

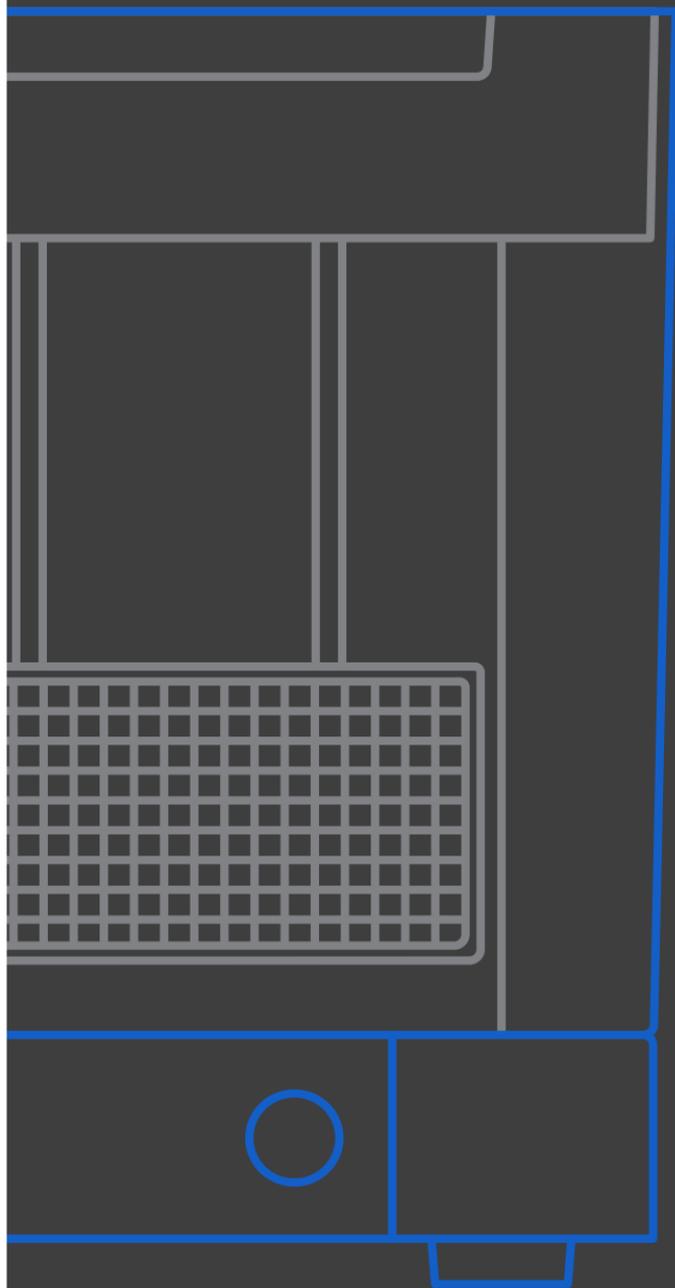
PRINT



WASH



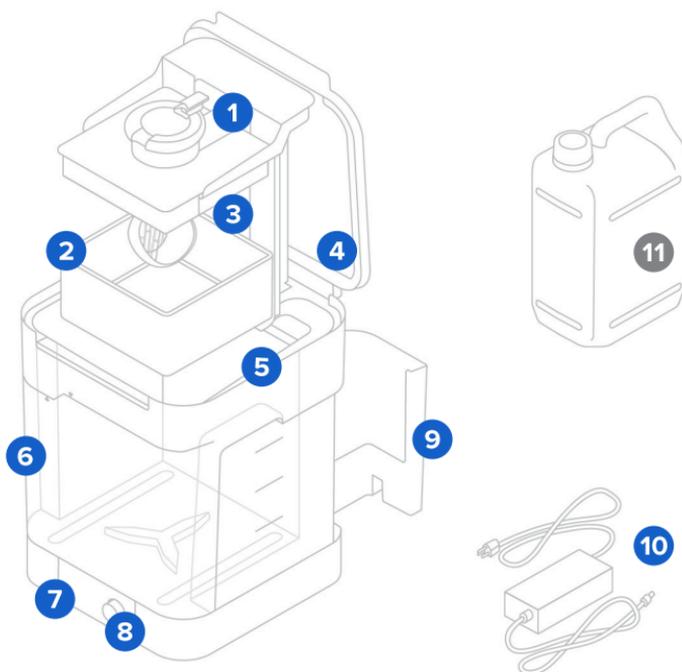
CURE



Form Wash

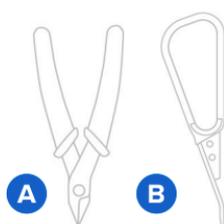
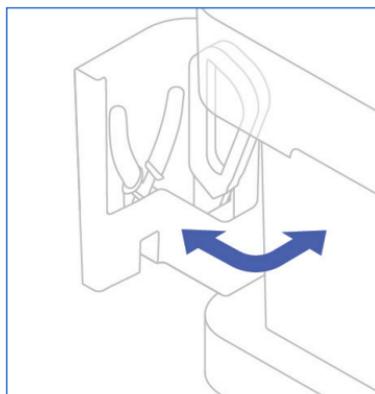
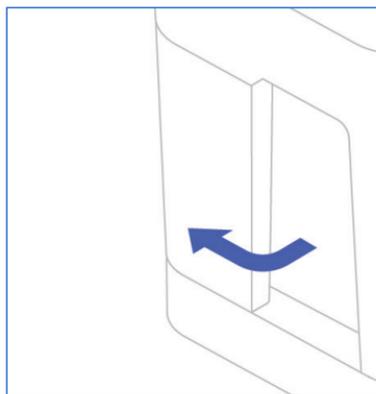
FORM WASH SYSTEM OVERVIEW

Form Wash automatically cleans uncured liquid resin from 3D printed parts' surfaces.

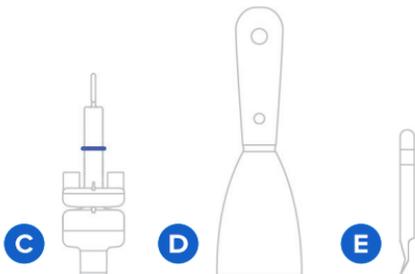


- 1 Basket Mount.** A single hook secures the basket to raise and lower.
- 2 Basket.** Holds parts to wash without the build platform.
- 3 Platform Mount.** Holds the build platform when washing parts.
- 4 Outer Lid.** Limits IPA evaporation. Keep the lid closed when not in use.
- 5 Inner Lid.** A hinged, secondary lid opens and closes to contain IPA while allowing parts to be lowered or raised from the bucket.
- 6 Wash Bucket.** The removable container holds a maximum of 8.6 L of IPA. A rotating impeller at the bottom circulates IPA.
- 7 Display.** Shows status, time, and options for configuring Form Wash.
- 8 Knob.** Turn or push to adjust time and to start, pause, or end a wash cycle.
- 9 Tool Storage.** Each side has designated locations for storing each tool.
- 10 Power Supply.** Provides power to Form Wash. *Specifications: 24 V, 2 A*
- 11 Isopropyl Alcohol (IPA).** Not included. Dissolves liquid resin from printed parts' surfaces. Start with 10 L. Concentration must be 90% or higher.

