

dichtol AM Hydro #2589

Product description

dichtol AM Hydro is a ready-to-use polymer system for sealing additively manufactured components. The water-based sealer is not a hazardous substance and is therefore particularly user-friendly. The sealer can be used to seal additively manufactured components against various liquids and gases and protect them from environmental influences. The sealer can be used for all common printing processes and printing materials.

Characteristics

- Ready to use, no mixing required
- Free of VOC (organic solvents)
- Very good infiltration behaviour
- Colourless after curing
- Good chemical resistance
- Good organic solvent resistance
- Good recoatability

Typical applications

- Sealing of additively manufactured components to seal against various media (liquids and gas-es)
- Increasing the mechanical strength
- Protection of surfaces against soiling and the influence of media
- Increasing the product service life



Available in the following versions

ARTICLE	PRODUCT	DESCRIPTION
#2589	dichtol AM Hydro	250 ml, 1 litre, 25 litre, special sizes on request

Product data condition of delivery

PROPERTIES	VALUE
Colour	Milky white
Density	1,05 g/cm ³
Viscosity	3 – 6 mPas
Curing time at 20°C, surface dry	60 min
Curing time at 20°C, fully cured	24h
Application temperature	Up to 40 °C
Yield	1L for 20 m ²

Product data fully cured product

PROPERTIES	VALUE
Colour	Colourless
Temperature resistance permanently	130 °C
Dry film thickness	7 µm
Suitable pore size	0 – 0,2 mm

Storage / shelf life

Store in the original, unopened container in a dry, cool and frost-free place (+5°C to +30°C).

Shelf life 2 years.

Close the opened container as airtight as possible after use.

Preparation

The component to be sealed must be completely free of dirt, foreign bodies (e.g. residual powder), grease and other adhesions. We recommend the use of DIAMANT Cleaner #1417 for this purpose, provided the printing material has sufficient chemical resistance.

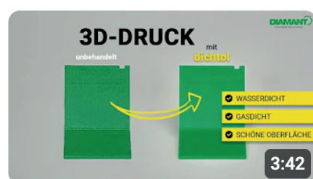
Application

The product is a 1-component system. Please consider the processing temperatures specified in the technical data. Application on surfaces that are too warm can have a negative effect on the penetration behaviour of the sealer, as can application at temperatures that are too low.

The application options are briefly explained below. You can find a more detailed explanation in this video:

Waterproof 3D prints

[Wasserdichte 3D-Drucke: So gelingen schöne Oberflächen mit dichtol | DIAMANT Polymer GmbH \(youtube.com\)](https://www.youtube.com/watch?v=...)



WATCH VIDEO

The choice of a suitable application method depends on the size and accessibility of the component surfaces to be sealed.

Dipping

This method is particularly suitable for small and complex components that need to be evenly sealed. Pour the sealer into a sufficiently sized container and place the components to be sealed inside. After a sealing time of approx. 5 minutes, remove the components and place them on a suitable surface to drain and dry.

Brushing on

This method is particularly suitable for components that are not to be sealed in all areas and for larger surfaces. Apply the sealer to the surface to be sealed using a suitable brush. Ensure that the sealer is left to work for at least 5 minutes. During this time, the surface must be kept constantly moist, so apply several coats if necessary.

Spraying

This method is particularly suitable for components with very large surfaces that need to be evenly sealed. Use the ready-to-use spray bottle or a suitable paint spray gun and spray the sealer onto the surface to be sealed. To ensure a sufficient contact time of at least 5 minutes, keep the surface moist by spraying several times.

Injecting

This method is particularly suitable as a supplement to brushing or spraying to seal hard-to-reach areas, drill holes, fine channels, etc. Draw up the sealer in a syringe and fill the cavity to be sealed with it. After a sealing time of at least 5 minutes, pour off the excess sealer.

Curing

The sealer physically hardens in a few hours (approx. 1 hour per mm of wall thickness). The sealer is dry on the surface after just a few minutes so that the components can be moved again quickly. Curing at an elevated temperature in an oven is not necessary, but can significantly shorten the curing time.

Special Information

Additive manufactured components vary greatly in terms of pore size and frequency depending on the material and printing process used, as well as other parameters. The specified dipping and exposure times are therefore only a guide. Extending the dipping or exposure time improves the infiltration of the sealer into the component and thus the sealing effect. If the components are not yet sufficiently sealed, we recommend a longer dipping or reaction time or, if necessary, a second application process.

Disposal

Waste and containers must be disposed of in a safe manner. Disposal according to Directive 2008/98/EC on waste and hazardous waste. Proposal list of waste keys/waste names according to ECAC 080 111* Waste paints and varnishes containing organic solvents or other hazardous substances *Hazardous waste according to Directive 2008/98/EC (Waste Framework Directive). Non-contaminated and empty packaging can be recycled. Containers that are not emptied properly are hazardous waste.

Safety Data Sheet

Please read the relevant safety data sheet before processing the product. Safety data sheets are available on a daily basis on request via info@diamant-polymer.de or by telephone on +49-2166-98360.

DIAMANT guarantees the product properties as long as they are stored and used in accordance with the specifications listed here. DIAMANT accepts no responsibility for the processing of the material. Our technicians will be happy to answer any further questions you may have.

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the industrial hygiene and legal regulations must be observed. For further information, please refer to the relevant safety data sheets. This edition replaces all previous versions.

The technical data listed here was determined under laboratory conditions and verified by quality assurance processes on the day of product manufacture. We reserve the right to make changes without prior notice. The customer is responsible for verifying the up-to-dateness of the data and should contact DIAMANT before ordering the material. Application, use and processing are beyond our control and are therefore the sole responsibility of the purchaser. Should liability nevertheless arise, this is limited to the value of the goods supplied by us and used by you. We guarantee the flawless quality of our products in accordance with our general terms and conditions of sale and delivery. All technical data vary depending on the loads and conditions of use. We will provide specific application data on request in each individual case.