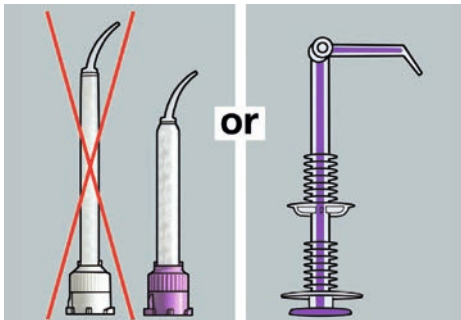
▼ **The white mixing tips cannot be attached to the Impregum Super Quick Material cartridge. I observed leakage between mixing tip and cartridge.**

Please use the 3M™ Garant™ Mixing Tips Purple only. The white mixing tips do not fit on the Impregum Super Quick Material cartridge. Similarly, the purple tips do not fit on the 3M™ Impregum™ L DuoSoft™ cartridges.



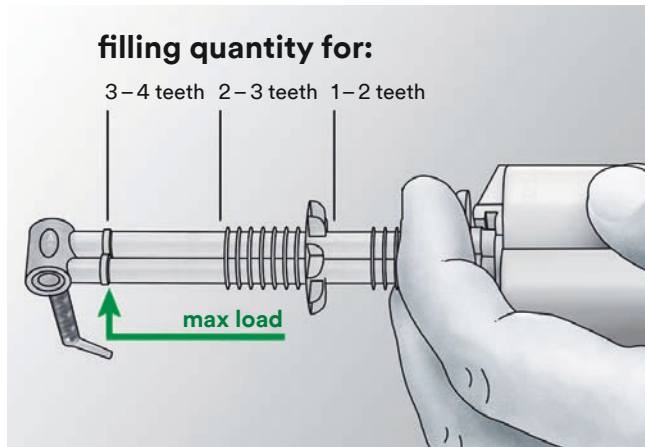
▼ **Can I use the standard 3M™ Impregum™ Mixing Tips?**

Please use the 3M™ Garant™ Mixing Tips Purple only. The white mixing tips do not fit on the 3M™ Impregum™ Super Quick Material cartridge.



▼ How many applications are possible with the material in one 3M™ Intra-oral Syringe Purple?

According to clinical evidence and depending on the quantity syringed around each unit, the amount of material in one syringe should be sufficient for about 2–4 units.



▼ What materials can be syringed using the Intra-oral Syringe Purple?

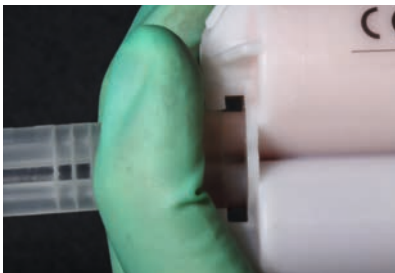
The Intra-oral Syringe Purple is indicated for syringing preparations with all polyether precision impression materials from 3M in accordance with ISO 4823 Type 3 and Type 2, provided the impression materials are intended for syringing.

▼ Is Impregum Super Quick Material performance influenced by using the Intra-oral Syringe Purple?

All impression materials perform as usual when using the single-use Intra-oral Syringe Purple.

▼ Paste comes out between the 50 ml cartridge and the 3M™ Intra-oral Syringe Purple while loading.

Place the Intra-oral Syringe Purple directly onto the openings of the 50 ml cartridge and hold firmly in place while loading.



▼ **When loading the Intra-oral Syringe Purple the catalyst and base pastes do not run evenly into the barrels of the syringe.**

To minimize this effect, dispense a pee-sized amount of material from the 50 ml cartridge before loading the Intra-oral Syringe Purple. Often, you cannot completely avoid uneven filling. The first small quantity of paste dispensed from the Intra-oral Syringe Purple should be discarded until the base and the catalyst pastes result in an even, homogeneous mixture.

▼ **When loading the Intra-oral Syringe Purple or when placing the plungers, paste flows into the mixing tip.**

While loading the Intra-oral Syringe Purple, leave the mixing tip in the original angled position to prevent paste from entering the mixing tip. In an angled position overfilled paste will emerge at the side of the joint.

▼ **How can I refill the Intra-oral Syringe Purple?**

The Intra-oral Syringe Purple is intended for single use. Refilling an intra-oral syringe which has been emptied or partially emptied is not possible since the mixed material in the mixing tip is already set.

