CLAYTONE-VP V XR

Vegan, powdered rheology additive based on organically modified natural bentonite (organophilic phyllosilicate) for use in personal care applications to increase viscosity, provide thixotropic flow behavior and suspend pigments and particles in non-polar to medium polar oil and solvent phases.

Gamma irradiation sterilized version of CLAYTONE-VP V.

Product data

Composition
Organophilic phyllosilicate (INCI: Quaternium-90 Bentonite)

Vegan

Typical properties
The values indicated in this data sheet describe typical properties and do not constitute specification limits.

Bulk density:	400–600 kg/m³
Water content:	max. 3 %
Particle size distribution D50:	15 µm
Sieve passing (200 mesh/74 µm):	min. 70 %
Total viable count:	< 100 cfu/g
Color:	light cream
Delivery form:	powder

Storage and transportation
CLAYTONE-VP V XR should be transported and stored dry in unopened, original packaging at temperatures between 0 °C and 30 °C.

Applications

Personal care

Special features and benefits
CLAYTONE-VP V XR is used in cosmetic products to increase viscosity, provide thixotropic flow behavior, and suspend pigments and particles. It may be used to stabilize water-in-oil emulsion systems and is designed to impart a high degree of gelling efficiency over a wide range of low to medium polar fluids. Suitable solvents are all non-polar to medium polar organic fluid systems, such as mineral oil, silicone oil, or vegetable oil. Additionally, CLAYTONE-VP V XR is compatible with surfactants and emulsifiers.

Recommended use

Creams and lotions	■
Sunscreen products	■
Antiperspirants/deos	■
Liquid makeup	■
Lipsticks	■
Cream eye shadows	■

■ especially recommended □ recommended

Recommended levels

1–10 % additive (as supplied) based upon the total formulation, depending on the application.

The above recommended levels can be used for orientation. The optimum dosage should be determined by application-related test series.

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/H_2O (95:5) 15–60 %*
- Ethanol/H_2O (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 into the oil phase (in-situ incorporation).

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.

When used in emulsions, CLAYTONE-VP V XR should be incorporated into the oil phase.

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