

Main features

- Properties similar to those of PA
- medium-viscous
- processible by hand and machine
- very high impact strength
- very high dimensional stability under heat

Applications

- prototyping
- production of technical parts
- small-lot production

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

		NEUKADUR ProtoAmid 80 technical	NEUKADUR ProtoAmid 80 Comp. B 4 technical	NEUKADUR ProtoAmid 80 Comp. B 10 technical
Colour		transparent amber	transparent brown	transparent colourless
Mixing ratio	p.b.w.	100	55	60
Density (20 °C)	g/cm ³	1.00	1.17	1.15
Viscosity (25 °C)	mPa·s	7,000	400	700

Properties of the mixture (approx. values)

			transparent amber	transparent amber
Colour			transparent amber	transparent amber
Mixed viscosity (25 °C)	mPa·s		2,200	3,100
Hardness	Shore D	DIN 53505	78	78
Pot life (RT) (100 g)	minutes		2.5	10
Demouldable (70 °C)	minutes		20 - 30	60 - 90

Mechanical values of the cured product after 5 hours of tempering at 100 ° C (approx. values)

Tensile elongation	%	DIN 53455	33	37
Tensile strength	MPa	DIN 53455	36	33
Flexural strength	MPa	DIN 53452	59	50
Bending elongation	%	DIN 53452	18	16
Modulus in flexure	MPa	DIN 53457	800	650
Impact strength	KJ/m ²	DIN 51230	42	75
Dimensional stability under heat	°C	HDT	>120	>120
Linear dimensional change	%	500 x 50 x 3 mm	1.3	2.3

RT = room temperature

How to process the material

NEUKADUR ProtoAmid 80 technical tends to crystallize out and has then to be melted at approx. 90 – 105 °C and homogenized prior to processing.

NEUKADUR ProtoAmid 80 technical has to be homogenized thoroughly before use. Preheat casting mould / tool to 70 °C. Before processing, degas NEUKADUR ProtoAmid 80 technical for 5 - 10 minutes under full vacuum, then mix resin and the desired hardener intensively with each other according to the indicated mixing ratio. For casting, reduce the vacuum to approx. 50 mbar.

The combination ProtoAmid 80 technical / Comp. B 10 technical can also be processed without a vacuum. The heat deflection temperature with hardener Comp. B 10 technical is approx. 30 °C below the other hardeners.

The indicated mechanical values are only obtained after the above described tempering. Alternatively, we have available the hardener NEUKADUR ProtoAmid Comp. B 2 technical with which you can achieve a further improvement of the mechanical and chemical resistances. For casting with NEUKADUR ProtoAmid Comp. B 2 technical or B 4 technical, we recommend the use of a pressure differential facility.

By a following step tempering (8 h 100 °C, 8 h 120 °C, 8 h 140 °C) the heat stability can be increased significantly (> 150 °C).

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

Form of delivery

NEUKADUR ProtoAmid 80 technical	1 kg	5 kg
NEUKADUR ProtoAmid Comp. B 4 technical	0.55 kg	2.75 kg
NEUKADUR ProtoAmid Comp. B 10 technical	0.6 kg	3 kg

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).

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.

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