▼ **How should I reclose the 50 ml cartridge?**

Close the 50 ml cartridge using an original cartridge cap. Alternatively close with a mixing tip containing hardened impression material. Make sure that the catalyst paste does not come into contact with the base paste to prevent paste cross-contamination.

Application/working and setting time/syringing

▼ **Can 3M™ Impregum™ Super Quick Material be combined with VPS materials?**

No, VPS and polyether materials are not chemically compatible.

▼ **Can Impregum™ Super Quick Material be used with other 3M polyether materials?**

Yes, but it is not recommended. If Impregum Super Quick Material is combined with other Impregum or 3M™ Permadyne™ Polyether Impression Materials the longer intra-oral setting time does apply.

▼ When do I need to check the proper catalyst and base paste mixture?

Every time. Always check proper catalyst and base paste mixture before use. Use colour uniformity as a guide. Every time you start a new cartridge or re-insert a partially emptied cartridge, discard any uneven mixture, and do not apply the paste until the mixture shows a homogeneous colour.

For a cartridge that is kept in the 3M™ Pentamix™ Mixing Unit from previous use, simply attach a new mixing tip and start the mixing procedure.

Note: For Impregum Penta Super Quick Material, a slightly more reddish colour of the very first amount of mixed material is typical – not a failure. The initial overdose of catalyst paste is intentional to guarantee a proper setting of the material.

▼ The 3M™ Penta™ Material is not properly mixed. The first amount of material appears more reddish. Can this material be used?

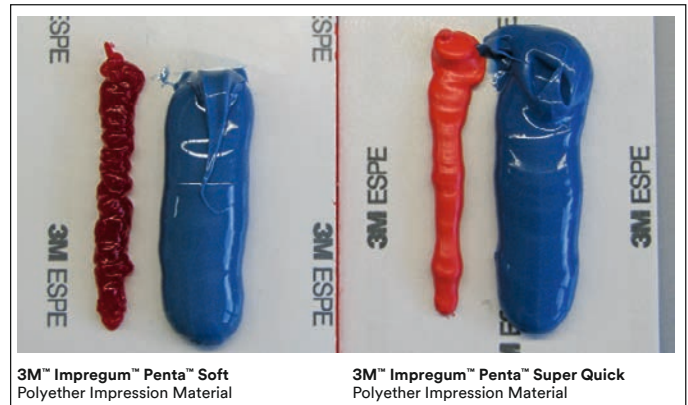
When using a new foil bag or when re-inserting a cartridge with foil bags partially used, please ensure the base and catalyst pastes are properly mixed; a homogeneous colour indicates properly mixed material. Discard the initial unevenly mixed material.

For foil bags in use that are kept in the Pentamix Mixing Unit, remixing of base and catalyst paste is not required. It is correct and set by intention for all polyether impression materials that the very first amount of material has a catalyst over dosage. A minimal forerun of the red catalyst paste leads to the colour difference. This is built-in to guarantee the proper setting of the material.

The following image displays the typical colour gradient you can expect. The samples show the first amount of pastes dispensed. The paste is extruded beginning in the middle of the circle. All material can be used. You do not need to discard the first amount.



Due to the more intense red colour of the Impregum Penta Super Quick catalyst paste (right picture), the colour gradient might be more noticeable than for other Impregum impression materials.



3M™ Impregum™ Penta™ Soft
Polyether Impression Material

3M™ Impregum™ Penta™ Super Quick
Polyether Impression Material

▼ Does the working time of the materials depend on the temperature?

Like all chemically setting materials the working time for Impregum Super Quick Impression Material depends on the temperature. At room temperatures above 25°C/77°F, the working times for all Impregum™ products are shorter compared to the values given in the instructions for use. According to the IFU, Impregum Super Quick Material as well as all other 3M impression materials should be stored at 18/64°F – 25°C/77°F.

▼ What are the working and setting times?

Impregum Super Quick Material is the ideal solution for impressions for 1 to 2 units. They offer an adequate working time of 45 seconds for these indications. The setting time in the mouth is 2 minutes.

▼ What is the difference between the working and setting times of Impregum Super Quick, Impregum Quick and regular-setting Impregum Materials?

