

VXL® EX

1. GENERAL INFORMATION

VXL® EX was developed specifically to dissolve the ESM-10 support material 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 waste water. 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® EX.

2. OPERATING INSTRUCTIONS

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

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. Temperatures above can lead to deformations within the model due to residual stresses from the print job.

The support material ESM-10 shows very good adhesion to model materials such as PEEK, PEKK, PC, ASA or ABS. 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 structure 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® EX (2,5 %). • 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® EX has been dissolved in water.
- The dissolving process usually takes between 0.5 and 9 hours, depending on the amount of support material being dissolved and the geometry of the model. Check the dissolving process periodically. You will soon get a feel for how much time is needed to dissolve which geometrics.
- Please remove the model from the bath after the support material is fully dissolved. IMPORTANT: Please let the model dry for at least 15 minutes. Depending on the geometrics you should rotate the model every few minutes to make sure the detergent can drain off.
- Afterwards, please rinse the model thoroughly under warm, running water to remove the remaining detergent and let dry completely.
- 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.
- 1 kg of VXL® EX can dissolve at least 1 kg 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.
- 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 support@3dgence.com.

Storage: Store VXL® EX in a tightly closed container to avoid agglutination and ensure proper functioning.