



Usage Guidelines

Introduction:

3DWASH cleaning agent has been specially optimized for the removal of alkali-soluble support material in technical cleaning systems. During development, emphasis was placed on occupational safety. This has been achieved by a special chemical composition that allows optimum results at low pH values: no heavy personal protective equipment is required in the handling of the cleaning agent, and disposal of the used solution requires only dilution with water to meet generally accepted, worldwide disposal standards*.

Several factors impact support removal effectiveness and time:

- Agitation/Circulation (varies by tank type and manufacturer)
- Temperature
- Part Geometry and Amount of Support Material
- pH Level.
- Chemical composition of the solvent

Results will vary based on the above factors. Below are recommended guidelines for using 3DWASH.

Suitable support materials:

3DWASH is good to use with all common support materials such as S2 from Polymaker, Stratasys SR-30, SR-35 etc., Arburg armat21. Note: 3DWASH is not suitable for HIPS or water-soluble support materials (PVA, BVOH etc.) and cannot be used with support materials of other printing processes such as SLA or Polyjet technology!

Cleaning Temperatures:

Water temperatures between 75°C and 85°C (167° F / 185°F) are most effective for dissolving support materials. The dissolution with temperatures below 65 °C (149°F), however, is almost ineffective, as the chemistry does not work!

Direction for use:

We recommend removing, bigger support structures by hand before using the automatic process. Important is a good circulation of the solution in the device. Make sure that the 3D printing parts are completely in the solution and do not float on top. An additional ultrasonic function of the cleaning device - if available - is advantageous.

The following amount of 3DWASH should be used: 180g per 7.5 liters (two gallons) of water. 3DWASH sachets are each filled 180g and are suitable for small cleaning systems. The 2.88kg 3DWASH buckets include a 180g dosing shovel. As a rule, we will send you a small dosing table. With the above ratio of 3DWASH and water, the pH of the solution will be about 10.8. Note: 3DWASH is buffered, so the PH value rel. remains stable and a moderate overdose is not critical. At the same time, the buffering system prevents a lowering of the pH. From an ecological point of view, however, an overdose should be avoided.

# 180g scoops	# buckets	g	gallons	liters
1		180	2	7,5
2		360	4	15
16	1	2.880	32	120

Note: Add water first. Do not add the powder directly into empty basin.

Solution Life:

How often you change the solution is dependent on the tank you use, how you maintain it, and the complexity of your parts. As support materials are dissolved over time, the pH level will decrease and dissolve times will increase. For optimal effectiveness, the solution should be changed after support material of double weight of 3DWASH has been dissolved (e.g. 400g S2 / 200g 3DWASH)

Solution Disposal*:

Please dilute used solution with an equal amount of fresh water. For example, when disposing of 7.5 liters (2 gallons) of used solution, dilute with 7.5 liters (2 gallons) of fresh water. Check with your local provider and/or international regulatory the complete compliance for disposal regulations and what pH level is acceptable; you may need to document how you dispose of the used solution; pay attention to correct dosage and these usage guidelines.

* In order to obtain information on the components of the dissolved plastics (in this case, lye-soluble support materials), please contact the respective manufacturer and / or supplier who can provide you with relevant data (waste profile datasheets). All mentioned brands of supporting materials and the wording "FDM" are the trademarks and property of Stratasys.