We create chemistry

Technical Information

Luviskol® VA 64 W

Valid since 27.06.2017
Revision 1.0

PRD 30035030

Care Chemicals

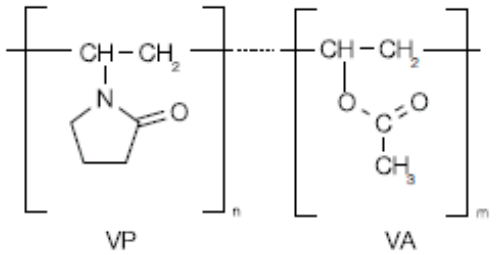
Polymeric film-forming agent that isused as hair fixatives particularly in pump sprays, liquid products, mousses and gels

INCI name(s)
VP/VA Copolymer

Chemical description
Vinylpyrrolidone (VP) / vinyl acetate (VA) copolymer

Physical form:
Clear, colorless to slightly yellowish liquid with faint characteristic odor

Structural Formula



CASR-No.	Ingredient
25086-89-9	VP/VA Copolymer

Ingredient information:
Composition VP:VA = 60:40

Care Creations™

Characteristic values

The specifications stated in the paragraphs 'Quality control data' and 'Additional product descriptive data' finally and conclusively describe the properties of the product.

Quality control data
(Data which is used for quality release and is certified for each batch.)

Test property	Specification
k-Value (1 % (m/V) in ethanol)	26.0 - 34.0
Solids (60 min. at 140 °C, vacuum)	48.0 - 52.0 %
pH value (10 % based on solids in water)[(1)]	5.0 - 7.0
Vinylpyrrolidone (HPLC)	max. 50 ppm
Vinylacetate (HPLC)	max. 100 ppm
Hazen color (as is)	max. 40 APHA units

Specific methods used for batch release see Certificate of Analysis.

Notes:

(1) The pH value can drop down to about 4.5 during storage depending on the storage temperature, but this does not negatively influence either the stability nor the performance (measured in our standard gel-/mousse formulas) of this polymer.

Storage information

Shelf life
12 months

Storage temperature
Between + 10 °C and + 25 °C.

Storage conditions
In original sealed containers and protected from moisture

Additional information
Aqueous solutions of the VA grades with a pH value below 7 can tend to develop mould. This can be prevented by adding one of the preservatives commonly used in cosmetics, e.g. a hydroxybenzoate.

Stabilising additives / Auxiliaries

Preservatives
not present

Antioxidants
not present

Solvents
not present

Others
not present

General information

Raw material basis
Synthetic: (mineral oil / natural gas)

Composition hints for finished product label

INCI Components

INCI Name (US/EU/CN)	Content
VP/VA Copolymer	48 - 52 %

Water Content	Content
	48 - 52 %

Product properties

Solubility

The solubility of the Luviskol® VA grades in water depends on the VP:VA ratio. Products with a high proportion of vinylpyrrolidone (Luviskol® VA 64 and Luviskol® VA 73) form clear solutions in water. The other grades can be dispersed in water. The solutions are slightly acidic. The polymers are nonionic and thus do not need to be neutralized. All the Luviskol grades are soluble in ethanol, isopropanol, n-propanol, glycerin, methylene chloride, esters and ketones. Any precipitates that occur in solutions in ethanol or isopropanol in the cold disappear again on heating. Solutions in isopropanol are clear, sometimes with a bluish tint.
Without a solubilizer, the products are not soluble in ether or aliphatic hydrocarbons.

Miscellaneous information

Water absorption

Water absorption by films of Luviskol® VA compared with Luviskol® K 30 as a function of relative humidity at 20 °C.

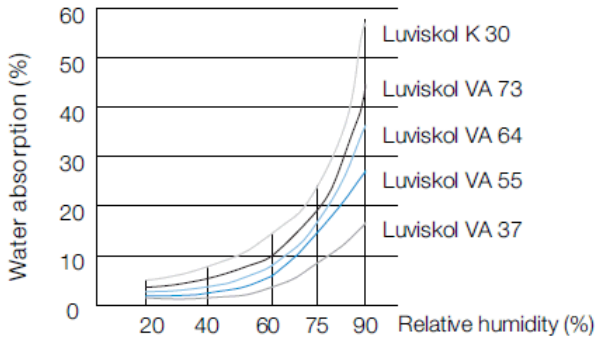


Fig. 1

Suitability for hair sprays

The Luviskol® VA grades are used as film-forming agents and fixatives in hair care. They possess excellent properties both for aerosol sprays and for non-aerosol products. The higher the proportion of vinylpyrrolidone, the more hygroscopic the Luviskol® VA grade is. The adhesion of Luviskol® VA films to the hair also increases with the proportion of vinylpyrrolidone, without adversely affecting their excellent combing-out and washing-out properties, thanks to the nonionic nature of the polymer.

The Luviskol® VA 64 grades, by contrast, are preferable for hairsprays that are to have a particularly hydrophilic character, e.g. for use in dry climates. They are also suitable for sprays with a high water content. Hair sprays for dry and brittle hair should include a small quantity of plasticizer (0.1 - 0.2 %), such as a polyethylene glycol like Pluracare® E 400, Luvitol® EHO, silicone oils or other plasticizers frequently used in cosmetics.

Propellant compatibility

Solutions of the Luviskol® VA grades are readily compatible with dimethyl ether (DME). Propane, butane, isobutane, pentane DME/pentane and DME/butane mixtures can be used together with solvents such as ethanol and methylene chloride.

Suitability for hair-setting solutions, gels and mousses

We create chemistry

Technical Information

Luviskol® VA 64 W

Care Chemicals

Because of their good solubility in water, the Luviskol® VA 64 and Luviskol® VA 73 grades are particularly suitable for liquid hair setting products, gels and mousses. Further, these polymers possess excellent setting properties. All the Luviskol® VA grades can be completely removed from the hair by straightforward washing.

The easy-to-use aqueous Luviskol® VA solutions (VA 64 W) as well as Luviskol® VA 64 Powder are particularly suitable for alcohol-free formulations. In the usual concentrations (1 - 5 % solid polymer), they form clear solutions in water and are very compatible with carbomers.

Example of use
Hair fixiative particulary in pump sprays, liquids products, mousses and gels.

Intended for use as cosmetic ingredient

Disclaimer

Care Creations™