

NECOWEL 5088

Cosolvent free, modified alkyd emulsion medium oil length

Product properties

NECOWEL 5088 is an aliphatic PU-modified alkyd emulsion with medium oil length. The emulsion does not contain APEO, is free of VOC and SVOC and is neutralized with ammonia.

NECOWEL 5088 offers very good drying properties, weather- and yellowing resistance. It is therefore applicable in air drying industrial top coats (e.g. for machinery).

Lacquers based on NECOWEL 5088 show good adhesion on metal, wood and most plastic substrates. Compared to NECOWEL 2275 and NECOWEL 2329, NECOWEL 5088 offers significantly faster drying and improved hardness due to a higher degree of polyurethane modification.

Application

- Industrial coatings, e.g. for machinery
- Top coats, wood paints
- Single layer coatings
- Hybrid systems

Analytical data

- Solid content: 43 – 46 %
- Oil length: approx. 35 %
- Type of oil: spec. fatty acids
- Viscosity: 0.7 – 2.2 Pa.s, 20 °C
- pH-value: 7 – 8
- Neutralizer: ammonia
- Solvent: water

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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.

Overview: aliphatic PU-modified alkyd emulsions

General properties of top coats based on NECOWEL aliphatic PU-modified alkyd emulsions on cold rolled steel at a film thickness of 40 – 50 µm.

NECOWEL	2275	2329	5088	5286
Pigment wetting:	excellent	←	←	Good
Minimum film-forming Temperature:	low	→	→	higher
Drying time (drying recorder):	18 h	10 h	4 h	1 h
Pendulum hardness (König):	>40 sec	>50 sec	>70 sec	>100 sec
Gloss GU (Gardner 20°):	> 85	> 85	> 85	> 85
Cross cut tests:	Gt 0	Gt 0	Gt 0	Gt 0
Cupping test (Erichsen):	>6 mm	>6 mm	>6 mm	>6 mm

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Starting formulation

Code No.: 180950 White top coat based on NECOWEL 5088

Position	Product	Wt. %	Supplier
A	NECOWEL 5088	67,70	ASK
B	Pigmentpaste 180947	31,90	ASK
C	Tafigel Pur 41	0,20	Münzing
D	Borchi Oxy Coat 1101	0,20	Borchers
		100,00	

Mix A – D; adjust viscosity with demin. water if necessary

Code No.: 180947 Pigment paste

Position	Product	Wt. %	Supplier
A	Demin. water	17,00	
B	Byk 024	0,10	Byk
C	Tego Dispers 755 W	3,95	Evonik
D	Kronos 2310	78,30	Kronos
E	Aerosil 200	0,50	Evonik
F	Acticide ICB 4	0,15	Thor
		100,00	

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

Test results:

Dry-to-touch:	0,5 h (Drying recorder)
Trough drying:	4 h (Drying recorder)
Substrate:	cold rolled steel
Film thickness:	40 - 50 µm
Gloss (20°)	> 85 GU
Pendulum hardness (König):	>70 sec (after 7 days at room temperature)
Cross cut adhesion:	Gt 0
Cupping test (Erichsen):	> 6,0 mm