TOOLS & STORAGE



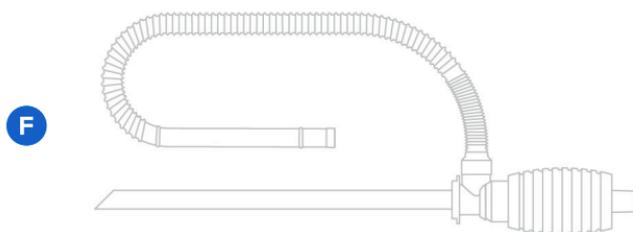
LEFT STORAGE



RIGHT STORAGE

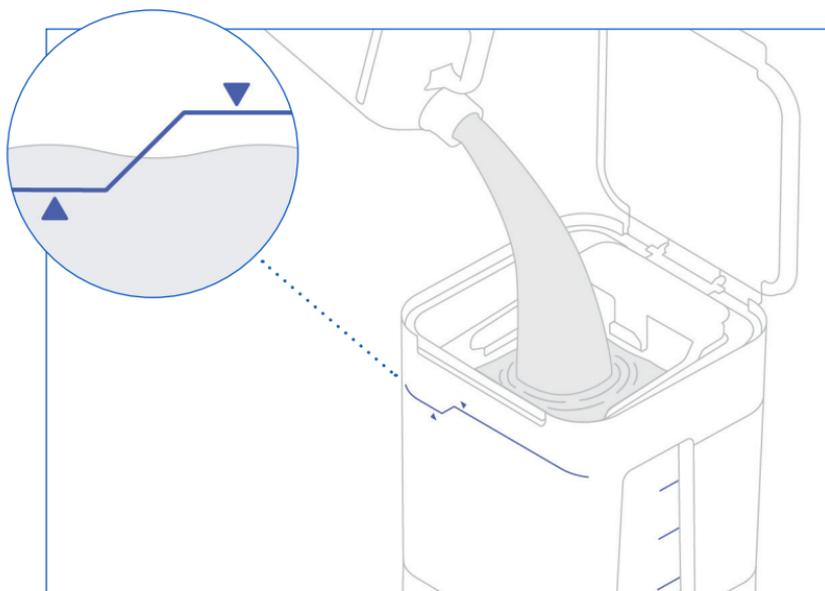
- A Flush Cutters.** Use to carefully remove support tips from printed parts.
- B Removal Tool.** Apply pressure under the base generated by PreForm to release the base of your parts from the build platform.
- C Hydrometer.** Float in IPA to measure the IPA's resin concentration, based on previous calibration in fresh IPA. See page 5.
- D Scraper.** Can be used to remove parts from the build platform, as well as to carefully clean and inspect the resin tank for cured material.
- E Tweezers.** Use to handle small parts or to manipulate supports after printing.

- F Siphon Pump.** Transfer IPA between the wash bucket and an IPA storage container. See page 9.



FORM WASH SET-UP

1. Fill Wash Bucket with IPA

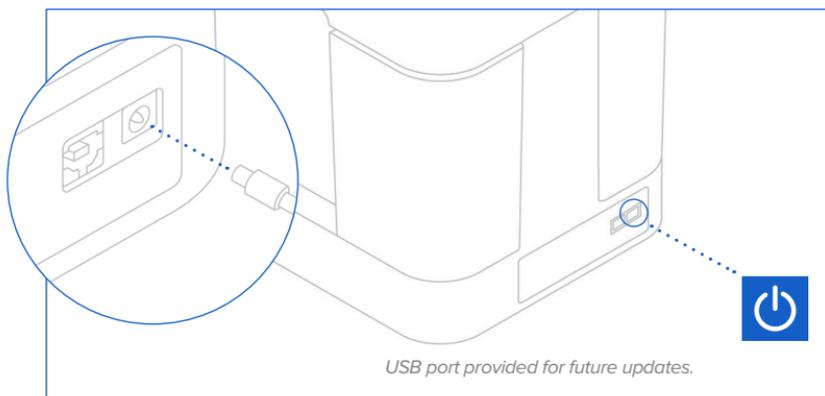


Isopropyl alcohol (IPA) is a solvent used to remove uncured resin from SLA 3D prints. Open the outer lid. Pour or siphon to fill the wash bucket with IPA to reach a level between the minimum (7.8 L) and maximum (8.6 L) fill lines. For more information about using a siphon, see *Changing the IPA* on page 9.

