

with hand and head



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<https://www.apraktika.hu/en/polyurethane-rigid-foam>

## Polyurethane Rigid Foam: Technical Data Sheet

This bicomponent polyurethane foam system consists of polyol and isocyanate components that cure at room temperature and are suitable for manual processing.

The ideal processing temperature is 20 °C. It hardens even at higher temperature but some technical parameters may differ slightly from the data below.

The surface of the cured polyurethane foam is non-sticky, solid, flexible, porous, low-density material, which can be used for casting and repairing finished foam products.

Due to its properties, it is suitable for imitating wooden elements.

It can be applied as supportive part of moulds, rigid shell structures and for the production of composites.

Due to its low thermal conductivity and thus good thermal insulation, it is excellent for insulating pipes.



The main features:

- Very fast reaction time, but a relatively long creaming
- Mix easily and well due to the low viscosity
- Can be used with silicone mould
- Low-density end product
- Good paintability
- Odorless end product

## 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. For mixing, a hand drill with a stir bar can be used.

For manual mixing, we recommend the use of a fork. Stir the material for 20-30 sec. until the color is homogeneous.

In the case of two-part moulds, fill the two parts first separately and then to assemble the parts.

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

When the polyol becomes inhomogeneous, place in a heat treatment chamber and homogenize at 60 °C. The system will then be usable again.

Before use, both components are homogenized by mixing and the components at least 20 °C are mixed.



## 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

	Isocyanate	Polyol	Cured Foam
Mixing ratio (mass %)	110	100	
Mixing ratio (volume %)	94	100	
Consistency	liquid	liquid	
Color	Dark amber	Yellowish, transparent	
Viscosity	300	1400	
Density g/cm <sup>3</sup>	1,235	1,035	0,180
Gel time			60
Creaming time			170
Tack free time			280
Compressive strength kPa			>2000
Water absorption			< 2%
Thermal conductivity W/mK			0,05
Proportion of closed cells			>90%
Storage temperature °C	10-25	10-25	

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The cured finished product shall not be classified as dangerous according to Directive 88/379 / EEC and subsequent amendments.

## 4. Shelf Life

The polyurethane rigid foam components are guaranteed for a period of 3 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.**