

Mouldable Low Friction Slideway Systems



5 Axis CNC Centre
Machining centre for automotive components in the UK. All of its linear guides as well as the ram bores were replicated using **moglice**. Almost all injections were carried out in one operation. No machining, no specialized tools necessary.

Typical Applications

- low friction slideways
- slideway repair coatings
- piston bore castings
- complex replicated running surfaces (eg. lead screws)
- replacement of Turcite and bronze slides

Product Description

moglice is a mouldable low friction wayliner to produce high-precision slideways with anti-stick-slip-properties. The moulding-method allows to create complex forms and structures down to the micron without mechanical machining. It helps to reduce production times in modern production engineering. The material can either be caused to stick to the moulding surface or to be released by the inclusion of a micro thin layer of release agent (**DIAMANT separator liquid**). The resultant surface is an exact replica of the tool surface even down to the finest surface texture.

Properties

- ◆ durable machine surface with anti-stick-slip- and wear-resistant qualities with best coefficient of friction
- ◆ minuscule shrinkage or loss of dimensional stability
- ◆ micro fine surface moulding capability
- ◆ resistant to movement after curing
- ◆ the accuracy achieved can be down to a micron depending upon the setup
- ◆ minimal humidity absorption
- ◆ full contact of mating surfaces and therefore good load transmittal
- ◆ high load carrying capacity, high damping properties
- ◆ good adhesion with zero ageing or weathering
- ◆ resistant to many chemicals
- ◆ works effectively with selected lubricating oils (polarised oils)

Material Selection Criteria

moglice is a polymer system with finest slideway materials and consists of the two components resin (comp. A) and hardener (comp. B), supplied in the correct quantities and ready to mix. No weighing or measuring necessary. Choice is dependent on: application method, precision requirements, friction characteristics.

Range

moglice P	#1130	paste-like
moglice FL/P	#0311	liquid / pour or inject
moglice P500	#0296	for injection

Shelf Life 12 month

Pack Sizes twin pack:
100g / 250g / 500g / 1.000g
bulk packs on request

Preparation

Roughen adhesion areas down to a roughness of 0,3 - 0,5 mm and then clean chemically (optimum: **DIAMANT cleaner**). Make sure that the working temperature is in the acceptable range of 20°C +/- 10°C.

Mixing

Pour the hardener liquid (comp. B) fully into the resin (comp. A) container. Mix manually by spatula or by machine (100 rpm for 2 min.) until the hardener liquid is mixed well with the resin. Ensure that material adhering to the side walls and the bottom is well incorporated.

Degas

- Paste: by spreading it crosswise and thinly onto a clean surface to remove air bubbles.
- Fluid: by pouring the mix in a long, thin, uninterrupted stream into a cartridge or the confined gap.

Application

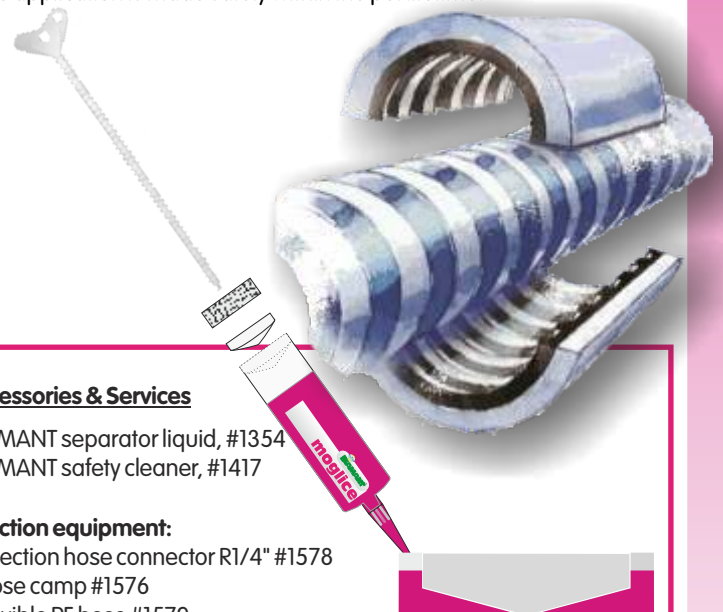
- moglice** may be
 - poured into a prepared and sealed gap under gravity feed.
 - spread in its paste form into a prepared cavity into which a replication tool or component is lowered and located in position.
 - injected into a prepared gap using a hand pump cartridge.

Paste

Apply a thin adhesion layer and push it into the surface using a spatula. Add the remainder rooflike taking care not to trap air.

Fluid

Pour **moglice** in the prepared cavity slowly in a long, thin stream. Aim at the lowest point to fill from the bottom to avoid the entrapment of air, or pump the liquid in from the bottom of the prepared gap into a prepared inlet port using a hand pump cartridge. To achieve coverage on larger components a number of inlet ports may have to be established. Ensure that the application is made safely within the pot lifetime.