Working time: The regular-setting Impregum Materials offer 1:45 min., the “Quick” products max. 1:00 min., and the new Impregum Super Quick Material offers 45 seconds maximum working time. Since 3M polyether impression materials are less affected by temperature, the extra- and intra-oral working time are the same.

Intra-oral setting time: The intra-oral setting time of Impregum Super Quick Material has been reduced significantly – to only 2 minutes. Unused working time does not need to be added to the intra-oral setting time for the Impregum Quick and Super Quick materials. In contrast to regular-setting Impregum products, 3M does not indicate a “total setting time” for Impregum Quick and Super Quick Materials.

▼ What is the intra-oral and what is the extra-oral working time for Impregum Super Quick Material?

In contrast to most VPS materials, only one working time is given in the instructions for use. The setting reaction of 3M polyether materials are less temperature sensitive compared to VPS. Therefore, only one valid extra- and intra-orally working time is given.

▼ What is the difference between VPS (especially 3M™ Imprint™ 4 Material) and Impregum Super Quick Materials with respect to setting?

Impregum Super Quick Material sets – due to a unique cationic ring opening setting reaction facilitating the known polyether snap set behavior – with constant flowability during the entire working time. Its setting reaction is less temperature sensitive compared to VPS.

▼ Can I use 3M™ Impregum™ Super Quick Material for larger cases?

Impregum Super Quick Material can be used for all cases where 45 seconds of working time are sufficient. There is no contraindication. 3M recommends but does not limit using Impregum Super Quick Material for 1 to 2 units.

▼ Do I have to use the full working time?

No, you can use any time up to the maximum working time of 45 seconds. The intra-oral setting time of 2 minutes remains constant, regardless of the working time used.

▼ The working time of Impregum Super Quick Material is too short.

Impregum Super Quick Material offers 45 seconds intra-oral syringing time and 45 seconds working time at room temperature – this time allows for syringing 1 or 2 units and inserting the tray within the 45 seconds working time. The tray should be inserted slowly – so plan in a couple of seconds for tray insertion. This is the reason why we recommend the “Super Quick” versions only for 1 or 2 unit cases. If the dentist wants to take a little more time or the 3M™ Pentamix™ Automatic Mixing Unit is not in the same operatory, 3M recommends to use a regular-setting material.

▼ I usually work with an assistant – she would fill the tray while I start syringing around the preparation. When should she start to fill the tray when using Impregum Super Quick Material?

We recommend start filling the tray as soon as syringing around the preparation is started.

▼ The maximum intra-oral syringing time of Impregum Super Quick Material is 45 seconds – this is too short for full arch cases.

3M offers a solution in the portfolio of Impregum Materials for cases where more intra-oral working time is needed. Impregum Material offers up to 1:45 min. intra-oral working time according to the clinical recommendation and maintains full flowability throughout the working time.

▼ When should the tray be inserted?

The tray should be inserted ideally immediately after the syringing is finished, so the tray should be ready by then. The tray must be inserted within the intra-oral working time.

▼ When should I set the timer? At start of mixing?

Just set the timer as soon as the tray is inserted in the mouth. The tray can be removed from the mouth after the indicated intra-oral setting time which is 2:00 min for Impregum Super Quick Material. To assure staying within the given working times you might find it helpful to use a second timer.

▼ For a single crown I usually do not need longer than 10 seconds to syringe around the prep – how long will the material have to remain in the mouth?

As soon as the tray is seated in the mouth, the wash and tray materials will need the same time to set – only 2 minutes for 3M™ Impregum™ Super Quick Material.

▼ **How does the new Impregum Super Quick Wash Material viscosity correspond to the existing Impregum wash viscosities?**

The new Impregum Super Quick Wash Material shows the same consistency according to the ISO standard measurement. Dentists might recognize a difference to the other Impregum wash materials. Impregum Super Quick Material shows a high thixotropy/structural viscosity, i.e. it flows well when syringing but stays more stable than the existing Impregum wash materials at the preparation afterwards.

▼ **When using the 3M™ Intra-oral Syringe Purple: Why is the mixing quality inhomogeneous? Or why does the impression material not set properly?**

Make sure you are using the correct syringe. Use the purple syringe for Impregum Super Quick Material (2:1) and the green one for VPS (1:1) wash materials. A completely even filling is often not possible. Therefore, discard the first amount of syringed material per the instructions for use.

