

CAUTION: Rx only - INSTRUCTIONS FOR USE

MACH™

Vinyl Polysiloxane Die Silicone / Dental Impression Materials

PARKELL PRODUCT INFORMATION:
24-HOUR SAFETY HOTLINE: 1-800-535-5053

MACH-2® (Stock No. S433S)
MACH-SLO™ (Stock No. S430S)

STORE MATERIAL AT ROOM TEMPERATURE (18° - 24° C / 64° - 75° F). AVOID EXCESSIVE HEAT, LIGHT OR MOISTURE.

DESCRIPTION AND INDICATIONS

Parkell's MACH™ DIE SILICONE / DENTAL IMPRESSION MATERIAL LINE consists of MACH-2® and MACH-SLO™.

MACH materials are highly flowable (ultra-low viscosity), highly accurate and fast setting. Set material will be hard but slightly flexible. MACH materials are classified as addition-reaction silicones, also known as A-Silicones, polyvinyl siloxanes, PVS, vinyl polysiloxanes or VPS. They are packaged in dual-barrel, split cartridges that utilize the DS-50 (1:1, 2:1) dispensing gun.

MACH materials are ideally suited for making strong, extremely accurate dies and models for fabricating dental restorations such as indirect resin inlays, onlays, and veneers, fiber-reinforced splints, provisional restorations and bleaching trays. Models may also be used to fabricate and repair removable prosthetic and orthodontic appliances.

MACH materials may also be used as the wash impression material inside a high-viscosity tray VPS. The resulting impressions will have exceptional accuracy with excellent tear strength.

IMPORTANT CLINICAL INFORMATION

- **MACH MATERIALS SET VERY QUICKLY, ESPECIALLY AT MOUTH TEMPERATURE.** Clinicians should choose the appropriate MACH based upon the time needed to complete the task, along with enough extra time for any delays.
- We recommend that MACH be used with tray or basing materials with a short setting time of 2 minutes or less. Such products include Parkell's Blu-Mousse® (SuperFast or Classic), Green-Mousse®, Quick Cinch™ Medium ("Cinch 90") or Quick Cinch™ Heavy. This will assure that the tray and wash materials bond well to each other, and complete their set at approximately the same time. Remember to always wait for the slower material to be set before pulling a model or an impression.

PROPERTIES OF MACH™ VINYL POLYSILOXANE MATERIALS

PRODUCT NAME	MACH-2	MACH-SLO
STOCK NUMBER FOR TWO (2) CARTRIDGES 50 ML EACH (100 ML TOTAL)	S433S	S430S
WORKING TIME (AT ROOM TEMP 23°C/73°F)*	30 - 60 Seconds	45 - 75 Seconds
SETTING TIME (AT MOUTH TEMP 37°C/98.6°F)*	4 Minutes	4 Minutes
FINAL DUROMETER (Shore A)	90+	90+
DISPENSING GUN DS-50	S343	S343
MIXING TIP	Yellow S302	Yellow S302
INTRA-ORAL TIP	Yellow S303	Yellow S303

*Working & settings times are dependent on room temperature, age of material and storage conditions.

Each MACH Material Kit contains mixing tips and intra-oral tips for that product. VPS Adhesive (HS446), the DS-50 Mixing Gun (S343), additional mixing tips and intra-oral tips are available separately from Parkell or many dental dealers.

STARTER KIT ALSO AVAILABLE

- MACH-2 Starter Kit (Stock No. S432S)—contains 1 cartridge of Mach-2 (50ml), 2 cartridges Super-Fast Blu-Mousse® (total 100ml), along with mixing tips, precision intra-oral tips and reusable plastic base formers.

STORAGE AND GENERAL USE INSTRUCTIONS FOR MACH™ MATERIALS

- 1) All MACH products should be stored between 18°C (64°F) and 24°C (75°F). Exposure to excess heat will shorten shelf life. For best results, use at normal room temperature. To extend work/set times, the materials may be slightly chilled, which will also reduce flowability.
- 2) Avoid contact between MACH products and all latex or sulfur-containing products, including latex rubber gloves or rubber dams, and hemostatic agents with sulfates (e.g. Aluminum Sulfate, Ferric Sub sulfate). If teeth or gingiva are contaminated with these products, scrub with a 5% hydrogen peroxide solution on gauze, and follow with a copious water rinse before impressing. Chloride hemostatic agents are acceptable substitutes that do not inhibit VPS setting.
- 3) Vinyl polysiloxanes like MACH are not compatible with polysulfides or polyethers.
- 4) Acrylic or methacrylate residues from bonding agents and restorative resins can inhibit the setting of MACH products. Remove the outer uncured layer of such products before impressing. Avoid making temporaries inside final impressions.