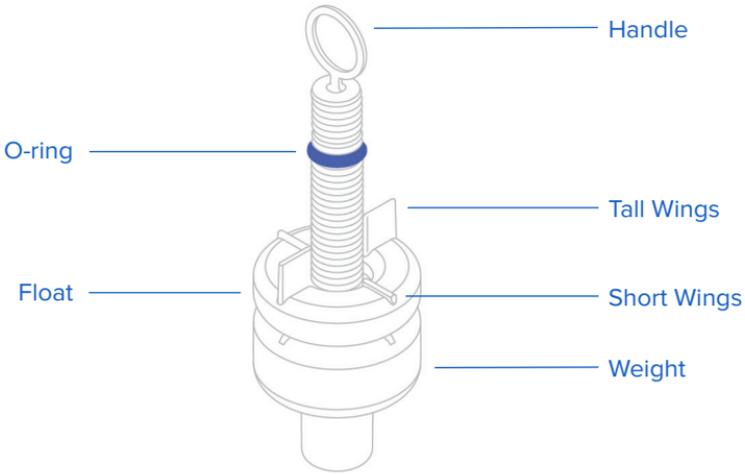
NOTE For more information on buying, handling, safe storage, and disposal of IPA see: formlabs.com/ipa

2. Connect Power Supply

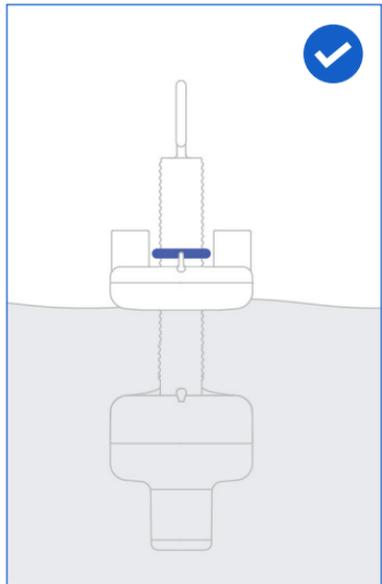
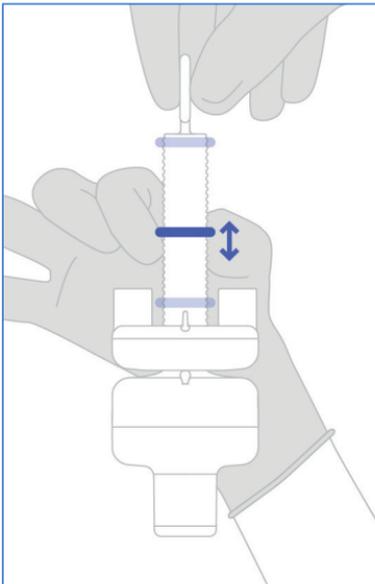
Connect the power cable to Form Wash and a power source.



3. Calibrate the Hydrometer



To calibrate the hydrometer, hold the handle and release the tool in the wash bucket's fresh IPA. Slide the O-ring along the ribbed stem until the O-ring aligns with the short wings at the top of the float. Leave the O-ring in this position. The alignment of the wings and O-ring will be used to check the resin concentration of IPA between washes. Store the hydrometer in the tool storage.



