

Technical Leaflet

WorléeSol 61 E

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W´Sol 61 E is an air drying, special fatty acid based alkyd, which will be water thinnable after neutralization with ammonia or amines.

Technical Data:

Non volatile content, 1h/125 °C, DIN EN ISO 3251	75% ± 2
Appearance	slightly turbid to clear solution
Flow time, 20 °C, 50% in butyl glycol, DIN 53211-4	50 - 70 s
Acid value, on solids, DIN EN ISO 3682	35 - 50 mg KOH/g
Colour, Gardner, 50% in butyl glycol, DIN ISO 4630	max. 10
Density, 20 °C, DIN EN ISO 2811-1	approx. 1.07 g/cm ³
Delivery form	75% in ethoxy propanol

Application and Properties:

W´Sol 61 E is a short oil alkyd resin for the manufacture of water thinnable, air and forced drying primers and top coats
For the fastest air dry rate ammonia should be used. For high gloss top coats and long term stability we recommend a combination of tri ethyl amine and ammonia. Alternatives like AMP-90 (Angus) etc. are also suitable.

$$\text{wt amine} = \frac{(\text{mol.wt.amine}) \times (\text{acid value resin solids}) \times (\text{wt. resin solids})}{56,100} = 100\% \text{ neutralization}$$

Primers based on W´Sol 61 E show a very fast drying and through drying with excellent corrosion resistance.

The best corrosion resistance will be obtained with the chromate free combination zinc phosphate ZP 20 + 0.5-2.0 % Alcophor 827 (Heubach/Henkel).

Due to it's excellent wetting properties W´Sol 61 E is especially suitable for the manufacture of haze-free high gloss lacquers, also with "difficult" pigments.

A further application is the manufacture of one coat lacquers (e.g. chassis lacquers) where a fast drying and good corrosion resistance is required.



W´Sol 61 E is good compatible with different acrylic dispersions (e.g. W´Cryl 7135 and Neocryl XK 62). Due to this good compatibility the properties like drying, adhesion on non-ferrous metals and film build can be improved. Furthermore the solids content of produced systems can be increased by such combinations.

Films with a very high hardness can be achieved by forced drying until 130 °C without addition of amino resin. Above 130 °C the combination of W´Sol 61 E /Cymel 350 (Dyno Cyanamid) 80:20 is proved.

The application of W´Sol 61 E based paints is similar to the conventional systems that means spraying also electrostatic, dipping, floating. However other viscosity (e.g. 40-60 s DIN 53211-4) for air spray is necessary.

To guarantee a good stability of the ready made products, the ratio water/co-solvent should be 80:20 or 85:15.

The addition of 2-3 % n-Butanol improves the storage stability.

pH-value: The pH value has to be checked after the production of lacquers based on W´Sol 61 E. If necessary pH has to be readjusted. Optimum properties will be achieved at a pH value 8.2 - 8.5.

Driers:

To achieve a better spreading the driers should also be dispersed if possible. For primers and coloured enamels based on W´Sol 61 E the following driers are recommended:

0.05 - 0.15% Co + 0.05 - 0.15%

for white and light pigmented systems

0.05% Co + 0.1% Ca + 0.1 - 0.3% Zr

(all calculated on solid resin).

Recommended Storage and Transport Conditions:

Up to 25 °C.

Avoid direct sunlight.