

## Pressure-Resistant Gap Balancing Systems



### Viaduct Altwipfelgrund 2004

Installing bridge bearings with **MM1018**. **MM1018** is used to fill construction-conditioned gaps between the face plates of the bridge and the bridge bearings.



### Waterway crossing Magdeburg 2003

Positive ties of the gaps between bottom plates and bridge bearing plates using **MM1018**.

**Range**

**DIAMANT MM1018** is available in the following types:

P	# 1436	paste-like / spreading with a float
FL	# 1866	liquid / pour or inject

**Shelf Life**  
min. 12 month

**Pack Sizes (cpl.)**  
twin pack:  
1,5 kg ~ 600 ccm  
4,5 kg ~ 1.800 ccm  
special sizes on request

### Typical Applications

- fitting from bridge bearings on steel bridges
- gap balancing at face plates from steel constructions
- relining from support columns, rails and presses
- slide rails at flood gates
- relining from wedge plates and chuck plates at new buildings

### Product Description

**DIAMANT MM1018** is a highly loadable metal polymer to produce a form- and force-fitted gap balance at steel constructions. The material has a high pressure resistance, also under extreme conditions like vibrations or thermal fluctuations from -40°C to +90°C, and is, next to its weathering resistance, mainly characterized by its easy handling (machining) and trouble-free application.

### Properties

- ◇ 100% gap balance from 0 - 10 mm, NO SHRINKAGE
- ◇ high comprehensive strength
- ◇ absorbing vibrations
- ◇ temperature-resistant from -40 °C to +90 °C
- ◇ weather-proof
- ◇ corrosion-resistant
- ◇ non-conducting
- ◇ resistant to fuel, oil, coolant and environmental influences
- ◇ easy and problem-free application on the spot without specific preparations and tools

### Accessories & Services

**DIAMANT Separating Agent** liquid # 1354 or spray # 1355  
**DIAMANT Safety Cleaner** liquid # 1417 or spray # 1534

Injection equipment:

- injection pipe
- unidirectional valves
- hand injection gun
- cartridges
- mixing propeller



We also offer a comprehensive product and process design service

to optimise the usage in special applications.

Our experienced technicians like to advise you in all questions around the application of our products.



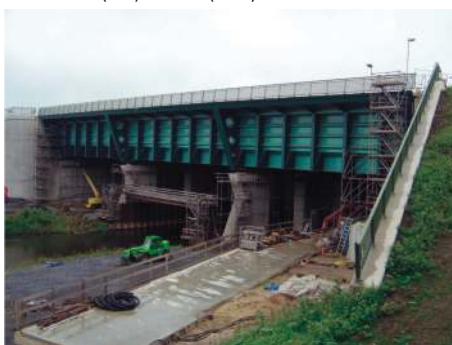
**Over 600 applications worldwide!!**

On request you can have our extensive list of references.

**Product application by specialised firms!**

On demand our Diamant Service Team will take over the application for you. We are looking forward to make an appointment with you.

All material values are average values and vary due to material quantity and environmental conditions. The mentioned material values are based on normal conditions (STP) of 20°C (68°F) and 1013mbar.



channel bridge Lippe 2006



chuck plates being coated with **MM 1018**



8 - 10 mm gap balance



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MM1018		P #1436	FL #1866
Pot Life (+20 °C) [min]		45	120
Cure Time (+20°C) [h]		24	36
Max. Compressive Strength [N/mm <sup>2</sup> ]		160	140
E-Modulus DIN 53457 [N/mm <sup>2</sup> ]		14000	12000
Specific Weight [g/cm <sup>3</sup> ]		2,4	2,4
Tensile Strength [N/mm <sup>2</sup> ]		76	71
Bending Strength [N/mm <sup>2</sup> ]		89	83
Linear Coefficient of Expansion [1/K]		32 x 10 <sup>-6</sup>	32 x 10 <sup>-6</sup>
Static Coefficient of Friction		> 0,5 (see sep. test report)	
Resistance to Chemical		very good (see sep. list)	
Temperature Resistance Permanent [°C]		-40 bis +90	-40 bis +90
Mixing Ratio by Weight	Komp. (A)	7,9	9,6
	Komp. (B)	2,1	0,4



### Preparation

Clean and roughen (if possible) the adhesion areas. For perfect cleaning use **DIAMANT cleaner**. Apply **DIAMANT separator** the areas where you do not want to stick MM1018 on. Close holes and gaps to prevent MM1018 flowing inside.

### Application

#### Paste-like

To begin immediately with the assembly after the application from MM1018 P the bearings should be brought into the right position directly from the beginning of the application. Pour the hardener (comp. B) fully into the resin (comp. A) container. Mix by machine with propeller mixer (250 rpm for ca. 2 min.). Mix until the hardener has mixed well into the tougher resin. Ensure that all the material is removed from the walls and sides of the tin and is mixed properly. Apply the whole calculated mass of MM1018 P roof like. Assemble the bearing immediately. Remove excess material before curing by spatula.

#### Liquid

After mixing (see above) pour MM1018 FL into an empty cartridge and push the piston in. Turn the cartridge slowly around 180° so that the air can rise to the top of the cartridge. Cut off the top of the cartridge, attach the nozzle, put into hand injection gun and insert into the injection hole. Inject MM1018 FL slowly into the gap until the material leaks out of the ventilation hole. After finishing the injection all holes have to be closed with plugs or valves.

The material has a curing time from 24 (MM1018 P) and respectively 36 (MM1018 FL) hours at 20°C.

A over welding is not possible, because the thermal overload leads to degassings. This can be circumvented, as the user submits and welds square borders.

**Please ask for our more detailed work instruction or contact us to discuss your special problems.**