▼ **When using the Intra-oral Syringe Purple: Why is the extrusion force so high?**

Impregum Super Quick Materials are tested for an acceptable extrusion force. Please make sure that:

- The Intra-oral Syringe Purple is completely activated and the mixing tip is in the 180° straight position
- The material does not set in the mixing tip before or during use

▼ **When using the Intra-oral Syringe Purple: Is it possible to use it with an angled mixing tip?**

No, the mixing tip has to be in a 180° straight position. Otherwise, the extrusion force would be higher and a part of the paste would be emerged at the joint venting valve.

▼ **When using the Intra-oral Syringe Purple: During application I observed leakage at the joint.**

Please be sure that the Intra-oral Syringe Purple is completely activated and the mixing tip is in the 180° straight position. Otherwise a part of the paste may emerge at the joint venting valve.

▼ **Why is the mixing quality inhomogeneous? Or why does the impression material not set properly?**

Dispense a pee-sized amount of material from the 50 ml cartridge before attaching the mixing tip. The first small quantity of paste dispensed from the mixing tip should be discarded until the base and the catalyst pastes result in an even, homogeneous mixture.

▼ **Is it useful to air-blow the wash material onto the teeth and margins to get better detail of the impression?**

3M recommends to carefully syringe wash materials around the prepared teeth as described above. When using the air-blow technique there is a risk of introducing bubbles into the wash material which can cause voids at the impression.

▼ **I observe void formation at the preparation margin. What can I do to avoid that?**

Start spiral syringing around the tooth stump in the sulcus without stopping, and while ensuring that the mixing tip is not removed from the material. If the preparation has been cleaned with hydrogen peroxide, rinse carefully with water.

▼ **How to remove the impression from the patient's mouth?**

Make sure to use trays in an appropriate size (not too small). For an easier removal, block out undercuts before impression taking if information is not needed. Slightly lift the edge of the impression with one finger in order to let air creep under the impression thus overcoming the vacuum. Carefully blow air or water with the air syringe between the impression and the teeth underneath.

▼ **What are the reasons for poor bonding of the wash material to the tray material?**

The main reason is that the working time has been exceeded and the wash material is already setting when the tray is seated. Be sure to use compatible materials and ideally materials from one product line with same setting speed. Do not combine VPS and polyether materials.

▼ **What can be the cause of smeary or greasy impression surfaces in the preparation area?**

Such smear layers are an indication that the impression material has not set properly. One reason can be improper mixing of the material. Please be sure to discard the first amount of material. Another reason is contact with chemicals, e.g. traces of hemostatic solutions or pastes. These residues can inhibit polymerization. Also, thoroughly rinse off any retraction solution with water around the preparation. Such effects are often not seen until casting, where adhesion of plaster to the impression or the adhesion of impression material to the plaster cast can occur.

If topical anaesthetics containing epinephrine are used, let the patient rinse out his mouth well before the impression is taken. If the preparation has been cleaned with hydrogen peroxide, rinse carefully with water.

▼ **How to disinfect 3M™ Impregum™ Super Quick Material?**

All commercial water-based disinfectants indicated for dental impression materials can be used. Glutaraldehyde solutions are recommended for disinfection. Follow the manufacturer's instructions for use, time, and level of disinfection required. After disinfection, rinse impression well with water and blow dry. The impression should be kept dry when sent to the laboratory. Temperatures exceeding 60 °C/140 °F will damage polyether impressions.

▼ Is Impregum Super Quick Material scannable?

Impregum Super Quick Material can be scanned with impression scanners dedicated for impression scanning. Depending on scanner technology used applying scanning sprays or powders might be indicated. With current LED line scanners (e.g. D2000, E3 from 3Shape), impression materials can be digitized without any surface treatment for easy access to CAD/CAM workflow.

▼ How to pour Impregum Super Quick Material?

The cast should be prepared from the impression with commercial gypsum stone no earlier than 30 minutes and no later than 14 days after making the impression. Do not use surfactants (de-bubblizers).

▼ Do I need de-bubblizers when pouring the gypsum model?

Surfactants (de-bubblizers) are not needed or recommended. Type 3 model stone, type 4 or 5 die stone can be used to pour polyether impressions.

▼ What needs to be considered when pouring the impression with resin based materials?

When pouring polyether impressions with epoxy, or any urethane resin based materials, a separator must be used.

