

Technical Leaflet

WorléeSol 07 A

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WorléeSol 07 A is an air drying, water thinnable special fatty acid based alkyd, which will be water thinnable after neutralization with ammonia or amines.

Technical Data:

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| Non volatile content, 1h/125 °C, DIN EN ISO 3251 | 75% ± 2 |
| Oil type | special fatty acids |
| Oil content | approx. 37% |
| Acid value, on solids, DIN EN ISO 3682 | 35 - 50 |
| Colour, Gardner, delivery form, DIN ISO 4630 | max. 10 |
| Viscosity, Rheometer, 20 °C, C 35/1°, 50 s ⁻¹ | 18,000 - 35,000 mPa·s |
| Density, 20 °C, DIN EN ISO 2811-1 | approx. 1.03 g/cm ³ |
| Delivery form | 75% in butyl glycol / sec. butanol 1 : 1 |

Application and Properties:

W'Sol 07 A is a short oil, fast drying alkyd resin. W'Sol 07 A is especially suited for the manufacture of water thinnable air and forced drying primers and top coats with a relatively low viscosity.

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 WorléeSol 07 A show a very fast drying, excellent adhesion, long term elasticity and good corrosion resistance.

The best corrosion resistance will be obtained with the chromate free combination zinc phosphate ZP 20 + 0.5 - 2.0% Loxanol MI 6627 (BASF).

Top coats with high gloss, fast drying, very good long term elasticity are easy to produce. Further good properties are early water and good outdoor resistance.

WorléeSol 07 A shows an excellent hydrolyse stability.

WorléeSol 07 A is compatible with different acrylic dispersions. Due to this 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. Nevertheless compatibility should always be tested very carefully.

The forced drying until 130 °C is possible without addition of amino resins. Above 130 °C the combination of WorléeSol 07 A / melamine resin 80 : 20 is proved.

The application of WorléeSol 07 A 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 WorléeSol 07 A. If necessary pH-value has to be readjusted. Optimum properties will be achieved at a pH-value 8.2 - 8.5.

Drying:

To achieve a better spreading the driers should also be dispersed if possible.

Following driers are recommended for WorléeSol 07 A:

0.05 - 0.15% Co + 0.05 - 0.15% Mn

For primers and color coatings

0.05 % Co, 0.1% Ca, 0.1 - 0.6% Zr

for white pigmented systems

(metal calculated on solid binder)

Our starting point formulations provide further information on tested pigments, matting agents and additives, etc.

Recommended Storage and Transport Conditions:

Avoid direct sunlight.

Shelf Life:

The storage stability of WorléeSol 07 A in the originally closed barrel is at a storage temperature from +5 to +25 °C six months, counted from the day of the delivery ex works.