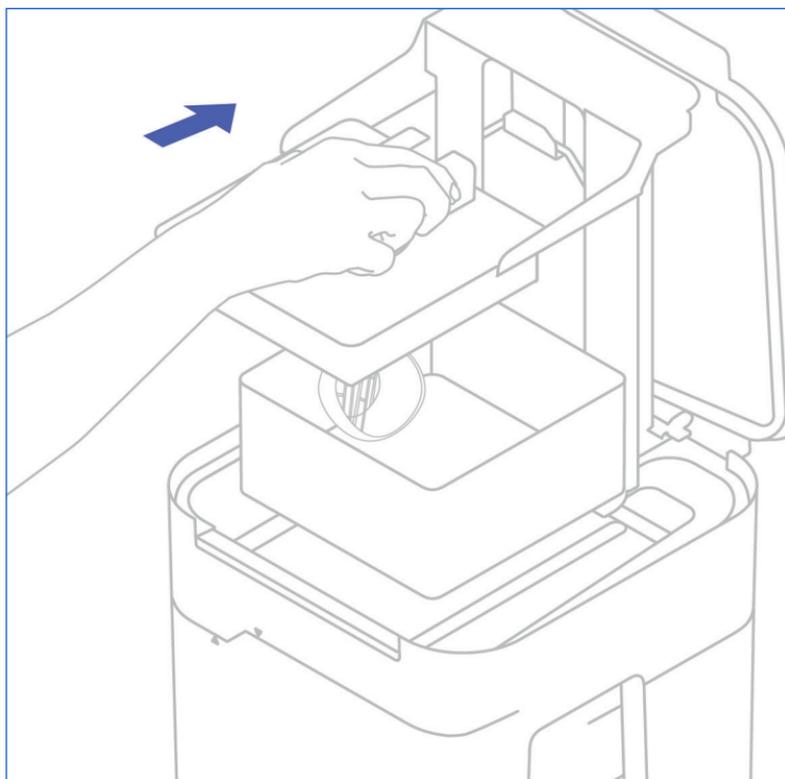
TIP The hydrometer is designed to work with 90% IPA or higher and will not work with IPA less than 90% nor any alternative solvent. After calibrating in fresh IPA, the hydrometer will only be effective for measuring IPA of the same concentration. The hydrometer can also be calibrated in a smaller container of fresh IPA.

USING FORM WASH

1. Insert Print

Use the display and knob to raise the platform and basket mounts. For convenience, install the build platform directly in Form Wash to clean parts before removal. Align the top lip of the build platform with the arms of Form Wash's platform mount, and fully insert to touch the back.

TIP For a complete wash, ensure that IPA is filled between the minimum and maximum fill lines.



ALTERNATIVE WASH METHOD Parts can also be washed in the basket, either as an alternative or in addition to the platform mount. Place parts directly in the basket after removing them from the build platform using the removal tool, scraper, or flush cutters. The basket comes installed in Form Wash. Without a build platform installed, the basket can be removed by lifting vertically from the basket mount.

NOTE Parts must be washed on the build platform and/or in the basket. Washing loose parts directly in the wash bucket will damage printed parts, create noise, and may interfere with the agitation of IPA.



CAUTION: Wear gloves when handling parts and surfaces with IPA or uncured resin.

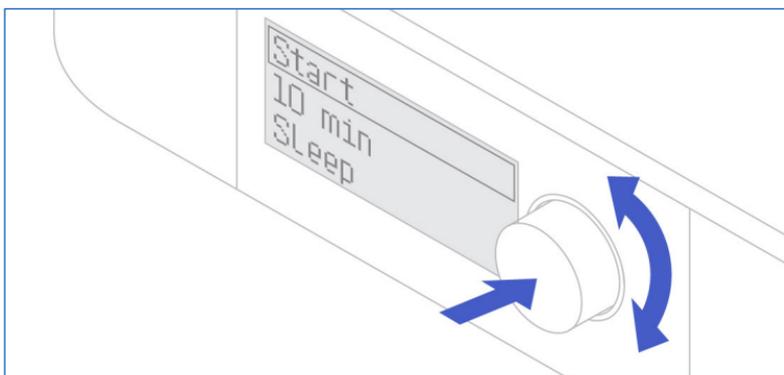
2. Set Wash Time

Wash parts for 10 minutes in fresh IPA.

Turn the knob to navigate the display menu and adjust the wash time. Push the knob to select or confirm. Wash parts for 10 minutes. Wash for additional time when using partially resin-concentrated IPA.

Check for recommended wash times at formlabs.com/wash-support.

The wash cycle begins when the platform and basket lower. Ensure the outer lid closes. To adjust the wash cycle time, push the knob to access the display menu. The pause option will raise the platform and basket.