Accessories & Services

DIAMANT separator liquid, #1354
DIAMANT safety cleaner, #1417

Injection equipment:

- injection hose connector R1/4" #1578
- hose clamp #1576
- flexible PE hose #1579
- blocking valve #1577
- cartridge 300ml / 10.5fl oz #1573

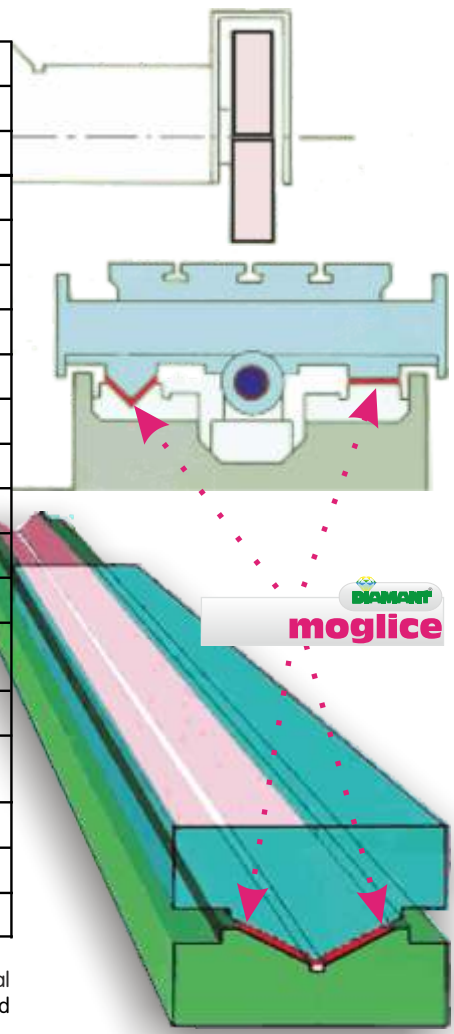
!!! For display reasons moglice is colored red.

We also offer a comprehensive and experienced product / process design service to optimise its use in special applications. Our technicians like to advise you in all questions around moulding methods.



Mouldable Low Friction Slideway Systems

	P #1130	FL/P #0311	P500 #0296
	paste-like	pour / inject	inject
Pot Life (+20°C) [min]	50	50	50
Cure Time (+20°C) [h]	18	18	18
E-Modulus DIN 53457 [N/mm ²]	10400	9100	9500
Compressive Strength [N/mm ²]	120	105	110
Hardness [Shore D]	88	86	87
Surface Pressure [N/mm ²]	12,5	14,5	14,5
[Psi]	1813	2103	2103
Adhesion [N/mm ²]	15,5	16,5	16
[Psi]	2248	2393	2320
Bending Strength [N/mm ²]	66	98	90
Thermal Conductivity [W/mK]	0,833	1,097	1,092
Coefficient of Thermal Expansion [K ⁻¹]	30,3 x 10 ⁻⁶	50 x 10 ⁻⁶	45 x 10 ⁻⁶
Shrinkage at Cure	hardly measurable / compensates using risers		
Temperature Resistance [°C]	permanent -20°C to temporary -40°C to	+60°C +125°C	+60°C +125°C
Viscosity (+20°C) [mPas]	paste-like	> 25000	> 75000
Mixing Ratio [A : B]	91,5 : 8,5	84,6 : 15,4	88,2 : 11,8
Specific Weight [g/cm ³]	1,7	1,6	1,6

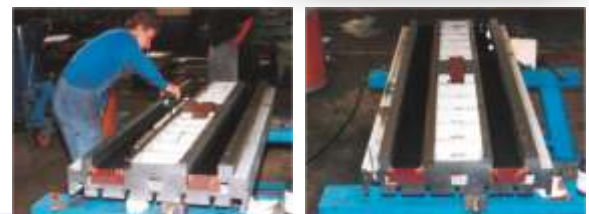


All material values are average values and vary due to mixing ratio, material quantity and environmental conditions. The mentioned material values are based on normal conditions (STP) of 20°C (68°F) and 1013mbar/hPa).

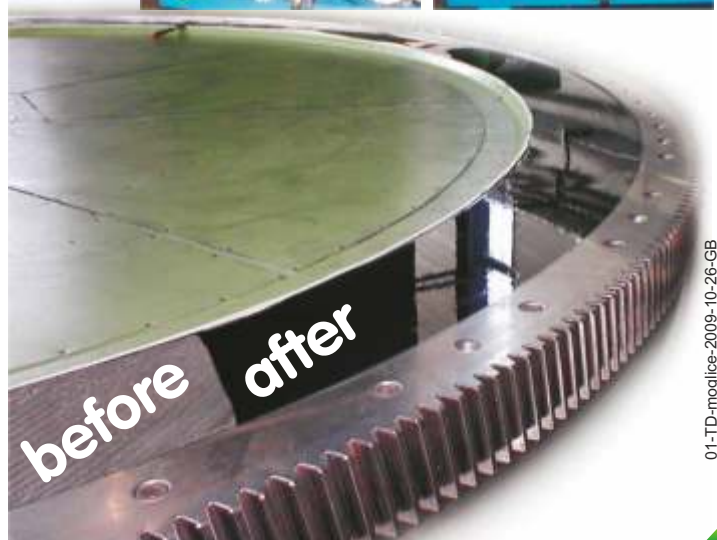
moulding of a hydrostatic tooth rack without machining



moulding of flat ways by pouring



flat way injection with moglice P500



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