

NEUKADUR VG SP 5
Epoxy Casting Compound
Mineral- / metal-filled

altropol

Main features

- hard
- abrasion-resistant
- workable
- highly heat-resistant

Applications

- production of injection moulds
- heavy-duty vacuum moulds

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

		NEUKADUR VG SP 5	NEUKADUR Hardener VG SP 5
Colour		black	transparent
Mixing ratio	p.b.w.	100	6
Density (20 °C)	g/cm ³	2.8	0.9
Viscosity (20 °C)	mPa·s	400,000	150

Properties of the mixture (approx. values)

Mixed viscosity	mPa·s		20,000
Pot life (1000 g)	minutes		170
Curing time	hours		48
Density	g/cm ³	DIN 53479	2.7
Hardness	Shore D	DIN 53505	90

Mechanical values of the cured product (approx. values)

Dimensional stability under heat	Martens °C	DIN 53458	150
Tensile strength	MPa	DIN 53455	50
Elongation at break	%	DIN 53455	0.4
Modulus in tension	MPa	DIN 53457	9,800
Compressive strength	MPa	DIN 53454	180
Thermal conductivity	W/K • m	DIN 52612	0.7
Coefficient of linear thermal expansion (without aluminium filler)	10 ⁻⁶ K ⁻¹	VDE	35
Coefficient of linear thermal expansion (with aluminium filler)	10 ⁻⁶ K ⁻¹	VDE	30
Linear dimensional change	mm/m		0.1

How to process the material

Before every use, stir up the resin component thoroughly as otherwise the fillers might deposit. Mix in the hardener component with care but intensively to ensure an optimal wetting and to prevent air inclusions. We recommend letting the mixed casting resin compound rest for 10 to 15 minutes before casting it in order to allow the possibly incorporated air to escape.

Backfilling and/or core production:

The NEUKADUR VG SP 5 system can be filled with aluminium filler, e. g. NEUKADUR aluminium grit MR 7 (round grain 1-2 mm) or NEUKADUR aluminium spray grit K 12 (spattered 0.6-1.2 mm), for the production of a castable / tampable compound.

Ratio of the weight 1 : 0.6 - 0.8 = castable

Ratio of the weight 1 : 0.8 - 1.0 = tampable

After having cured at room temperature, the moulding material is in a brittle phase. Demoulding shall preferably be made after 48 hours. A subsequent tempering is obligatory. For this, we suggest the following cycle:

4 hours at 40 °C, then 2 hours each at 60 / 80 / 120 / 150 °C

Form of delivery

NEUKADUR VG SP 5	1 kg	10 kg
NEUKADUR Hardener VG SP 5	0.06 kg	0.6 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).

NEUKADUR Hardener VG SP 5 crystallizes at temperatures below 15 °C. By heating of the the same to 40 °C, it liquefies again without changing its properties.

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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