For Safety Data
Sheet (SDS) go to
www.parkell.com

- 5) The set materials may be disinfected using glutaraldehyde or most other standard dental surface disinfectant products.
- 6) Allergic reactions may occur in susceptible individuals. Flush affected tissues with copious water and consult a physician.
- 7) All MACH products will work with equivalent products from other manufacturers.

SUGGESTED IMPRESSION TECHNIQUES FOR MACH MATERIALS

- a) Single Step / Dual Body Method (Wet-Wet or Simultaneous), where unset medium body or heavy body VPS is placed over unset MACH that has been syringed over the teeth. The materials set simultaneously.
- b) Double Step / Dual Body Method (Dry-Wet or Tray-Wash Method), where a prefab or custom tray filled with medium body or heavy body VPS is used to make a primary impression on the teeth and allowed to fully set. After the prepping is complete, the initial impression material is relieved, cleaned, dried and a second impression is made in the first one, using the MACH as a wash to accurately reproduce detail.
- c) Laminar Flow Impression Technique, where MACH material is injected into a previously taken, properly vented, closed-mouth, preliminary impression made from a rigid VPS such as Parkell's Blu-Mousse. The resulting impressions are strong and extremely accurate, with excellent reproduction of the patient's bite. For more information on the Laminar Flow Technique, consult our website at www.parkell.com. Click the "Knowledge Base", followed by "Impression and Occlusal Registration", where you will find multiple articles on the topic.

NOTE: The first stage (tray) impression should not be used as a matrix for a bis-acryl temporary, if a second stage (wash) impression is planned. The residual, uncured slick layer from the bis-acryl will interfere with the bond between the tray and wash materials, causing them to separate upon removal.

IMPRESSION PROCEDURE USING MACH MATERIALS AS A WASH

- 1) Using two separate impression guns, load a MACH cartridge onto one, and the appropriate tray viscosity VPS cartridge onto the other. Twist off and discard the sealing caps. Bleed about ¼" of material from the orifices, ensuring that it is visible at both holes. Wipe the ends clean, avoiding cross-contamination.
- 2) Attach a yellow-hubbed mixing tip to the MACH cartridge and lock tight ¼ turn. Affix a yellow intra-oral tip to the end of the mixer. For increased flow, cut off 1-2 mm of the intra-oral tip. Verify that the hole at the end is round and open.
- 3) Attach a pink or teal-colored mixing tip to the tray material cartridge, lock tight ¼ turn, and load the tray.
- 4) Quickly remove the retraction cord, and rinse and dry the tooth.
- 5) Bleed a small amount of MACH thru the intra-oral tip outside of the mouth, and immediately syringe it into the gingival sulcus and over all the desired teeth, keeping the tip immersed in impression material to avoid air entrapment.
- 6) Place loaded impression tray over teeth, and wait for tray material to set. Remove impression with a quick, firm motion.
- 7) Leave mixing tips on cartridges as sealing caps. Disinfect the cartridges and store them horizontally until the next use.
- 8) **Wait one hour after removal from the mouth before pouring the impressions in dental stone. Properly stored impressions may be poured up to 30 days later.**

INSTRUCTIONS FOR USING MACH AS A WASH IN THE LAMINAR IMPRESSION TECHNIQUE

- 1) Take a preliminary impression with Blu-Mousse Classic or SuperFast with a double-arch tray.
- 2) Load a MACH cartridge onto the cartridge gun, and affix a mixing tip and an intra-oral tip. For increased flow, cut off 1-2 mm of the intra-oral tip. Verify that the hole at the end is round and open.
- 3) Drill holes in the buccal of the preliminary impression, mesial and distal to the prepared tooth. They should be large enough to accommodate the cut end of the intra-oral tip.
- 4) Inject MACH in the mesial hole and continue injecting with a steady trigger pressure until the MACH exits the distal hole. Keep expressing until the escaping MACH is clean and free of any blood or debris.
- 5) Allow the MACH to set completely before removal. Test by using a finger nail on the excess that escaped from the vent hole.

