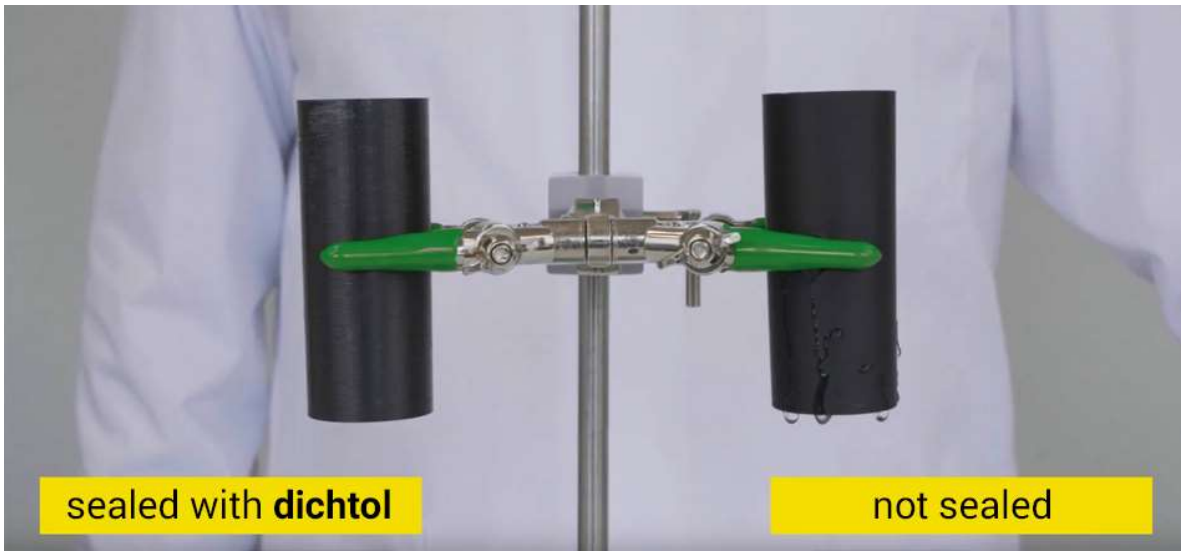
Pore-deep impregnation - a new solution for 3D printed components

dichtol AM Hydro is the new universal solution in 3D printing for efficiently sealing components against gas and liquids. The low-viscosity high-performance polymer ensures fast and reliable pore-deep sealing and impregnation of the parts. dichtol AM Hydro is adaptable to the working conditions of additive manufacturing and closes pores up to 0.2 mm in diameter reliably. As a result, porous surfaces can be impregnated, sealed and finished in a single operation.



dichtol AM Hydro will penetrate deep into additively manufactured components, where it cures. Its high-performance, hard-elastic polymer delivers permanent, gap-free sealing and impregnation, preventing liquids or gases from leaking out of cylinders, vases, and other 3D printed objects.

dichtol AM Hydro specially designed for additive production using standard 3D printing. DIAMANT Polymer GmbH is the developer of this high-performance polymer, ideal for filament printing and powder-based manufacturing methods. The solvent-free, water-based 1-component system enables long-lasting, gap-free sealing and impregnation of parts and components made of popular materials - especially PLA, ASA, ABS, and polyamide.

Unlike conventional sealers for 3D printed components, dichtol AM Hydro penetrates all pores, no matter how fine, and hardens there. This seals the treated surface and provides it with deep impregnation. Once cured, the hard-elastic polymer anchors itself in the coated part and provides a reliable seal, regardless of changing temperatures. Beyond surface refinement, the polymer system enhances the basic properties of additively manufactured parts, including sensitivity to contamination and geometrical stability.

It is just as easy to brush, inject or dip the dichtol AM Hydro polymer system, reliably sealing pores up to 0.2 millimeters in diameter.

With the solvent-free, transparent dichtol AM Hydro, impregnating 3D printed products can be done quickly. Create a gas- and liquid-tight seal even in hard-to-reach areas by submerging printed 3D objects in the low-viscosity, high-performance polymer. The application is manual, with no additional machinery or equipment, making it highly adaptable. dichtol AM Hydro is colorless after curing and offers protection for your component. Since the pores are closed, there is no chance for the accumulation of contaminants on the component, and the pigmented parts have great brilliance thanks to the treatment with dichtol AM Hydro.

How to infiltrate, impregnate and seal with dichtol AM Hydro is demonstrated on a 3D printed cylinder.
https://youtu.be/NwhMepSWBjw

An overview of the advantages of dichtol AM Hydro:

- Gas- and liquid-tight components
- Efficient material use
- Excellent pore sealing
- High chemical resistance (e.g., oil)
- Easy to clean surface (using common household agents)
- Easy application, no machinery or equipment required
- Can be used indoors and outdoors
- Well-suited for PLA, ASA, ABS, and polyamide materials
- Well-suited for filament printing processes and SLS
- VOC-free, non-hazardous, and non-flammable
- Solvent-free, water-based sealer

DIAMANT Polymer GmbH specializes in polymer systems that protect, improve and increase the durability of 3D printed objects. The family-owned company's products and services contribute to cutting costs and retaining value. Every product offered by DIAMANT Polymer GmbH is "Made in Germany," including formulation, development, and production of the products.