NEUKADUR PN 9100

2-C PUR Casting Elastomer
Shore A 85

altropol

Main features

- high elongation
- very high restoring force
- very good flow properties
- very good resistance to tear propagation

Applications

- prototyping
- production of technical parts
- all kinds of moulds and patterns

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

		NEUKADUR PN 9100 Comp. A	NEUKADUR PN 9100 Comp. B
Colour		yellowish	yellowish brown
Mixing ratio	p.b.w.	100	9
Density (20 °C)	g/cm³	1.05	1.20
Viscosity (70 °C) Viscosity (40 °C) Viscosity (20 °C)	mPa·s mPa·s mPa.s	1400 5800 solid	600 (RT*) 600 (RT*) 600 RT*)

* RT = room temperature

Properties of the mixture at 23 °C (approx. values)

Colour**			yellow-transparent
Mixed viscosity (70 °C) Mixed viscosity (40 °C)	mPa·s mPa·s		1300 5500
Density	g/cm³	DIN 53479	1.08
Hardness	Shore A	DIN 53505	85
Pot life of Comp. A - preheated to 40 °C (100 g)	minutes		15
Demoulding time (70 °C) Demoulding time (100 °C)	minutes minutes		60 30
Tempering (100 °C)	hours		20

** tintable with the AltroColor INKs (e. g. red)

Mechanical values after 1 week of storage at room temperature (approx. values)

Tensile elongation	%	DIN 53455	*
Tensile strength	MPa	DIN 53455	*
Resistance to tear propagation	N/mm	ASTM D 624	*
Rebound resilience	%	DIN 53512	*
Linear dimensional change	%	500 x 50 x 5 mm	*

* work in progress

Attention! In this system, Component A is the isocyanate.

How to process the material

Processing in a vacuum casting machine or in a 2-C casting machine:

NEUKADUR PN 9100 Comp. A is sensitive to cold and may crystallize out at temperatures below +25 °C.
This occurrence is reversible at 30 - 60 °C.
Prior to use, preheat NEUKADUR PN 9100 Comp. A to 40 °C and homogenize the same thoroughly. (Comp. B needs not be preheated to 40 °C).

When the material is cast into 70 °C or 100 °C hot moulds, the castings can be demoulded after a relatively short period of time. Post-curing at 100 °C (for approx. 20 hours) is strongly recommended in order to obtain the high mechanical characteristics.

Casting without vacuum and/or without casting machine:
Preheat NEUKADUR PN 9100 Comp. A to approx. 40 °C (70 °C is also possible). Then mix both components with each other thoroughly according to the indicated mixing ratio (repotting helps to avoid mixing faults and to reduce the formation of bubbles) and cast in a thin stream. It is nearly impossible to produce completely bubble-free castings this way. We recommend working with covering color paste, e. g. AltroColor 5000 serie.
The material should then rest in the mould at 70 °C, better 100 °C for at least 60 minutes before demoulding. Curing at temperatures below 40 °C should be avoided.
Post-curing at 100 °C (for approx. 20 hours) is strongly recommended in order to obtain the high mechanical values.

NEUKADUR PN 9100 Comp. A/B is a development product for which we do not have any final experimental values available yet.

Prior to casting make sure that parts and moulds are free from humidity and non-evaporated release agent.

For release agents, please visit our homepage under http://www.altropol.de/en/produkte/weitere-produkte/trennmittel

Form of delivery

NEUKADUR PN 9100 Comp. A	on request
NEUKADUR PN 9100 Comp. B	on request

Storage
We recommend keeping the material in tightly closed original receptacles at temperatures of 20 - 25 °C. When duly stored, the material can be used within the shelf life indicated on the labels (the first 2 digits of the batch number indicate the week, the 3rd digit indicates the year).
After a partial withdrawal of NEUKADUR PN 9100 Comp. A, we strongly recommend covering the material with dry nitrogen.
Also in the reservoirs of a 2-C casting machine the NEUKADUR PN 9100 Comp. A should be covered with dry nitrogen.

Measure of precaution
With the aid of the current safety data sheets, which contain physical, ecological, toxicological and other data relating to safety, the user can inform himself on the safe handling and storage of the products.

Our technical service - in words, in writing or by trials - is given according to the current state of our knowledge. It does however not relieve the customer/user from the duty to check by himself if the products supplied by us are suitable for the intended processes and purposes. Application, use and processing of the products take place beyond our control possibilities and lie therefore exclusively in the area of responsibility of the processor. Any existing property rights of third parties are to be considered. We guarantee the perfect quality of our products in accordance with our general terms and conditions of business. When handling our products you have to observe the legal rules and the rules for the industrial hygiene. As for the rest, we refer to the corresponding safety data sheets.
• 2016-12-05.3 / 7 / LW-W •

• www.altropol.de •
• Altropol Kunststoff GmbH • Rudolf-Diesel-Straße 9 - 13 • D-23617 Stockelsdorf • Tel. +49 451-499 60-0 •
• Fax. +49 451-499 60-20 • E - Mail: info@altropol.de •