# VIALKYD® AC 290/70MPAC

Technical Datasheet

## TYPE

Fatty acid modified, non-drying phthalic resin

## FORM OF DELIVERY (f.o.d.)

70 % in methoxypropyl acetate (70MPAC)
(containing also 5 % xylene)

## SPECIAL PROPERTIES AND USE

**Excellent compatibility characteristics with alkyd stoving paints, thermosetting acrylic paints, NC-lacquers, acid curing enamels, alkyd- or acrylic-isocyanate enamels**

**Grinding resin for pigment pastes**

## RESIN COMPOSITION

(approx.)

29 % synthetic branched fatty acids (as triglycerides)
45 % phthalic anhydride

## PRODUCT DATA

**Determined per batch:**

| | | |
|---|---|---|
| **Dynamic Viscosity DIN EN ISO 3219** | | |
| dynamic viscosity<br>50 % propylene glycol methylether acetate<br>(100 1/s; 23 °C) | [mPa.s] | 65 - 210 |
| **Iodine Colour Number DIN 6162** | | |
| iodine colour number<br>50 % propylene glycol methylether acetate | | <= 5 |
| **Acid Value DIN EN ISO 2114** | | |
| acid value<br>(non volatile matter) | [mg KOH/g] | < 15 |
| **Non-Volatile Matter DIN 55671** | | |
| non-volatile matter<br>(120 °C; 5 min) | [%] | 68 - 72 |

**Not continually determined:**

| | | |
|---|---|---|
| **Non-Volatile Matter DIN EN ISO 3251** | | |
| non-volatile matter<br>(1 h; 125 °C; 1 g) | [%] | 68 - 72 |
| **Density (Liquids) DIN EN ISO 2811-2** | | |
| density<br>approx.<br>(20 °C) | [g/cm³] | 1,10 |
| **Flash Point DIN EN ISO 1523** | | |
| flash point<br>approx. | [°C] | 43 |

## DILUTABILITY

| | | | |
|---|---|---|---|
| special white spirit 100/140 | ○ | methyl isobutyl ketone | ● |
| white spirit | ○ | butyl acetate | ● |
| turpentine oil | ● | methoxypropyl acetate | ● |
| xylene | ● | methoxypropanol | ● |
| Shellsol AB | ● | ethanol | ○ |
| acetone | ● | butanol | ● |

● = unlimited dilutability
⊙ = limited dilutability
◉ = substantial dilutability
○ = very limited or no dilutability

## COMPATIBILITY

| % Vialkyd AC 290 | 90 | 75 | 50 | 25 | 10 |
|---|---|---|---|---|---|
| % other binder | 10 | 25 | 50 | 70 | 90 |
| **Alkyd resins** | | | | | |
| Vialkyd AF 724, AS 673m | ○ | ○ | ○ | ○ | ○ |
| Vialkyd AL 504, AC 451 | ● | ● | ● | ● | ● |
| Vialkyd AR 427, AR 340, AC 274 | ● | ● | ● | ● | ● |
| **Acrylic resins** | | | | | |
| Viacryl SC 341, SC 420 | ● | ● | ● | ● | ● |
| **Other binders** | | | | | |
| Desmodur N, Desmodur L | ● | ● | ● | ● | ● |
| Alresat KM 201 | ● | ● | ● | ● | ● |
| nitrocellulose, e.g. 24 E, 9 E | ● | ● | ● | ● | ● |
| CAB-551-0.2 | ● | ● | ● | ● | ● |
| Beckopox EP 304, EP 307 | ○ | ○ | ○ | ○ | ○ |
| Duroxyn EF 900, EF 935 | ○ | ○ | ○ | ○ | ○ |

● = definite compatibility
○ = very limited or no compatibility

## SUGGESTED USES

Vialkyd AC 290 has been designed as grinding resin in the formulation of pigment pastes which have full compatibility with alkyd stoving paints, thermosetting acrylic paints, nitrocellulose enamels and acid curing enamels, alkyd- or acrylics- polyiscoyanate combinations. The pastes can be reduced with the respertive resins and give paints with the performance of irrelevant modified basic paint properties. Vialkyd AC 290 has a balanced functionality and is fully integrated into the cured film. Therefore, it must be fully considered as resin component for reaction with amine resins, polyisocyanates, nitrocellulose systems and acid curing systems. Up to a resin proportion of 30 % of Vialkyd AC 290, the performance of the binder resin is not influenced adversely. Vialkyd AC 290 shows yellowing resistance up to 30 min / 200 °C and acts up favourably to top quality alkyd resins. Solvent resistance is not adversely affected. At low curing temperatures, Vialkyd AC 290 shows good crosslinking and is thus also suitable for quick stoving 80 °C enamels.
Owing to the excellent performance of Vialkyd AC 290 in a variety of paint formulations and due to the fact that Vialkyd AC 290 does not subdue the characteristics of the main binder, paint preparation can be substantially rationalized with this new grinding medium.

## PROCESSING

The low viscosity of Vialkyd AC 290 allows processing on any modern milling facilities. Vialkyd AC 290 has excellent pigment wetting capacity and can be milled with critical pigments. The pigment pastes have good storage stability for long periods. Best pigment wetting is obtained by admixing the pigments in portions to concentrate the pastes.

**Preparation of the pigment pastes**

The following mill base formulations were produced on a triple roll mill or a pearl mill, with 70 % of resin solids.

**Example of a pigment paste**

245 parts of Kronos 2310 are stirred into 100 parts of Vialkyd AC 290/70 % in methoxypropyl acetate and the paste is passed twice over a triple roll mill.
Optimum mill base formulations can be obtained with inorganic pigments with the aid of the determination of the flow point according to Daniel. This method cannot be applied to the majority of organic pigments. For organic pigments we recommend to check individually the pigments by preliminary tests to find out the required amount of resin.

| **Pigment** (Producer) | **content,** max. | **%** rec. |
|---|---|---|
| Kronos 2310 (Kronos) | 280 | 245 |
| Bayferrox 130 BM (Bayer) | 210 | 175 |
| Bayferrox 3920 (Bayer) | 105 | 70 |
| Permanentgelb NCG 71 (Clariant) | 45 | 30 |
| Irgazingelb 2 GLT (Ciba) | 50 | 25 |
| Novopermgelb HR (Clariant) | 40 | 20 |
| Permanentrot FGR (Clariant) | 50 | 25 |
| Novopermrot F 5 RK (Clariant) | 35 | 20 |
| Hostapermviolett RL spez. (Clariant) | 25 | 10 |
| Hostapermblau AFL (Clariant) | 35 | 20 |
| Cromophtalblau A 3 R (Ciba) | 35 | 15 |
| Hostapermgrün GG 01 (Clariant) | 35 | 20 |
| Farbruß FW 2 (Degussa) | 18 | 13 |

## STORAGE

At temperatures up to 25 °C storage stability packed in original containers amounts to at least 730 days.

Producer:

Desmodur N, L (Covestro)
CAB-551-0.2 (Eastman)