

Plantatex[®] HCC

® = Registered trademark of BASF
in many countries.

Wax dispersion for surfactant preparations

Chemical character

Dispersion of opacifying waxes with surfactants.

PRD-No.*

30532522

* BASF's commercial product numbers.

Properties

Plantatex® HCC is a white, dispersion liquid at room temperature and tends to form sediment in the coldness.

Plantatex® HCC	Unit	Value
Physical form (23 °C)		liquid
Dry residue (ISO 1625)	%	approx. 36 – 42
Water content (EN 13267)	%	approx. 58 – 64
pH value (EN 1262, solution B)		approx. 4
Density (DIN 51757, 20 °C)	g/cm ³	approx. 1.04
Pour Point (ISO 51586)	°C	approx. -5
Surface tension (EN 14370, 1 g/l in distilled water, 23 °C)*	mN/m	approx. 30
Wetting (EN 1772, distilled water, 23 °C, 2 g Soda ash/l)		
0.5 g/l	s	>300
1.0 g/l	s	>300
2.0 g/l	s	>300
Foam volume (EN 12728, pg. 1, 40 °C, 2 g/l water at hardness of 1.8 mmol Ca-ions/l, after 30 s)	cm ³	approx. 90

* Applying Harkins-Jordan correction.

The above information is correct at the time of going to press. It does not necessarily form part of the product specification. A detailed product specification is available from your local BASF representative.

Solubility

Details on the solubility of Plantatex® HCC in various solvents are given in the table below (Solubility 10% at 23 °C).

Plantatex® HCC

Distilled water	–
Potable water (2.7 mmol Ca ²⁺ -Ions/l)	–
Caustic soda (5%)	–
Hydrochloric acid (5%)	–
Salt solution (5%)	–
Solvent naphtha	–
Ethanol, Isopropanol	–
Aromatic hydrocarbons	–

+ = *clear solution*

± = *sparingly soluble (insoluble sediment)*

– = *insoluble (phase separation)*

○ = *forms an opaque soluble, homogeneous emulsion*

Viscosity

The relationship between viscosity and temperature is always an important point to consider when Plantatex® HCC is stored or shipped. This table shows the connection (Brookfield LVT):

Temperature (°C)	Viscosity (mPa·s)
0	> 100000
10	> 100000
20	1200
23	1000
30	700
40	50000
50	> 100000
60	35000

We would recommend the preparation of 10 – 25% stock solutions of Plantatex® HCC if it is to be used in the form of very dilute solutions, or if it is to be added to other solutions. This makes it very much easier to dilute it later on.

Viscosity of Plantatex® HCC after addition of (23 °C, Brookfield LVT):

Water addition (%)	Viscosity (mPa·s)
+ 10	700
+ 20	450
+ 30	300
+ 40	200
+ 50	150
+ 60	100
+ 70	50

Storage

- a) The storage temperature of Plantatex® HCC should not be allowed to exceed 40 °C. This is important to avoid potential melting of wax dispersion during the transport!
- b) Liquid that has solidified or that shows signs of sedimentation should be heated to max. 40 °C and homogenized before it is processed. Please mix sufficiently prior to use.
- c) Drums that have solidified or that have begun to precipitate should be reconstituted by gentle heating, preferably in a heating cabinet. The temperature must not be allowed to exceed 50 °C. Please mix sufficiently prior to use. This also applies if drums are heated by external electrical elements. Internal electrical elements should not be used because of the localized anomalies in temperature that they cause.
- d) During longer storage periods, separations might occur which, if necessary, can be eliminated by stirring preferably processed at temperatures between 15 and max. 40 °C.
- e) At temperatures below 10 °C the pumpability can suffer due to viscosity increase. This is product specific and can be reversed through tempering to 20 – 25 °C and stirring.
- f) Plantatex® HCC must be blanketed with nitrogen if it is stored in heated tanks at approx. 40 °C to prevent it from coming into contact with air. Constant, gentle stirring helps to prevent it being discolored or damaged as a result of prolonged contact with electrical elements or external heating coils.
- g) At storage temperatures above 40 °C the viscosity may increase and is not totally reversible.

Materials

The following materials can be used for tanks and drums:

- a) Stainless steel 1.4306 - AISI 304 L stainless steel (X2 CrNi 1911)
- b) Stainless steel 1.4401 - AISI 316 stainless steel (X5 CrNiMoTi 17122)
- c) Stainless steel 1.4571 - AISI 316 Ti stainless steel (X6 CrNiMoTi 17122)
- d) Stainless steel 1.4541 - AISI 321 stainless steel (X6 CrNiTi 1810)

Shelf life

Provided it is stored properly and drums are kept tightly sealed, Plantatex® HCC has a shelf life of at least 12 months in its original packaging.

Safety

We know of no ill effects that could have resulted from using Plantatex® HCC for the purpose for which it is intended and from processing it in accordance with current practices.

According to the experience that we have gained over many years and other information at our disposal, Plantatex® HCC does not exert harmful effects on health, provided it is used properly, due attention is given to the precautions necessary for handling chemicals, and the information and advice given in our Safety Data Sheets are observed.

Please refer to the latest Safety Data Sheet for detailed information on product safety.

Note

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