

Operating instructions for the use of VXL solve

1. General information

VXL solve was developed specifically to dissolve the **Xioneer VXL 70, VXL 90, VXL 111** and **VXL 130** support materials in water. The detergent, dissolved in water, produces a mild alkaline which usually, together with the dissolved support material, can (in limited quantities) be disposed of via the wastewater. Please check your local regulations.

The temperature and the recirculation of the solvent bath have a great impact on the dissolving speed. A stirred and heated bath is always required. The quantity, design and position of the support material will also have an influence on the dissolving speed. Dissolving from cavities will take more time than dissolving parts that are easily accessible.

Please find below operating instructions for the correct handling and use of **VXL solve**.

2. Operating instructions

Despite its low corrosiveness, please follow the safety data sheet for the correct and safe use of **VXL solve**. Please always wear appropriate protective gloves, eye protection, and respiratory protection when using **VXL solve**.

When dissolving the support material, please pay attention to the softening point of the model material. To avoid deformation, it is important to keep the dissolving temperature 20 – 30 °C below the softening temperature (= glass transition temperature Tg). Temperatures above can lead to deformations within the model due to residual stresses from the print job. If you do not know the Tg of your filament, please contact your filament manufacturer for information or test the material in advance.

The support materials **Xioneer VXL 70, VXL 90, VXL 111** and **VXL 130** show very good adhesion to model materials such as PEEK, PA, PC, TPU, ASA, ABS, or PET(G). This is required to prevent delamination from the model material. You can use appropriate tools to remove parts of the support structure to reduce the time needed for dissolution. ***Wear protective gloves*** to avoid cuts and ***use tightly closing eye protection***. Do not remove any support material mechanically from delicate structures to avoid damage to the model. Therefore, always finish with a solvent bath for the purpose of completely removing the supports.

How to proceed:

- Start using tap water to fill your dissolving device. Never put any powder in an empty tank.
- Use 4 l of tap water to dissolve 100 g of **VXL solve** (2,5 %).
- When using our starter kit **VXL GO**, add the entire contents of the sachet (180 g) into the container filled with water (10 L). The slightly lower concentration (1.8%) will not affect the dissolution time.
- Heat the bath to the necessary temperature and start the recirculation process.
- You can add your models as soon as the bath has reached the correct temperature and **VXL solve** has been dissolved in water.
- The dissolving process usually takes between 0.5 and 9 hours, depending on the amount of **VXL supportmaterial** being dissolved and the geometry of the model. Check the dissolving process periodically. You will soon get a feeling for how much time is needed to dissolve which geometrics.
- 100 g of **VXL solve** can dissolve at least 100 g of support material. The more support material is dissolved, the slower the process of dissolution will be. Substitute a new solution for the old one.
- Please remove the model from the bath after the support material is fully dissolved. **IMPORTANT:** Afterwards, please rinse the model thoroughly under warm, running water to remove the remaining detergent and let dry completely. Depending on the geometrics you should rotate the model every few minutes to make sure the detergent can drain off.
- If white residues appear on the surface, please put the model into a warm (30 – 50 °C) water bath for at least one hour. To speed up the process you can add rinsing agent for dish washers.
- Before disposing the solution, it must be neutralized. For this, we recommend 5 – 10 g citric acid per litre of used up solution. When foam formation occurs, the solution has reached a neutral pH area.
- Please comply with local wastewater regulations to dispose of the solution including the dissolved support material. You can acquire our waste profile datasheet by contacting wecanhelp@xioneer.com

Storage:

Store **VXL solve** in a tightly closed container to avoid agglutination and ensure proper functioning.

3. Safety data sheet

Be sure to completely read and understand the Safety Data Sheet!

The data below only reflect an excerpt:

Hazard pictograms:



Signal word:

Warning

Hazard statements:

H315: Causes skin irritation.

H319: Causes serious eye irritation.

H335: May cause respiratory irritation.

Precautionary statements:

P261: Avoid breathing dust/fumes/gas/mist/vapours/spray.

P280: Wear protective gloves/eye protection/face protection.

P304+P340+P312: IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.

P337+P313: If eye irritation persists get medical advice/attention.

P403+P233: Store in a well ventilated place. Keep container tightly closed.

P501: Dispose of contents/container to an approved waste disposal plant.

Hazardous components, which must be listed in the label: POTASSIUM CARBONATE

4. Contact details:

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