

VINNOL® P 38 C

VC-Copolymer, CAS No. 9003-22-9

Characteristics

VINNOL® P 38 C is a copolymer of approx. 61 wt.% vinyl chloride and approx. 39 wt.% of vinyl acetate. It's main use is as a binder for surface coating compounds and printing inks.

Properties

VINNOL® P 38 C is a thermoplastic, physically drying binder that forms a film when the solvent contained in the formulation has evaporated.

Like all VC copolymers, VINNOL® P 38 C is characterized by excellent toughness, permanent flexibility, abrasion resistance, low gas permeability and low swelling in the presence of water.

Films formed with VINNOL® P 38 C are highly resistant to water. They also exhibit excellent resistance to oil, grease, dilute aqueous acids, alkalis and saline solutions. Aromatic hydrocarbons and chlorinated hydrocarbons cause them to swell to varying extents. VINNOL® P 38 C is resistant to aliphatic hydrocarbons, such as white spirit, and to alcohols.

Special characteristics

VINNOL® P 38 C is a high vinyl acetate containing copolymer. It is therefore especially suitable as a cobinder for formulating flexible VINNOL®-paint and printing ink formulations.

Application

Typical applications for VINNOL® P 38 C are:

- Adhesives
- Strippable laquers
- Protective and masonry paints
- Paper and film coatings
- Heat-sealable lacquers
- Road-stripping paints

Processing

VINNOL® P 38 C is usually used as a solution in solvent or solvent mixes. Ketones and esters are the solvents most commonly used for VINNOL® P 38 C. Ketones are particularly good solvents for vinyl chloride copolymers; VINNOL® P 38 C dissolves rapidly, for instance, in acetone, methyl ethyl ketone, methyl isobutyl ketone and cyclohexanone. Esters, such as ethyl and butyl

Product data

Properties	Test methods	Unit	Value	Tolerance
Chlorine content	WACKER-method	wt.%	34,6	+/- 0,6
K-value	DIN EN ISO 1628-2		60,0	+/- 1,0
Volatile content	WACKER-method	wt.%	< 2,0	
Viscosity ¹⁾ (20% solids in MEK)	DIN 53015 (20°C)	mPa·s	180	+/- 30
Efflux time* (20% solids in MEK)	DIN EN ISO 2431 (4 mm)	s	Approx. 145	
Supplied as*	visual		white powder	
Particle size*	WACKER-method	mm	< 1	
Bulk density of delivery form*	DIN EN ISO 60	g/cm ³	Approx. 0,75	
Density of the polymer*	DIN 53479 / ISO 1183-3	g/cm ³	Approx. 1,30	
Glass transition temperature*	DSC (DIN 53765 / ISO 11357-5)	°C	Approx. 62	
Molecular weight (M _w)*	SEC, PS-Standard		100 - 140 x 10 ³	

¹⁾ after dissolution at 50°C

* These figures are only intended as a guide and should not be used in preparing specifications.

acetate 98/100, are somewhat less efficient solvents than ketones. Alcohols and aliphatic hydrocarbons do not dissolve VINNOL® surface coating resins. Aromatic solvents cause swelling of the product. If a true solvent is present, up to 80 % of aromatic solvents can be used in combination with VINNOL® P 38 C.

The flexibility of the films can be increased further by adding plasticizers (external plasticizing). VINNOL® resins are compatible with a large number of plasticizers, such as Phthalates, Adipates, Sebacates, Citrates, Phosphates, Epoxides and Chlorinated paraffins.

VINNOL® P 38 C can be combined unlimited with all other VINNOL® surface coating resins. It is also compatible with a large number of other resins like acrylic and epoxy resins. Alkyds, polyvinyl acetates and polyvinyl butyrals are in general not compatible with VINNOL® P 38 C. It is recommended to always check the compatibility of VINNOL® P 38 C with the polymer in question.

VINNOL® P 38 C shows good compatibility with the pigments and fillers normally used in the paint industry.

In stoving finishes, care must be taken when using pigments containing iron and zinc cadmium. Preliminary tests are essential, since there is a danger of discoloration.

VINNOL® P 38 C can be processed according to all methods commonly used in the paint and printing ink industry.

To avoid risk of discoloration, contact with iron should be avoided both during preparation of the solution and during subsequent storage of the product. VINNOL® - based surface coating compounds should be stored in coated containers.

Storage

Store under dry conditions and at room temperature

(below 25 °C). Under these conditions, the product has a shelf life of at least 12 months, from the delivery date. If the material is kept beyond the recommended shelf life, it is not necessarily unusable, but the user should perform a quality control on the properties relevant to the application. The properties determined in our pre-release quality control may change during storage, depending on storage conditions, and deviate from the specification.

Package

VINNOL® P 38 C is packed in 25-kg, coated three-ply paper bags containing a polyethylene liner.

Additional information

Health regulations

The monomers used in the production of VINNOL® P 38 C are listed in section 1 of European Council Resolution AP(96)5 and in section A of EU Commission Directive 2002/72/EU.

The composition of VINNOL® P 38 C is in compliance with FDA 21 CFR §175.300.

If VINNOL® P 38 C is used in applications other than those recommended, the choice, processing and use of VINNOL® P 38 C is the sole responsibility of the purchaser. In connection with this, all legal or other regulations should be considered.

Safety information

Detailed safety information is contained in each material data safety sheet. These can be obtained from our sales offices or can be downloaded from our website www.wacker.com.

The data presented in this leaflet are in accordance with the present state of our knowledge, but do not absolve the user from carefully checking all supplies immediately on receipt. We reserve the right to alter product constants within the scope of technical progress or new developments. The recommendations made in this leaflet should be checked by preliminary trials because of conditions during processing over which we have no control, especially where other companies' raw materials are also being used. The recommendations do not absolve the user from the obligation of investigating the possibility of infringement of third parties' rights and, if necessary, clarifying the position. Recommendations for use do not constitute a warranty, either express or implied, of the fitness or suitability of the products for a particular purpose.

The management system has been certified according to DIN EN ISO 9001 and DIN EN ISO 14001



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