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https://www.apraktika.hu/en/f190-polyurethane-resin-100g

F190 Polyurethane Resin: Technical Data Sheet

The F 190 fastcast polyurethane resin system consists of a polyol and isocyanate components that cure at room temperature and are suitable for manual processing.

The cured F 190 polyurethane resin can be used to make slightly rigid finished products, but mostly moulds.

Aluminum powder can be used to increase thermal conductivity of the mould.

In addition, 180 g of aluminum hydroxide, Al(OH)3 can be added to 100 g of isocyanate + 100 g of polyol each. This reduces shrinkage to zero, increases pot life, hardness, but reduces the coefficient of thermal expansion. See the table below for more details.

Main features of the product:

- Convenient pot life of about 8 minutes
- Easy to use thanks to the 1: 1 weight ratio mixing
- Very low aggression against the silicone form
- Relatively low viscosity even when filled

1. Instructions for use

1. Prepare the two components (resin / base and catalyst) and mix them separately. Weigh out the amounts of polyol and isocyanate components given in the table below.

2. Keep the mixing ratio exactly. The technical properties listed below are guaranteed only this case.

3. Do not leave unmixed components on the wall of the mixing bowl.

4. Stir until the color is homogeneous. The polyurethane resin can then be cast.

Crystallization can occur with both the isicyanate and the polyol component.

In this case, i.e. if the polyol component becomes inhomogeneous and the isocyanate becomes opaque, place in a heat treatment chamber and homogenize at 60 ° C.

The system is then reusable.

Ensure the components are mixed at least 18 ° C.

2. Important Recommendations

- Observe the general health and safety regulations
- Wear protective gloves
- Ensure adequate ventilation
- Wear safety goggles and suitable safe clothing

3. Chemical and Physical Properties

	Isocianate	Polyol	Mixture	Filled Mixture RZ 30150
Mixing ratio (mass %)	100	100		360
Consistency	liquid	liquid	liquid	liquid
Coulor	Of-white	Dark amber	Of-white	Of-white
Viscosity	90	55	90	2900
Density at 25 °C g/cm^3 Hardened Density g/cm^3	0,99	1,11	 1,07	 1,62
Working time (pot life) at 25 °C			7-9	12-14
Hardness Shore D1/D15			70	79
Flexural elasticity modulus MPa			1300	4150
Flexural strength MPa			47	44
Sharpy impact resistance kJ/m^2			19	
Glas transition temperature, °C			90	100
Coefficient of thermal expansion (Between +20 oC and +70 oC) 10-6 / K			150	75
Disassembly time 23 °C			90 (10 mm thickness)	90 (50 mm thickness)
Linear shrinkage (mm / m)			0,3 (10 mm thickness)	0,04 (10 mm thickness)

The cured finished product must not be classified as dangerous in accordance with Directive 88/379 / EEC and subsequent amendments. The hazards of the components can be seen in another document.

4. Shelf Life

The F180 polyurethane resin is guaranteed for a period of 18 months if stored correctly at a temperature of between 5°- 27°C (41° - 80°F).

The advice given verbally, in writing or through demonstrations on the use of the products are based on our knowledge.

The use and application of the product by the user lie beyond the control of the company and are therefore the user's own responsibility.