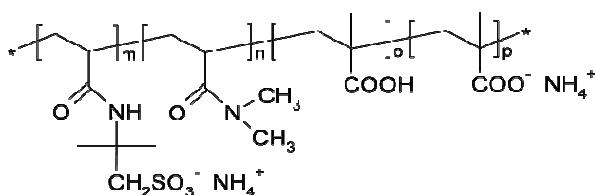


Aristoflex® Velvet

Gelling agent for aqueous systems and thickening agent for oil-in-water emulsions with excellent tolerance to high amounts of solvents

General formula



INCI designation

Polyacrylate Crosspolymer-11

Product properties ^{*)}

Appearance [20 °C]

white powder

Chemical-physical data

Solid content min.	92%
Water	max. 7%
pH value (1% in dist. water)	4.0 - 6.0
Viscosity (1% in dist. water)	12000 - 21000 mPas

Product description

Aristoflex® Velvet is a polymeric sulfonic acid with carefully controlled cross-linking. It is pre-neutralized with ammonia and therefore does not require neutralization upon using. Aristoflex® Velvet does not contain any aliphatic or aromatic solvents.

Application

Aristoflex® Velvet is a synthetic polymer used as texturizer, thickener and stabilizer for oil-in-water emulsions. The polymer is pre-neutralized, easy to use, and provides formulations with excellent yield value.

Besides the rheological aspects, excellent sensory properties (soft, velvet skin feel, and low degree of stickiness/tackiness) characterize formulations with Aristoflex® Velvet. Based on a polymer backbone derived from sulfonic acid, O/W emulsions can be formulated even at low pH, enabling easy incorporation of e.g. Alpha Hydroxy Acid (AHA).

Aristoflex® Velvet has an excellent compatibility with organic solvents (e.g. ethanol, acetone, isopropanol). Highly transparent hydro-alcoholic gels with up to 70% ethanol can be easily formulated.

The amount of Aristoflex® Velvet used in personal care formulations is typically in the range of 0.3 – 2.0 %

^{*)} These characteristics are for guidance only and not to be taken as product specifications. The tolerances are given in the product specification sheet. For further product properties, specifications, safety and ecological data, please refer to the MSDS.

Preparation of emulsions

Aristoflex® Velvet can be used to prepare O/W emulsions with both hot and cold processes. Aristoflex® Velvet may be incorporated either in the oil phase, the water phase or by pre-dispersing it in water-free polyols (e.g. glycerine, propylene glycol). If aqueous pre-dispersions are made, a suitable homogeniser/mixer capable of handling resulting viscosity should be used.

As Aristoflex® Velvet is pre-neutralized, no neutralisation step is required.

Emulsions containing Aristoflex® Velvet are shiny and glossy, providing excellent spreading. These O/W emulsions are characterized by a soft, velvety feel without tackiness and are especially suitable for a broad range of personal care formulations (e.g. face care creams, lotions, etc.).

Preparation of hydro-alcoholic gels

Aristoflex® Velvet has a good compatibility with polar organic solvents (e.g. ethanol, isopropanol, and acetone). Transparent hydro-alcoholic gels can be obtained with up to 70% ethanol. Ethanol may be used to dissolve active ingredients while avoiding the use of solubilizers such as PEG-40 Hydrogenated Castor Oil or Polysorbate 20. It is therefore easy to prepare hydro-alcoholic gels containing perfume oils, oil-soluble UV-filters actives (e.g. Bisabolol), film formers etc. For those reasons, Aristoflex® Velvet is recommended for the formulation of hand sanitizers. In addition, Aristoflex® Velvet allows the formulation of nail-varnish-removers, containing mixtures of ethanol and ethyl acetate.

Typically, Aristoflex® Velvet is added to the water/ethanol mixture. To manufacture hydro-alcoholic gels with a high content of water insoluble components, the order of addition should be changed. These components are dissolved in ethanol first and then water and Aristoflex® Velvet are added. Like with all polymer gels, care has to be taken to avoid trapping of air bubbles.

Use information

Aristoflex® Velvet can be used over a broad pH range from 3.0 to 8.0. As Aristoflex® Velvet is an ammonium salt, if pH is higher than 9.0, ammonia will be released.

Storage recommendations

The product is stable for 3 years when stored in closed original containers. It must be protected from humidity during storage.

Further information on handling, storage and dispatch is given in the EC safety data sheet.

This information is based on our present state of knowledge and is intended to provide general notes on our products and their uses. It should not therefore be construed as guaranteeing specific properties of the products described on their suitability for a particular application. Any existing industrial property rights must be observed. The quality of our products is guaranteed under our General Conditions of Sale.

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