

# NECOWEL 580

## Cosolvent free, unmodified alkyd emulsion short oil length

### Product properties

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NECOWEL 580 is a cosolvent free short oil alkyd emulsion based on non-yellowing fatty acids. The emulsion is free of APEO, VOC and SVOC.

It is especially suited to formulate lacquers of low odor emission. With adding of appropriate driers, NECOWEL 580 can be used as binder for air drying systems, especially hybrid systems. In acrylate systems the addition of NECOWEL 580 improves brushability, body and gloss. In combination with water soluble melamine resins, highly reactive baking enamels with good resistance can be formulated. The reactivity of baking enamels is influenced by the choice of aminoplast and catalyst. With highly reactive melamine resins, the storage stability has to be checked. Typical catalysts are blocked acids like Cypat 4040 (Allnex). Minimum baking temperature is about 120 °C. hardness and elasticity can be adjusted by the ratio between NECOWEL 580 and aminoplast.

Generally NECOWEL 580 shows good compatibility with pigments, except basic pigments. Due to the excellent shear resistance, NECOWEL 580 can be used as binder in mill bases.

### Application

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- Baking enamels, e.g. outside drum coating
- Hybrid systems
- Mill bases / pigment preparations

### Analytical data

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- Solid content: 41 – 44 %
- Oil length: approx. 20 %
- Type of Oil: sunflower oil
- Viscosity: 1.5 – 3.0 Pa.s, 25 °C
- pH-value: 6.5 – 7.5
- Neutralizer: triethylamine
- Solvent: water

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## Packaging and storage

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- Packaging: 200 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.

# NECOWEL 580

## Starting formulation

### Code No. 8454: White baking enamel based on NECOWEL 580

Position	Product	Wt. %	Supplier
A	NECOWEL 580	30,0	ASK
B	Tego Twin 4000	0,3	Evonik
C	Disperbyk 194	0,5	BYK
D	Kronos 2310	21,0	Kronos
E	NECOWEL 580	22,5	ASK
F	Tego Airex 901 W	0,3	Evonik
G	Cymel 328	6,0	Allnex
H	Tafigel Pur 41	0,5	Münzing
I	Dem. water	9,7	
J	Butyldiglykol	5,0	
K	Halox 570 solution #6499	1,0	
L	Isopropanol	1,6	
M	n-Butanol	1,6	
		<b>100,0</b>	

Mix A – D, thereafter disperse with dissolver or pearl mill to a particle size < 10µm. Add E – M under stirring.

### Code No. 6499: Halox 570 solution

Position	Product	Wt. %	Supplier
A	Dem. water	62,8	
B	Ammonia 25 %	7,2	
C	Halox 570	30,0	Halox
		<b>100,0</b>	

Mix position A – C in given order under stirring.

### Test results:

Substrate:	cold rolled steel
Drying:	10 min., 150 °C
Film thickness:	35 µm
Gloss:	> 90 (Gardner 60°)
Hardness (König):	> 100 sec
Cupping test (Erichsen):	3.5 mm
Cross cut tests:	Gt 0