VIACRYL® SC 370/75SNA

Technical Datasheet

TYPE

Acrylic resin, cross-linkable with amino resins or polyisocyanates (two-pack systems)

FORM OF DELIVERY (f.o.d.)

75 % in solvent naphtha 150/180 (75SNA)

SPECIAL PROPERTIES AND USE

High solids stoving enamels for automotive finishes or general industrial purposes. Resin additive for improving solids content, body and gloss of stoving enamels and two-pack systems. In combination with polyisocyanates for forced drying high solids two-pack systems. Resin base for pigment pastes.

RESIN COMPOSITION

Carboxyl and hydroxyl groups containing copolymer

PRUDUCT DATA

Determined per batch:

Dynamic Viscosity DIN EN ISO 3219		
dynamic viscosity (25 1/s; 23 °C)	[mPa.s]	4200 - 7000
Colour Scale (Hazen) DIN EN ISO 6271-1		
Hazen colour value		<= 100
Acid Value DIN EN ISO 2114		
acid value (non volatile matter)	[mg KOH/g]	8 - 12
Non-Volatile Matter DIN EN ISO 3251		
non-volatile matter (1 h; 125 °C; 2 g; ethyl acetate)	[%]	73 - 77

Not continually determined:

Hydroxyl Value (cat.) DIN 53240-2		
hydroxyl value (solid matter content)	[mg KOH/g]	110 - 130
Density (Liquids) DIN EN ISO 2811-2		
density approx. (20 °C)	[g/cm³]	1,03
Flash Point DIN EN ISO 1523		
flash point approx.	[°C]	38

DILUTABILITY

white spirit	○	butyl acetate	●
xylene	●	methoxypropyl acetate	●
solvent naphtha 150/180	●	methoxypropanol	●
solvent naphtha 180/210	●	ethanol	⊙
methyl ethyl ketone	●	butanol	⊙

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

COMPATIBILITY

% Viacryl SC 370	90	75	50	25	10
% other binder	10	25	50	75	90
Alkyd resins					
Vialkyd AC 290	●	●	●	●	●
Vialkyd AC 371	○	○	○	●	●
Vialkyd AC 451n, AC 531	●	●	●	●	●
Vialkyd AF 342	○	○	○	○	○
Vialkyd AL 503	●	○	○	●	●
Vialkyd AR 280	○	○	○	●	●
Acrylic resins					
Viacryl SC 200, SC 303, SC 341, SC 420	●	●	●	●	●
Viacryl SC 121	○	○	○	○	○
Macrynal SM 500, SM 510, SM 510n, SM 513	●	●	●	●	●
Macrynal SM 515, SM 540, SM 548	●	●	●	●	●
Other binder					
Beckopox EP 301	●	○	○	○	○
Beckopox EP 140	●	●	●	●	●
Desmodur N	●	●	●	●	●
nitrocellulose 24 E	●	●	●	●	●
CAB-381-0.1, CAB-551-0.2	●	●	●	●	●
CAB-381-0.5	●	●	○	○	○

● = definite compatibility
○ = very limited or no compatibility

SUGGESTED USES

Viacryl SC 370/75SNA is used in combination with melamine resins for the formulation of thermosetting enamels. Because of its good compatibility with other resins, the use of Viacryl SC 370 as a cobinder for thermosetting (= one component) and isocyanate curing (= two component) acrylic resins or alkyd resins is of particular interest. Thus the solids content of the paint and the body, levelling and gloss of the coatings can be clearly improved.
Because of its good pigment wetting and its good compatibility with a variety of resins Viacryl SC 370 can be used as a resin base for pigment pastes in one component and two component systems.

PROCESSING

As a thermosetting resin Viacryl SC 370 must be combined with (preferably also low-viscous) reactive melamine resins. The ratio acrylic resin : melamine resin normally amounts to about 80 : 20 (solids).
As a co-binder with thermosetting acrylic- or alkyd-systems, a clear improvement on the appearance of the topcoats is usually achieved at an amount of 15 - 25 % Viacryl SC 370 on the other resin (based on solids).
The compatibility with the other resin, as well as a possible plasticizing effect have to be taken in account.

Pigmentation

Viacryl SC 370 can be processed with usual pigments suitable for stoving enamels and isocyanate curing two component systems. With organic pigments the use of wetting agents, like Additol XL 260, may be useful.

Dilution

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

Stoving conditions

Best result are obtained in the stoving temperature range of 130 °C (30 minutes) - 150 °C (20 minutes).

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 303 or Viacryl SC 341 stoving enamels based on Viacryl SC 370 show a higher solids content. Reactivity and hardness are lower, however. That´s why Viacryl SC 370 is rather recommended as a co-binder to give a higher solids content and better film-appearance.

For the curing with melamine resins of the hexamethoxymethylmelamine-type the special high solids resin Viacryl VSC 2950 is preferred.

Producer:

Desmodur N (Covestro)
CAB-381-0.1, CAB-551-0.2, CAB-381-0.5 (Eastman)