3. Drain and Dry Prints

The platform mount and basket raise automatically at the end of the wash cycle. Any IPA that drips onto the inner lid as parts dry will drain into the wash bucket. Thoroughly drain IPA from printed parts; carefully check and drain concave or hollow geometries that may hold IPA. Allow parts to dry for at least 30 minutes after washing and draining.

4. Collect Prints

Remove the build platform or parts from the basket, depending on the wash method used in step 1.

5. Part Finishing

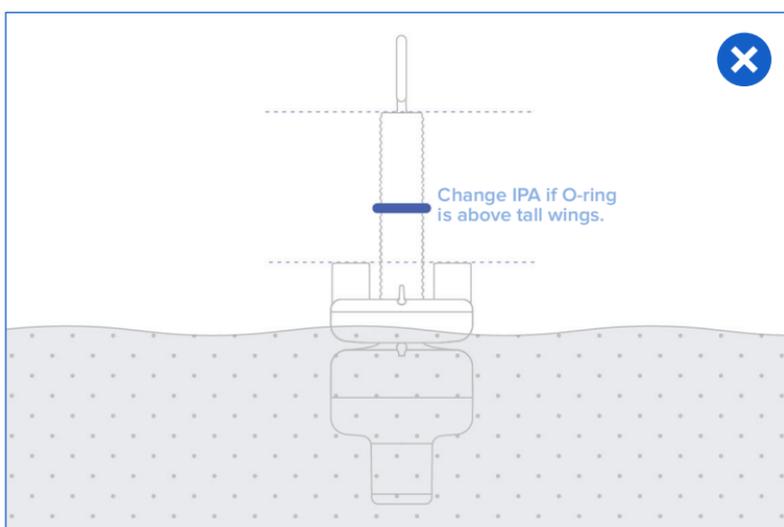
After washing parts on the build platform, use the removal tool, scraper, or flush cutters to remove parts. Learn more about part removal and preparing prints for use in Form Cure at: formlabs.com/cure-support

MAINTENANCE

As more parts are cleaned, the IPA gradually becomes more concentrated with liquid resin, reducing the effectiveness of Form Wash. As IPA evaporates, add fresh IPA to keep the fill level between the minimum and maximum lines. Use the hydrometer to check the IPA resin concentration between cleaning cycles, and replace IPA as needed for the cleanest parts.

Checking IPA Resin Concentration

To check whether the IPA is suitable for cleaning parts, lower the mount, open the outer lid, and float the previously calibrated hydrometer in the wash bucket. Note the alignment of the O-ring relative to the float's wings.



As the IPA resin concentration increases, the weight will float higher, and the stem and O-ring will rise. For a smooth, dry surface finish, replace IPA when the O-ring rises above the float's tall wings.

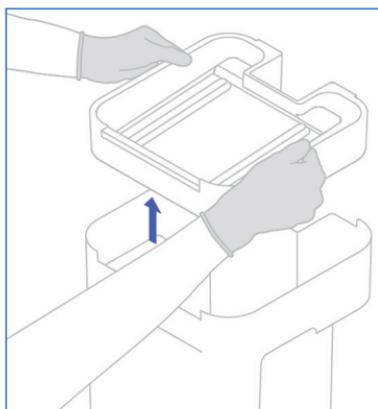
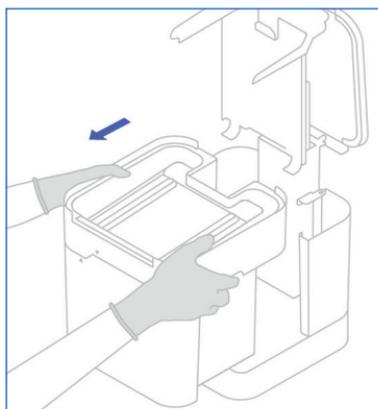


CAUTION: Wear gloves when handling parts and surfaces with IPA or uncured resin.

Changing the IPA

1. REMOVE THE WASH BUCKET AND INNER LID

Start with the outer lid open, the platform mount raised, and the basket removed. Lift the wash bucket forward and upward to remove it from the base. Set the wash bucket on a clean, stable surface, then lift to remove the inner lid.



