

NEUKADUR ProtoCast VZ

General

NEUKADUR ProtoCast VZ is a retarder which has been developed specifically for the range of ProtoCast casting resins. Particularly in combination with ProtoCast 115, major and more complicated component parts can be realized in this way as one obtains a considerably extended pot life of the ProtoCast 115 by the relatively unimportant addition of ProtoCast VZ (see examples of application). Parallel to this, the curing time is prolonged accordingly.

We recommend to temper for 2 – 3 hours at for instance 80 °C.

It is possible to cast layers of up to 30 mm in the combination ProtoCast 115/ProtoCast VZ as ProtoCast VZ clearly decreases the exothermic reaction and the shrinkage behaviour of the reaction of ProtoCast with for example hardener PTG 4. On this occasion, however, ProtoCast VZ also reduces the heat stability of the ProtoCast 115 (see resistance to heat in the following table).

Modification

ProtoCast VZ can be modified in any ratio with the products of the ProtoCast range. However, attention is to be paid to the fact that mixing ratios will change when the portion of VZ is > 50 % (see examples of application).

The mixing ratio of the pure (here for instance 100 p.b.w.) ProtoCast VZ with hardener PTG 1 is: 100 : 80 p.b.w.
 and with hardener PTG: 100 : 70 p.b.w.

Examples for application

<i>ProtoCast 115 p.b.w.</i>	<i>ProtoCast VZ p.b.w.</i>	<i>Mixture with PTG 4 (PTG 1) in p.b.w.</i>	<i>Pot life at RT in min.</i>	<i>Resistance to heat* in °C PTG 4 (PTG 1)</i>	<i>Castable layer thickness in mm</i>
100	0	100 (120)	. 4	approx. 110 (90)	up to 6
90	10	100 (120)	approx. 7	approx. 105 (100)	up to 8
75	25	100 (120)	approx.12	approx. 90 (80)	approx. 6 -10
50	50	90-100 (110-120)	approx.25	approx. 80 (70)	approx. 15-25
25	75	80 (100)	approx.50	approx. 80 (70)	approx. 25-30

* = depending on thickness of layer

When the mixing ratio (MV) is 75 : 25 (115/VZ), the very good mechanical properties of the PC 115 decrease by approx. 5 %, when the MV is 50 : 50, they decrease by approx. 10 %.
 (Please also refer to the table "Comparison of mechanical properties PC115/PCVZ" on page 2).

Fields of application

- universally for all kinds of moulds and models
- prototype parts

Form of delivery

NEUKADUR ProtoCast VZ

1 kg / 5 kg / 10 kg / 30 kg / 50 kg

Shelf life

At 18 - 25 °C in closed original reservoirs: 6 months.

Comparison of mechanical properties of ProtoCast 115/ ProtoCast VZ:

		Pot Life	Tensile Strength	Tensile Elongation	Bending Strength	Bending Elongation	Bending E Modul
		Exothermic reaction	MPa	%	MPa	%	M Pa
100 p. b. w. PC 115	100 p. b. w. hardener PTG 4 Tempering: 4 h 80 °C	4 min 100 °C	approx. 68	approx. 12	approx. 108	approx. 8	approx. 1750
90 p. b. w. PC 115 10 p. b. w. PC VZ	100 p. b. w. hardener PTG 4 Tempering: 4 h 80 °C	7 min 77 °C	approx. 64	approx. 22	approx. 95	approx. 8	approx. 1640
75 p. b. w. PC 115 25 p. b. w. PC VZ	100 p. b. w. hardener PTG 4 Tempering: 4 h 80 °C	12 min 71 °C	approx. 60	approx. 17	approx. 90	approx. 8	approx. 1560
50 p. b. w. PC 115 50 p. b. w. PC VZ	100 p. b. w. hardener PTG 4 Tempering: 4 h 80 °C	25 min 52 °C	approx. 57	approx. 17	approx. 82	approx. 7	approx. 1520
25 p. b. w. PC 115 75 p. b. w. PC VZ	80 p. b. w. hardener PTG 4 Tempering: 4 h 80 °C	50 min 38 °C	approx. 50	approx. 17	approx. 75	approx. 9	approx. 1350

The statements in this data sheet are intended for information purposes and as for the rest, they are legally not binding.

NEUKADUR ProtoCast VZ E31303 (rg/ug)