

Product Description:

DWH 311 FL is a low-viscosity 2-component fine adjustment and adhesive coating based on epoxy resin with aluminum fillers. This is used for the form- and force-fitting filling and bonding of separating joints to components, assemblies, and components of a wide variety of material components. By means of casting, injection and molding, complex shapes and structures can also be created with a precision in the μm range. DWH 311 FL can be detached by using a micro-thin layer of Diamant release agent on the counter surface. The result is an exact copy of the molded surface. High-precision preparation of surfaces and mechanical post-processing of the surfaces are not required. In modern production technology, process times and costs can be reduced many times over

Typical Applications:

- Form- and force-fitting installation of guides in mechanical engineering
- Adjusting coating for assemblies and elements of various materials.
- Full-surface lining of moldings and elements as a replacement for feed plates.
- Load-bearing gap compensation on beams of portal milling and Gantry systems
- μm - precise molding of bushes, centering and guide elements
- Fixing and / or centering of bearing bushes according to high precision alignment
- As filling and composite material in 3D printing + additive Manufacturing

Properties:

- Very high accuracy, μm -precision molding
- Very high compressive strength
- Extreme dimensional stability after curing
- Excellent load transfer due to complete contact surfaces
- Temperature resistance up to $+80^{\circ}\text{C}$
- Excellent damping properties due to the E-module ca. 8700 N/mm^2
- steel grey shade after curing
- High resistance against cooling emulsions, mineral and synthetical coolants, lubricants and cutting materials

Shelf Life:

Store in original, unopened container in a dry, cool, and frost-free place ($+5^{\circ}\text{C}$ to $+20^{\circ}\text{C}$).

Keep away from direct sunlight. Higher temperatures reduce the shelf life.

- 24 months

Packing Size:

- 50-gram kit
- 100-gram kit
- 250-gram kit
- 500-gram kit
- 1,000-gram kit
- Custom kit size (available per customer request)

Application Instruction:

- **Preparation:**
Roughen adhesion areas down to a roughness of 0,3 - ,05 mm (.012" - .020") and then clean chemically (optimum: Devitt cleaner).
- **Mixing:**
Pour the hardener (Part B) fully into the resin (Part A) container. Mix manually or by machine (100 rpm for 5 minutes) until the hardener is mixed well with the resin. Ensure that material adhering to the side walls and the bottom is well incorporated.
- **Degas:**
By pouring the mix in a long, thin, uninterrupted stream into a cartridge or the confined gap.
- **Application:**

DWH 311 FL can be poured free flowing into the gap open at the top and of sufficient size. Alternatively, DWH 311 FL, after being transferred into a hand-held cartridge, can be injected through an inlet port into the prepared sealed cavity. To avoid air pockets, the cavity is filled from the lowest point.

Technical Data	Metric	Imperial
Pot life [min]	50 Minutes (+20°C)	50 Minutes (+68° F)
Curing time [Hr]	18 Hours (+20°C)	18 Hours (+68° F)
E-Modulus DIN 53457	8,500 N/mm ²	1,232,821 psi
Compressive Strength	158 N/mm ²	22,916 psi
Hardness	83 Shore D	670 Brinell
Tensile Strength	Info to Come	Info to Come
Adhesion Strength	Info to Come	Info to Come
Bending Strength	Info to Come	Info to Come
Thermal Conductivity	Info to Come	Info to Come
Coefficient of Thermal Expansion	Info to Come	Info to Come
Temperature Resistance [Permanent]	-20°C up to 80° C	-4°F up to 176° F
Temperature Resistance [Temporary]	-40°C up to 125°C	-40°F up to 257°F

Viscosity	20000 mPas	20x 10 ⁹ Pas
Specific Weight	1,9 g/cm ³	31 g/in ³
Mixing Ratio [by weight]	866:134 (grams)	30.54:4.72 (oz)

Technical Service:

Devitt Machinery Co. offers within the product application a comprehensive technical service, which ranges from the R&D over application consultancy, product training to the application by trained engineers. Please contact our hotline to get an individual offer.

Field Alignment Services & Training (F.A.S.T.) offers field services to perform applications of products and engineered solutions developed by Devitt Machinery Co.

Safety:

Read the appropriate safety data sheet before using the product and proceed accordingly. For questions, our service technicians are always available.