

TYPE

Short oil, air-drying silicone alkyd resin

FORM OF DELIVERY (f.o.d.)

50 % in methoxypropanol / Softsol W (50MPWSW)

SPECIAL PROPERTIES AND USE

Rapid initial and through drying.
Exceptional film hardness.
Excellent recoatability.
Superior weather resistance.

Air-drying and stoving industrial paints,
especially for top-quality automotive repair paints.

RESIN COMPOSITION

(approx.)

35 % oil
 27 % polysiloxane

PRODUCT DATA

Determined per batch:

Dynamic Viscosity DIN EN ISO 3219

dynamic viscosity [mPa.s] 100 - 500
 (100 1/s; 23 °C)

Iodine Colour Number DIN 6162

iodine colour number < 5

Acid Value DIN EN ISO 2114

acid value [mg KOH/g] 10 - 16
 (non volatile matter)

Non-Volatile Matter DIN 55671

non-volatile matter [%] 48 - 52
 (120 °C; 5 min)

Not continually determined:

Non-Volatile Matter DIN EN ISO 3251

non-volatile matter [%] 48 - 52
 (1 h; 125 °C; 1 g)

Density (Liquids) DIN EN ISO 2811-2

density [g/cm³] 0,98
 approx.
 (20 °C)

Flash Point DIN EN ISO 1523

flash point [°C] 32
 approx.

DILUTABILITY

| | | | |
|------------------------------|---|------------------------|---|
| special white spirit 100/140 | ● | methyl isobutyl ketone | ● |
| white spirit | ● | butyl acetate | ● |
| turpentine oil | ● | methoxypropyl acetate | ● |
| xylene | ● | methoxypropanol | ● |
| solvent naphtha 180/210 | ● | ethanol | ⊙ |
| acetone | ● | butanol | ● |

● = unlimited dilutability
 ○ = substantial dilutability

⊙ = limited dilutability
 ○ = very limited or no dilutability

COMPATIBILITY

| | | | | | |
|------------------|----|----|----|----|----|
| % Vialkyd TS 314 | 90 | 75 | 50 | 25 | 10 |
| % other binder | 10 | 25 | 50 | 75 | 90 |

Alkyd resins

| | | | | | |
|--|---|---|---|---|---|
| long oil, drying, e. g. Vialkyd AF 724 | ○ | ○ | ○ | ○ | ○ |
| medium oil, drying, e. g. Vialkyd AM 524, AL 504 | ● | ● | ● | ● | ● |

Amino resins

| | | | | | |
|-----------------|---|---|---|---|---|
| CYMEL 325 Resin | ● | ● | ○ | ○ | ○ |
|-----------------|---|---|---|---|---|

Rosin based resins

| | | | | | |
|-----------------|---|---|---|---|---|
| Albertol KP 626 | ● | ● | ○ | ○ | ○ |
|-----------------|---|---|---|---|---|

Other binders

| | | | | | |
|-------------------------------------|---|---|---|---|---|
| cyclized rubber, e. g. Alpex CK 450 | ○ | ○ | ○ | ○ | ○ |
| nitrocellulose 24 E | ● | ● | ● | ● | ● |

● = definite compatibility

○ = very limited or no compatibility

SUGGESTED USES

Vialkyd TS 314 is a silicone and fatty acids modified short oil alkyd resin for air-drying and stoving industrial paints. This resin has been specially designed for vehicle repair paints with excellent weather resistance, yellowing resistance and colour retention. Vialkyd TS 314 yields car refinishing paints excelling in performance compared to common resins, particularly in terms of drying, film hardness and weather resistance. Whereas from experience it is known that vehicles repainted with usual paints, after several months of exposure to sunlight lose gloss and colour and no longer match with the original stoving paint, films of Vialkyd TS 314 exhibit a weather resistance which compares well with that of the original paint film.

Recoatability is equally good of air dried or forced dried (80 °C) films. Yellowing will not occur, even on prolonged exposure to heat. Film properties, like hardness and flexibility can be enhanced through combination of Vialkyd TS 314 with medium or high reactivity melamine resins, e. g. CYMEL 325 Resin, for a stoving range of 80 - 130 °C.

PROCESSING

Compatibility

In combining Vialkyd TS 314 with resins or paint raw materials other than silicone-modified, it should be kept in mind that with increasing quantities of extenders the advantages of the silicone modification will recede.

Thus, silicone alkyds are primarily designed as sole binder, and Vialkyd TS 314 and TS 354 are intermiscible at any ratio. This creates a broad platform for tuning the desired paint performance without having to sacrifice the optimum silicone level of about 30 %.

Siccative, pigmentation, application, paint performance

For siccative the Co-free drier Additol DRY CF 100 is recommended together with suitable auxiliary driers like Ca and Zr.

Silicone alkyds may be pigmented in known manner like other binders. There are no limitations as with pure silicone resins. There is no danger of thickening with reactive pigments; the coemployment of zinc white, however, will reduce the gloss retention.

Finishes on silicone alkyds can be applied to any common resin primer, by brushing, spraying, roller coating, dipping or flow coating. Paints on silicone resin Vialkyd TS 314 afford longer protection and decorative appearance. Thus they help to reduce costs and time owing to repeated repair and maintenance.

STORAGE

At temperatures up to 25 °C storage stability packed in original containers amounts to at least 550 days.

DISTINGUISHING FEATURES

Vialkyd TS 314 dries faster than Vialkyd TS 354, so paints based on Vialkyd TS 314 preferably are used for spray application.