

NEUKADUR ProtoCast 102 Comp. A/B

Polyurethane Casting Compound
impact resistant, low-viscous, white after curing

altropol

Main features

- very good flowability
- very impact resistant
- very easy to dye
- high HDT
- white after curing

Applications

- all kinds of moulds and patterns
- prototyping

Properties in the non-crosslinked state (approx. values)

		NEUKADUR ProtoCast 102 Component A	NEUKADUR ProtoCast 102 Component B	
Colour		slightly yellowish	slightly yellowish	
Density 20 °C	g/cm ³	1.06	1.06	
Viscosity 25°C	mPas	950	120	

Properties of the mixture (approx. values)

				Storage 2 hours 70 °C
Mixing ratio	p.b.w.	30	100	
Mixed viscosity	mPas		395	
Mixed density 20 °C	g/cm ³		1.06	
Pot life 25 °C	minutes		6 - 7	
Demoulding time 70 °C	minutes		30 - 60	
Colour after curing			white	
Shore D-hardness	DIN 53505			78
Tensile strength [MPa]	DIN 53455			*
Tensile elongation [%]	DIN 53455			*
Flexural strength [MPa]	DIN 53452			61
Modulus in flexure [MPa]	DIN 53457			1,600
Impact strength [KJ/m ²]	DIN 51230			> 25
Dimensional stability under heat [°C]	HDT			90 - 100
Shrinkage	%			0.5

* work in progress

How to process the material

Homogenize NEUKADUR ProtoCast 102 Component A thoroughly prior to processing. Tightly close receptacles after every use. After 30 – 60 minutes, the cured material has not yet got its full impact strength (the same is only obtained after approx. 1 - 2 hours at 70 °C) so that demoulding should be made with care, particularly when it deals with thin parts.

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We recommend pouring ProtoCast 102 Comp. A/B into moulds having been preheated to 70°C (e. g. of ProtoSil RTV 240) and tempering the compound for at least 1 hour at 70°C before demoulding. Recommended thickness of cast layer: up to max. 5 mm

Furthermore, we recommend evacuating NEUKADUR ProtoCast Comp. A for 15 minutes at the highest possible vacuum, then releasing the material to 20 – 25 mbar before adding NEUKADUR ProtoCast 102 Comp. B. At <20 mbar, heavy foaming may occur when both components are poured together. NEUKADUR ProtoCast 102 Comp. A can also be preheated beforehand to e. g. 40°C, then an evacuation time of approx. 10 minutes will be sufficient.

It is also possible to evacuate ProtoCast 102 Comp. B (larger quantity) under vacuum and under stirring and to add component A (smaller quantity) to component B. This may stop a too heavy foaming of component B at <5 mbar and possibly prevents a heavy foaming when component A and component B are poured together.

When castings of a layer thickness <1 mm shall be produced, we recommend the addition of our catalyst UL 1 %. By adding e.g. 0.1 % of the catalyst to the mixture, the pot life will be reduced by approx. 1 minute, but the demoulding time will be reduced significantly. The catalyst should be stirred into component A.

Form of delivery

NEUKADUR ProtoCast 102 Comp. A	0.3 kg
NEUKADUR ProtoCast 102 Comp. B	1.0 kg

Storage

The material should be kept in tightly closed original receptacles at temperatures of 15 - 25 °C. When duly stored, the materials can be used within the shelf life indicated on the labels.

Measure of precaution

Users should make use of the current safety data sheets, which contain physical, ecological, toxicological and other data relating to safety, to inform themselves on the safe handling and storage of products.