INSTRUCTIONS FOR USING MACH FOR DIE/MODEL FABRICATION

- 1) For the intra-oral impression, use either a hydrocolloid impression material, or a high-quality alginate such as Parkell's Triphasix™ (Stock No. S400). Choose the appropriate-sized perforated metal or plastic quadrant impression tray. If a plastic tray is utilized, coat it with Parkell Alginate Tray Adhesive (Stock No. S405) to firmly adhere the alginate to the tray.
- 2) Syringe the alginate into the preparation as you would for a VPS crown and bridge impression. Cover the syringed alginate with the tray completely filled with alginate. Wait the appropriate interval and remove the tray in a firm, quick motion. Inspect for accuracy. If the alginate impression is acceptable, spray it with a surfactant such as DeLar Surfactant.
- 3) If a VPS material is used as the impression material, it **MUST** be thoroughly coated with a separating medium **AFTER IT HAS BEEN REMOVED FROM THE MOUTH**. This will prevent copolymerization with the MACH. Such media include Handler's SPL-88 (use 3-5 coats, allowing it to dry between coats), or Miller-Stephenson Chemical Company's MS122-AD PTFE ("Teflon") Release Agent (spray entire impression lightly). Follow their directions for use.
- 4) Load a MACH cartridge onto an impression gun, remove sealing cap and express 5mm (¼") onto mixing pad to ensure free flow of base and catalyst. Securely attach a yellow base mixing tip to the cartridge, and a yellow intra-oral tip to the mixing tip. For increased flow, cut off 1-2 mm of the intra-oral tip. Verify that the hole at the end is round and open.
- 5) Load a Blu-Mousse SuperFast cartridge onto another impression gun, remove and discard sealing cap and express 5mm (¼") onto mixing pad to ensure free flow of base and catalyst. Securely attach a pink base mixing tip to the cartridge.

- 6) Express MACH into the impression and allow it to flow across the occlusal surfaces. Keep the tip immersed in the MACH so as not to trap air in the material. A vibrator may be used for convenience, but is not essential. Express enough material to fill the crowns of impressed teeth to the desired level.
- 7) Express the Blu-Mousse SuperFast directly over the poured MACH to completely fill the rest of the impression. Express additional Blu-Mousse into a plastic base former and invert this onto the impression so that two Blu-Mousse layers fuse. Allow 2 minutes for complete setting.
- 8) Separate the impression from the poured model. Separation from an alginate or hydrocolloid impression is easy. If VPS material was used, the model may resist removal. To separate them, remove all set VPS impression material that has expressed around the tray border or through tray perforations. Cut the plastic tray with a separating disc and remove it from the impression, and peel the impression from the model.
- 9) **Make sure to fully remove the separating medium from the model using an alcohol gauze before proceeding to the next step.**
- 10) To create a removable die model:
 - a. Leave the model in the plastic base former for now. Create individual dies by carefully cutting through interproximals with a single-edge razor blade. Cut through the model to the top of the base former, without cutting through it.
 - b. Remove the cut model from the base former, grasp the model firmly, and snap apart the remaining uncut portion. This will form a rough edge that will assure accurate re-assembly of the model in the base former. This is important for proper interproximal and occlusal contact, and for proper contour of the restoration.
 - c. Trim dies if desired with a scalpel, and use any preferred restorative material to fashion a restoration. If desired, a light-cured restoration may be post-cured along with the MACH/Blu-Mousse SuperFast working model in a thermostatically-controlled oven (e.g., toaster oven). Post-curing enhances the physical properties of composites and may be accomplished by placing the restoration into an oven and raising the temperature to about 120°C (250°F) and holding there for 10 minutes.
DO NOT PLACE PLASTIC BASE FORMERS INTO THE OVEN—THEY WILL MELT!
 - d. Final occlusal adjustments and polish of the composite restoration(s) should be accomplished intra-orally AFTER it has been cemented with an appropriate shade composite luting resin.

WARRANTY AND TERMS OF USE:

Parkell will replace defective material. This warranty is in lieu of all warranties of merchantability, fitness for purpose or other warranties, express or implied. Parkell does not accept liability for any loss or damage, direct, consequential or otherwise, arising out of the use of or the inability to use the product herein described. Before using, the user shall determine the suitability of the product for its intended use and the user assumes all risk and liability whatsoever in connection herewith. For full Warranty and Terms of Use information, please see www.parkell.com.

Safety Data Sheets (SDS) are available at www.parkell.com.

Parkell's Quality System is certified to ISO 13485.



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