▼ The gingival mask shows a smeary surface. What gingival mask material can be used?

Choosing the right gingival mask material in combination with the right separating material is important: Polyether materials from 3M (Impregum, Permadyne) can be used with common separators based on silicone, wax, or petrolatum (vaseline). C-silicones (GI-MASK®, Coltene®) can be used without a separator. Use caution with A-silicones (VPS), they can be used only with a separator that forms a sealed solid waxy layer (Sherasepal-U®, Shera®). Separating materials can be applied with a brush, to insulate areas as necessary.

▼ Is plating of Impregum Super Quick Material possible?

All polyether impressions can be silver-plated, but cannot be copper-plated.

▼ **The removal of the 3M™ Impregum™ Super Quick Material impression from the model is very difficult. What shall I do?**

Heating the impression to about 40 °C/104 °F after the cast has set will help in the removal of the cast. Block out, or minimize undercuts if information is not needed. Isolating or blocking out the palatal area will help in removal of the model on a maxillary impression with a deep vault. When making a custom tray, make sure that you have 2 – 3 mm material thickness per 1 mm undercut. You may section or cut the custom tray if it is “locked-on” the model.

▼ **What are the ideal storage conditions for Impregum Super Quick Material?**

Carefully dry off impression after disinfection. Do not expose to direct sunlight and do not store when moist (e.g. storing an impression not quite dry yet in a plastic bag or together with alginate) since this may damage the impression.

Material properties

▼ **3M states that the taste of Impregum Super Quick Material is improved. Nevertheless, some of my patients complain about unpleasant taste.**

3M conducted a clinical study. In this study, Impregum Super Quick Material showed a more pleasant taste and increased patient comfort compared to existing Impregum Penta Impression Material. The aftertaste was also rated much better. Nevertheless, the taste sensitivity is very subjective and differs widely among individuals. Some patients will still be complaining, particularly patients who do not like the minty taste.

▼ **Why is Impregum Super Quick Material intrinsically hydrophilic?**

Only polyether material is intrinsically hydrophilic through its polar structural backbone (in the class of elastomeric impression materials). All silicone matrices are originally hydrophobic but can be made hydrophilic through tensides/surfactants. Polyether impression materials show initial hydrophilicity whereas hydrophilized VPS materials show hydrophilicity after a certain contact time with liquids like blood or saliva.

▼ **Do Impregum Impression Materials contain additional surfactants?**

The intrinsic hydrophilicity is caused by polyether polymers. Impregum Materials do not contain typical surfactants used in VPS materials.

▼ **What is the Shore hardness of Impregum Super Quick Material?**

Impregum Super Quick Material has a Shore A hardness in the range of 50 to 55.

▼ The following table provides an overview on the mechanical properties of 3M™ Impregum™ Super Quick Materials:

Mechanical properties	3M™ Impregum™ Super Quick Light Body	3M™ Impregum™ Penta™ Super Quick Medium Body	3M™ Impregum™ Penta™ Super Quick Heavy Body
	Polyether Impression Material*	Polyether Impression Material**	Polyether Impression Material***
Consistency A+B [mm] (DIN ISO 4823:2015)	40.5	35.0	33.0
Recovery from deformation [%] (DIN ISO 4823:2015)	99.0	97.6	97.9
Strain in compression (DIN ISO 4823:2015)	2.9	2.8	2.0
Detail reproduction (DIN ISO 4823:2015)	pass	pass	pass
Linear dimensional change [%] (DIN ISO 4823:2015)	-0.38	-0.16	-0.12
Shore hardness after 15 min/24 h (ISO 7619-1)	54/55	50/54	57/60
Tensile strength after 24 h [MPa] (3M Internal SOP)	2.33	1.85	2.16
Toughness after 24 h [J] (3M Internal SOP)	0.70	0.79	1.00
Contact angle initial, on set material [°] (3M Internal SOP)	62	66	45
Working time at 23°C [min:sec] (according to IFU)	0:45	0:45	0:45
Intra-oral setting time [min:sec] (according to IFU)	2:00	2:00	2:00

* Batch No. #VT-PENG-Abf_G-0009

** Batch No. Base #VT-PENG-B-0008, Cat #VT-PENG-K-0007

*** Batch No. Base #4202097, Cat #4230412

▼ Where can I find detailed technical information?

3M offers an elaborated Technical Data Sheet.

