

Technical Information

Luviskol® VA 37 E

PRD 30035021

Valid since 02.10.2020
Revision 2.0

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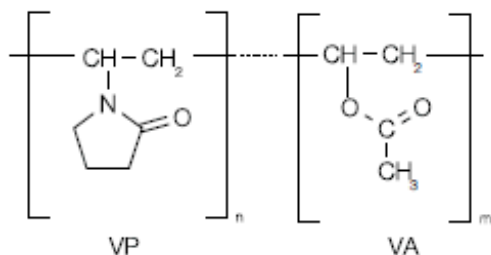
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Care Chemicals**Polymeric film-forming agent that is used as hair fixatives particularly in aerosol sprays, pump sprays, liquid products****INCI name(s)**

VP/VA Copolymer (and) Alcohol denat.

Physical form:

Clear, colorless to slightly yellowish liquid with faint characteristic odor

Structural Formula**CASR-No.**25086-89-9
64-17-5**Ingredient**VP/VA Copolymer
Ethanol**Ingredient information:**

Composition VP:VA = 30:70

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 propertySolids content (60 min.; 140 °C;
vacuum)

K-value (1 % in ethanol)

Vinylpyrrolidone (HPLC)

Vinylacetate (HPLC)

Specification

48.0 - 52.0 g/100 g

28 - 36

max. 25 mg/kg

max. 75 mg/kg

Test method

PM/01161

PM/00748

PM/00727

PM/00727



We create chemistry

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Storage information

Shelf life

24 months

Storage temperature

Room temperature

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

Ethanol

Others

not present

General information

Raw material basis

Synthetic: (mineral oil / natural gas)

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Care Chemicals**Composition hints for finished product label****INCI Components****INCI Name (US/EU/CN)**

VP/VA Copolymer

Alcohol denat.

Content

48 - 52 %

48 - 52 %

Water Content**Content**

max. 0.5 %

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. Luviskol® VA 37 forms clear solutions in ethanol abs., ethanol 96 % and ethanol/water (VOC 80 % and VOC 55 %). Solutions in isopropanol are clear, sometimes with a bluish tint. Without a solubilizer, the products are not soluble in ether or aliphatic hydrocarbons.

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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.

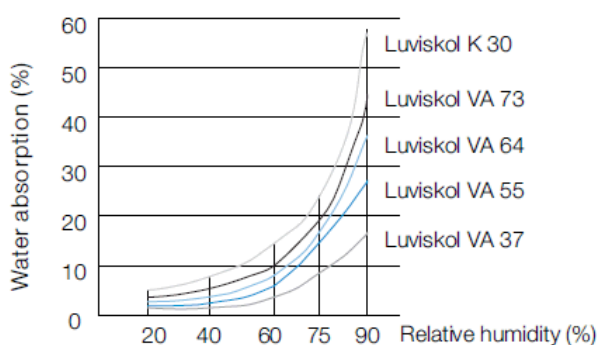


Fig. 1

Cloud point

The moderate hydrocarbon compatibility of Luviskol® VA 37 can be greatly improved by adding small quantities of water. This makes it possible to achieve cloud points below 0 °C (Fig. 2).

Temperature, °C

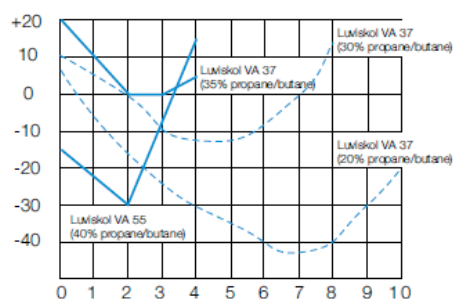


Fig. 2: Reduction in cloud point by adding water to ethanolic solutions containing 3 % solid polymer

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

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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.

Luviskol® VA 37 grades are particularly suitable for hair sprays whose films it must be possible to remove from the hair by brushing. The hair is even degreased on brushing, as the grease is effectively removed together with the Luviskol film.

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

All the Luviskol VA grades can be completely removed from the hair by straightforward washing. The moderate hydrocarbon compatibility of Luviskol® VA 37 can be greatly improved by adding small quantities of water. This makes it possible to achieve cloud points below 0 °C.

Example of use

Hair fixatives particularly in aerosol sprays, pump sprays, liquid products.

Intended for use as cosmetic ingredient**Disclaimer**

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