

TYPE

Hydroxy functional acrylic resin

FORM OF DELIVERY (f.o.d.)

60 % in butyl acetate (60BAC)

SPECIAL PROPERTIES AND USE

Automotive finishes, in particular for metallics, especially for metallic basecoats (wet-on-wet process).

Baking enamels with good outdoor stability and colour retention, for general industrial purposes.

PRODUCT DATA

Determined per batch:

Dynamic Viscosity DIN EN ISO 3219

dynamic viscosity (25 1/s; 23 °C)	[mPa.s]	6000 - 8400
--------------------------------------	---------	-------------

Colour Scale (Hazen) DIN EN ISO 6271-1

Hazen colour value		<= 80
--------------------	--	-------

Acid Value DIN EN ISO 2114

acid value (non volatile matter)	[mg KOH/g]	10 - 15
-------------------------------------	------------	---------

Non-Volatile Matter DIN EN ISO 3251

non-volatile matter (1 h; 125 °C; 2 g; ethyl acetate)	[%]	58 - 62
--	-----	---------

Colour / Appearance VLN 250

colour		colourless to light yellow
appearance		clear

Not continually determined:

Hydroxyl Value (cat.) DIN EN ISO 4629

hydroxyl value (solid matter content)		70 - 90
--	--	---------

Density (Liquids) DIN EN ISO 2811-2

density approx. (20 °C)	[g/cm ³]	0,96
-------------------------------	----------------------	------

Flash Point DIN EN ISO 1523

flash point approx.	[°C]	27
------------------------	------	----

SUGGESTED USES

Viacryl SC 303 is used in combination with melamine resins and urea resins for the formulation of baking enamels. The principal application area is automotive finishes, in particular metallics and clearcoats for two-coat metallic systems, in combination with cellulose acetobutyrate (CAB) for basecoats in two-coat metallics.

Viacryl SC 303 is also used in paints for 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 provide very good stability to heat and to UV radiation. This high stability has been proved by Florida long-term weathering test series of automotive clearcoats which show neither colour change nor cracking nor loss of gloss.

PROCESSING

As a thermosetting acrylic resin, Viacryl SC 303 must be combined with amino resins for cross-linking. At stoving temperatures between 120 and 150 °C, reactive melamine resins are used as reaction partners.

In special cases it may be advantageous to combine Viacryl SC 303 with the less reactive hexamethoxy methyl melamine resins. The most suitable combination ratios are 70 to 85 parts of acrylic resin and 15 to 30 parts of melamine resin, calculated on solids. With acidic 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 (CAB) speeds up physical drying.

Pigmentation

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

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

Dilution

The principal 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 303/60BAC is compatible with cellulose acetobutyrate, and therefore particularly suitable for the formulation of automotive basecoats.