

NECOWEL 720

Polyol component for fast-drying water based 2K PU lacquers systems

Product properties

NECOWEL 720 is a polyol component to formulate high quality 2K PU lacquers. The emulsion does not contain APEO and is free of VOC and SVOC.

NECOWEL 720 has a high molecular weight polyester backbone and incorporated building blocks which increase the reactivity towards isocyanates. This modification fastens drying time up to 3 hours and achieves pendulum hardness above 150 seconds after seven days. The cured PU-coating, clear-coat and topcoat, provides high gloss retention as well as an excellent scratch, chemical and weathering resistance.

As crosslinker HDI and IPDI based oligomeric polyisocyanates are recommended. Basically hydrophilic isocyanates specially designed for waterborne systems, as well as common hydrophobic types can be used. Best results have been obtained by a mixture of both. As usual in PU systems, an excess of crosslinker is recommended (e.g. 150 % isocyanate). In combination with appropriate hardeners film thicknesses of more than 100 µm can be achieved without blistering.

Application

- 2K PU Lacquers

Analytical data

- Solid content: 38 – 41 % in water
- Viscosity: 250 – 1.500 mPa.s, 25 °C
- pH-value: 6.5 – 7.5
- OH-value: 165 - 215 mg KOH/g (5.0 – 6.5 %)

Packaging and storage

- Packaging: 180 kg drum | 900 kg IBC | tank car
- Transportation and storage: Protect from freezing
- Minimum shelf life: 6 months in closed original packaging
- Detailed health and safety information please find in the corresponding safety data sheet.

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Starting formulation

Code Nr.: 170712 2 K clearcoat based on NECOWEL 720

Position	Product	Wt. %	Supplier
A	NECOWEL 720	70,00	ASK
B	Byk 3455	1,50	Byk
C	Dem. water	28,50	
		100,00	

Mix A – C

Mixing ratio = 3:1 by weight with ASK-Hardener 8382

Code Nr.: 8382 ASK Hardener 8382

Position	Product	Wt. %	Supplier
A	Bayhydur XP 2655	80,00	Covestro
B	Butylglykolacetate	20,00	
		100,00	

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Starting formulation

Code Nr.: 170452 2 K topcoat based on NECOWEL 720

Position	Product	Wt. %	Supplier
A	NECOWEL 720	60,00	ASK
B	Pigmentpaste # 14448	36,40	ASK
C	Byk 3455	0,50	Byk
D	Tafigel PUR 41	0,10	Münzing
E	Byk Silclean 3720	3,00	Byk
		100,00	

Mix A – E

Mixing ratio = 4:1 by weight with ASK-Hardener 8382

Code Nr.: 8382 ASK Hardener 8382

Position	Product	Wt. %	Supplier
A	Bayhydur XP 2655	80,00	Covestro
B	Butylglykolacetate	20,00	
		100,00	

Code Nr.: 14448 Pigmentpaste

Position	Product	Wt. %	Supplier
A	Dem. water	22,80	
B	Disperbyk 192	6,50	Byk
C	Byk 024	0,10	Byk
D	Kronos 2310	70,00	Kronos
E	Orisil 200	0,40	Orisil
F	Acticide MBS	0,20	Thor
		100,00	

Mix A – F, thereafter disperse with dissolver or pearl mill to a particle size < 10µm

The pot-life of the paint formulations listed here is > 2h and can be adjusted with special additives if needed.