

## DWH Filler Heavy #2597

### Product description

DWH Filler Heavy is a low-viscosity, magnetic 2-component filler based on epoxy resin. It is used for form-fit and force-fit filling and for optimising the properties in terms of density and mechanical load-bearing capacity of 3D printed components. Using casting, injection and moulding processes, even complex shapes and structures can be produced with an accuracy in the  $\mu\text{m}$  range.

Components filled with DWH Filler Heavy are significantly more resilient than fully printed 3D plastic components. It also offers the possibility of achieving higher weights in fully printed 3D plastic parts with low volumes.

DWH Filler Heavy can be removed with a micro-thin layer of DIAMANT release agent on the mating surface. The result is an exact copy of the moulded surface. High-precision surface preparation and mechanical finishing of the surfaces is not required. In modern production technology, process times and costs can be reduced significantly.



### Properties

- Magnetic
- Good recoatability
- Solvent-free system
- Easy application
- Very good penetration behaviour
- Self-levelling
- Good thermal and electrical insulating properties
- Mechanically workable
- High density

### Typical applications

- Filler and composite material in the 3D printing sector
- Optimising density and weight- Increasing stability, static optimisation
- Saving printing time and printing material
- Increasing mechanical strength
- Optimising tensile strength

### Available in the following versions

ARTICLE	PRODUCT	DESCRIPTION
#2597	DWH Filler Heavy	Heavy, magnetic potting compound
#2598	DWH Filler Light	Lightweight potting compound
Packaging sizes 500 ml, 1 litre		

Individual component parameters			
Component	2598A	2598B	Method
Mixing ratio [%]	93,5	6,5	calculated
Density [g/cm <sup>3</sup> ]	4,02	0,989	DIN EN ISO 1183
Viscosity [mPas]	165000	75	DIN 53019
Amine value [mg KOH/g]	-	375	DIN EN 1877-2
Epoxy value [Mol/100 g]	0,09	-	DIN EN 1877-1
Mixing parameters A and B component			
Mixed viscosity [mPas]	2100		DIN 53019
Pot life [min] at 20 °C/100 g	300		DIN EN ISO 9514
Maximum temperature rise at 10 °C	2		DIN EN ISO 9514
Maximum temperature rise at 20 °C	6		DIN EN ISO 9514
Maximum temperature rise at 30 °C	12		DIN EN ISO 9514
Maximum temperature rise at 40 °C	15		DIN EN ISO 9514
Application temperature [°C]	10-40		
Density [g/cm <sup>3</sup> ]	3,82		DIN EN ISO 1183
Curing at 20 °C [h]	48		DIN ISO 7619
Curing at 30 °C [h]	24		DIN ISO 7619
Temperature resistance (duration)	100°C		
Temperature resistance (30 min)	160°C		
Hardness after ShoreD 48h	88		DIN ISO 7619
Mechanical parameters A and B component			
Compressive strength cube [N/mm <sup>2</sup> ]	103,3		DIN EN ISO 604
Compressive strength prism [N/mm <sup>2</sup> ]	82,4		DIN EN ISO 604
Tensile strength [N/mm]	47,3		DIN EN ISO 527 1-5

## Storage/shelf life

48 months in the sealed original container. It is recommended to use up opened containers within one year. After longer storage periods, it is recommended to stir the product again separately before mixing.

## Preparation of adhesion surface

Clean, dry, free of dust and grease.

## Mixing process

Prepare A component and add B component in the mixing ratio.

## Venting

After mixing, pour slowly with a thin stream (1-2 mm) into a second container and pour back again.

## Waste disposal

Cured material can be disposed of with household waste. Uncured material can be disposed of at the local hazardous waste collection point. Material can be disposed of at the local hazardous waste collection centre.

## Safety data sheet

Please read the relevant safety data sheet before using the product. Safety data sheets are available on a daily basis on request via [info@diamant-polymer.de](mailto: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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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.