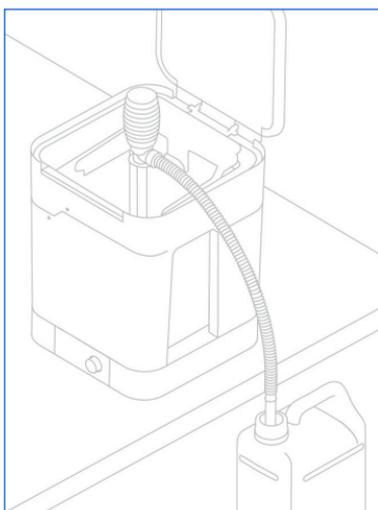
TIP Use separate wash baskets and wash buckets to preserve part color and quality. Maintain separate equipment to meet biocompatibility requirements.

2. USE THE SIPHON PUMP

With the wash bucket elevated, insert the rigid tube into the saturated IPA and the flexible tube into the used IPA storage vessel. Squeeze the siphon pump's handle several times. Hold and gradually release the pump when IPA begins moving through the pump.

3. CLEAN THE WASH BUCKET

Optional – For the cleanest wash, rinse the wash bucket with IPA and wipe with a paper towel.



4. REFILL WITH FRESH IPA

Use the siphon pump or pour from a container of fresh IPA to refill the wash bucket between the minimum and maximum fill lines.

5. INSTALL THE INNER LID

Align the front edge of the inner lid with the wash bucket's edge, then lower the lid directly onto the top of the bucket.

ADDITIONAL RESOURCES

Safety

For complete information, see the included **Safety Guide** and formlabs.com/ipa. Wash parts in a well-ventilated area, away from possible sources of ignition. Refer to the isopropyl alcohol (IPA) supplier for instructions on safe handling and disposal, and always wear gloves when handling IPA.

Basic Care

REAR TOOL STORAGE

Clean the hand-held tools with fresh IPA, then store them in the rear storage on Form Wash's right and left sides.

MAINTENANCE

Use the hydrometer to periodically check the resin concentration of the IPA. For best surface finish, use fresh IPA to wash printed parts.

PRESERVE QUALITY

Use separate wash baskets and wash buckets to preserve part color and quality. Use separate equipment for biocompatible materials.

Additional Supplies

Isopropyl alcohol (IPA), 90% or higher

Powder-free disposable gloves

Paper towels

More Information

Video tutorials and more instructions: support.formlabs.com

Washing recommendations: formlabs.com/wash-support

Keep this manual for future reference.

VISIT FORMLABS.COM FOR



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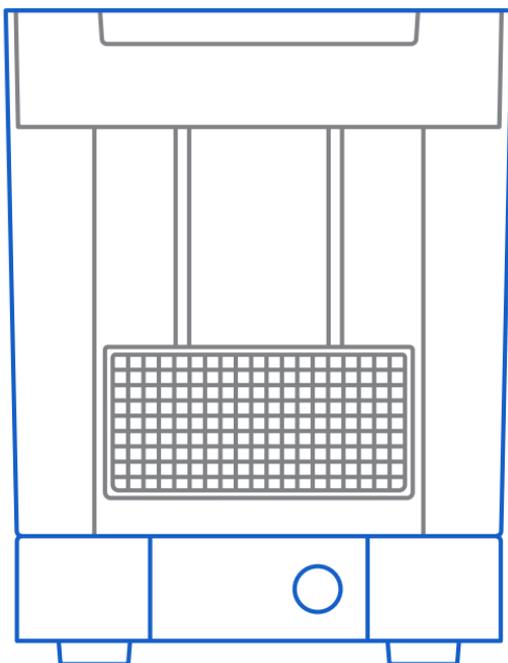


Discussion Forums



Help Articles

This guide is available in other languages on support.formlabs.com.



Form Wash

A Complete System For Cleaner, Stronger Parts

Form Cure

