# VIACRYL® SC 303/65XB

Technical Datasheet

## TYPE

Acrylic resin for cross-linking with amino resins

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

65 % in xylene / butanol (65XB)

## SPECIAL PROPERTIES AND USE

**Automotive finishes, in particular for metallics, especially for metallic basecoats (wet-on-wet process).**
**Stoving enamels with good outdoor stability and colour retention, for general industrial purposes.**

## PRODUCT DATA

**Determined per batch:**

| | | |
|---|---|---|
| **Dynamic Viscosity DIN EN ISO 3219**<br>dynamic viscosity<br>(25 1/s; 23 °C) | [mPa.s] | 19000 - 30000 |
| **Dynamic Viscosity DIN EN ISO 3219**<br>dynamic viscosity<br>50 % xylene<br>(25 1/s; 23 °C) | [mPa.s] | 700 - 1300 |
| **Colour Scale (Hazen) DIN EN ISO 6271-1**<br>Hazen colour value | | <= 80 |
| **Acid Value DIN EN ISO 2114**<br>acid value<br>(non volatile matter) | [mg KOH/g] | 10 - 15 |
| **Non-Volatile Matter DIN EN ISO 3251**<br>non-volatile matter<br>(1 h; 125 °C; 2 g; ethyl acetate) | [%] | 63 - 67 |

**Not continually determined:**

| | | |
|---|---|---|
| **Density (Liquids) DIN EN ISO 2811-2**<br>density<br>approx.<br>(20 °C) | [g/cm³] | 1,01 |
| **Flash Point DIN EN ISO 1523**<br>flash point<br>approx. | [°C] | 27 |

## DILUTABILITY

| | | | |
|---|---|---|---|
| xylene | ● | methoxypropyl acetate | ● |
| white spirit | ○ | butyl acetate | ● |
| solvent naphtha 150/180 | ● | methoxypropanol | ● |
| methyl ethyl ketone | ● | ethanol | ● |
| ethyl acetate | ● | butanol | ● |

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

## COMPATIBILITY

| % Viacryl SC 303 | 90 | 75 | 50 | 25 | 10 |
|---|---|---|---|---|---|
| % other binder | 10 | 25 | 50 | 75 | 90 |
| **Alkyd resins** | | | | | |
| Vialkyd AC 371 | ○ | ○ | ○ | ○ | ○ |
| Vialkyd AC 451 | ● | ● | ● | ● | ● |
| Vialkyd AR 400 | ○ | ○ | ○ | ○ | ○ |
| **Acrylic resins** | | | | | |
| Viacryl SC 370 | ● | ● | ● | ● | ● |
| **Amino resins** | | | | | |
| Maprenal MF 590, MF 650 | ● | ● | ● | ● | ● |
| Maprenal MF 800, MF 900 | ● | ● | ● | ● | ● |
| **Epoxide resins** | | | | | |
| Beckopox EP 140 | ● | ● | ● | ● | ● |
| Beckopox EP 301 | ● | ○ | ○ | ○ | ○ |
| Duroxyn EF 900 | ○ | ○ | ○ | ○ | ○ |
| **Other binders** | | | | | |
| epoxidized soya bean oil | ● | ● | ○ | ○ | ○ |
| benzyl butyl phthalate | ● | ● | ● | ● | ● |
| CAB-381-0.5 | ● | ● | ● | ● | ● |

● = definite compatibility
○ = very limited or no compatibility

## SUGGESTED USES

Viacryl SC 303/65XB is used in combination with melamine and urea resins for the formulation of stoving enamels. The principal application area is automotive finishes, in particular metallics and clear coats for two-coat metallic systems, in combination with cellulose acetobutyrate for basecoats in two-coat metallics, but also industrial applications such as electric night storage heaters, fluorescent lamps, household appliances, boilers and drying boxes.

In addition to their good adhesion, gloss, hardness, flexibility and corrosion resistance, paint films based on Viacryl SC 303 have very good stability to heat and to UV radiation. This is impressively evident in the case of top coats in two-coat metallic paints which, after prolonged outdoor exposure in Florida, show neither discolouration, cracking nor gloss impairment.

## PROCESSING

As a thermosetting cross-linking acrylic resin Viacryl SC 303/65XB must be combined with amino resins. In the stoving temperature range of 120 - 150 °C, reactive melamine resins such as Maprenal MF 590 and Maprenal MF 650 are used as reaction partners.

In special cases it may be advantageous to combine the resin with the less reactive hexamethoxymethylmelamine resins, e. g. Maprenal MF 900. The most suitable combination ratios are 70 to 85 parts acrylic resin and 15 to 30 parts melamine resin, calculated on solids. With acid catalysts, such as maleic acid or p-toluene sulphonic acid, cross-linking takes place already at stoving temperatures as low as 90 °C. The addition of cellulose acetobutyrate speeds up physical drying.

**Pigmentation**

Viacryl SC 303 can be processed with usual pigments suitable for stoving enamels, and with aluminium pigments.

Depending on the shade required, the aluminium pigment content may be max. 4 % based on solid resin.

**Dilution**

The principial diluents used are aromatic hydrocarbons in combination with alcohols or glycol ethers or their esters.

## STORAGE

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

## DISTINGUISHING FEATURES

Compared to Viacryl SC 341 and Viacryl SC 370, Viacryl SC 303 is compatible with cellulose acetobutyrates, and therefore particularly suitable for the formulation of basecoats.

Producer:

CAB-381-0.5 (Eastman)