

CLAYTONE-VP V XR

Thickening and Suspending Agent for non-polar to medium polar Oil and Solvent Phases in Cosmetic Applications

Product Data

INCI Name

Quaternium-90 Bentonite

Product Description

CLAYTONE-VP V XR is an organically modified bentonite (Organoclay) for use in cosmetic and personal care products to increase viscosity, provide thixotropic flow behaviour and suspend pigments and particles. It is designed to impart a high degree of gelling efficiency over a wide range of low to medium polar fluids. CLAYTONE-VP V XR may be used as an auxiliary emulsifier in water-in-oil emulsion systems. CLAYTONE-VP V XR is vegan and sterilized by gamma irradiation.

Typical Properties

The values indicated in this data sheet are typical and do not constitute specification limits.

Form:	Powder
Color:	Light cream
Specific Density:	1.8 g/cm ³
Loose Bulk Density:	400 – 600 kg/m ³
D50 value:	15 µm
Dry Sieve Passing 75 µm:	min. 70.0 %
Water Content:	max. 3 %
Microbial Count	< 100 cfu/g

Recommended Use

CLAYTONE-VP V XR may be used in non-polar to medium polar organic fluid systems.

Suitable solvents: Mineral Oil, Silicone Oil, Vegetable Oil

Application areas:

Personal Care:	Creams and Lotions Sun Care Products Antiperspirants
Color Cosmetics:	Liquid Make-up Lipsticks Cream Eye Shadows

Recommended Levels

Typically, 1 - 10 % loading (based upon total formulation weight) is a good starting point to increase viscosity, control syneresis and provide thixotropic flow behavior. These levels are suggested as a guideline; optimum levels can be determined by laboratory tests.

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Incorporation and Processing Instructions

CLAYTONE-VP V XR is effective in a wide range of organic fluid systems and has no processing temperature requirements. For maximum efficiency, CLAYTONE-VP V XR requires a polar activator and very high shear, e.g. dissolver, rotor-stator system or homogenizer.

Suggested polar activators are:

- Propylene Carbonate/H₂O (95:5) 15 – 60 % *
- Ethanol/H₂O (95:5) 15 – 40 % *

*(based on weight of CLAYTONE-VP V XR)

It is recommended to incorporate CLAYTONE-VP V XR into the solvent phase using a concentrated pre-gel. In some cases, CLAYTONE-VP V XR can also be incorporated directly as a powder (in-situ incorporation) into the oil phase.

Pre-gels can be prepared by the following procedure:

1. Add the organic solvent to the dispersion vessel.
2. Slowly add CLAYTONE-VP V XR (10 % by weight of total pre-gel) to mixer under agitation.
3. Mix at very high shear for approx. 15 minutes.
4. Add the polar activator.
5. Mix at very high shear for approx. 15 minutes.
6. Incorporate the other formulation ingredients into the gel.

Special Note

When used in emulsions, CLAYTONE-VP V XR should be incorporated into the oil phase. CLAYTONE-VP V XR is compatible with surfactants and emulsifiers. To obtain optimum results, these should be added after the CLAYTONE-VP V XR has been activated.

Storage and Transportation

CLAYTONE-VP V XR should be transported and stored dry in the unopened original containers at temperatures between 0 °C and 30 °C (32 °F and 86 °F).

BYK-Chemie GmbH
P.O. Box 10 02 45
46462 Wesel
Germany
Tel +49 281 670-0
Fax +49 281 65735

info@byk.com
www.byk.com/additives

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