

TECHNICAL PRODUCT INFORMATION

Cartaguard KTX Liquid

Oleophobic and hydrophobic sizing chemical for imparting grease, oil, and water resistance to paper or board for food packaging

Cartaguard KTX liquid is a highly effective water based fluorochemical for grease resistance of food packaging paper. It can be applied on the paper surface or in the wet end.

Cartaguard KTX liquid does not contain perfluorooctanoic acid (PFOA), i.e. PFOA level is below the detection limit.

Cartaguard KTX liquid is weakly cationic, so compatibility with other anionic size-press additives must therefore be predetermined. Previous studies have however demonstrated its compatibility with both cationic and non-ionic starch.

Cartaguard KTX liquid is compliant for use as a surface refining and coating agent in paper and board intended for food contact applications according to BfR recommendations XXXVI and XXXVI/2 (Baking applications), and to FDA (21CFR §176.170 and §176.180).

Cartaguard KTX liquid is suitable for use in microwave and conventional ovens up to a temperature of 220°C.

1. Specifications

Every batch of **Cartaguard KTX liquid** is checked to ensure that it meets the specifications below.

Solid content (%)	21.0 - 23.0
pH	2.0 - 5.0
Viscosity (mPa.s)	20 – 50

2. Additional Data

The information in this section is not subject to constant monitoring nor is it part of the specification for this product, as such this information is given solely to describe the product.

Appearance	Pale yellow to brown liquid
Ionic character	Weakly cationic
Flash point	>100°C
Dilutability	Miscible with water in all proportions
Stability	6 months from date of manufacture
Freeze thaw	Freezing point at about -4°C. Reversible on warming.
Density	1.1

3. Application

3.1. For surface application in the size-press/film-press

Usage rates of **Cartaguard KTX liquid** normally come within the range 0.4% - 1.5% of liquid product based on the weight of paper, and are dependent on the required level of resistance to grease and oil.

The performance of the fluorochemical is strongly influenced by the choice of fibre, filler, degree of refining, internal sizing and basis weight of the paper. Addition rates can therefore be reduced through careful manipulation of these factors.

We recommend to stir well the working solution before use and to use it quickly after preparation. To optimise the performance of **Cartaguard KTX liquid**, it is also recommended to use some additives such as a wetting agent. A water-soluble polymer can be employed as a vehicle for the fluorochemical in the size-press. Typically, this polymer would be cationic, anionic or non-ionic starch although strongly anionic size-press may lead to a slight loss in efficiency.

Due to the cationic nature of **Cartaguard KTX liquid**, this product is not sensitive to the presence of hard water ions.

Cartaguard KTX liquid is a fluorochemical polymer and, due to its highly surface active character, it will generate foam under shear conditions. Foam generation can be minimized by careful process control, however it is often necessary to employ a foam control agent to prevent the build up of foam. Your Archroma representative will be able to recommend a suitable product for the size-press formulation. The most effective use of **Cartaguard KTX liquid** is often seen on unsized papers which allows better penetration of the product into the sheet. This is most relevant in the higher specification barrier papers and for applications where the paper is to be creased.

Cartaguard KTX liquid can be dried under normal conditions (100-130°C).

A typical size-press solution would be made up of: 3% **Cartaguard KTX liquid** of the size-press colour and 0.01% defoamer

3.2. For wet-end applications

Cartaguard KTX liquid is normally added to the thick stock, after the refiners, at a level of 0.4 to 3% product as supplied, based on the weight of paper.

Cartaguard KTX liquid has good affinity for cellulosic fibre and can be retained in the sheet using products such as fixatives, paper strengthening and sizing agents.

4. General Information

An MSDS is available from your local Archroma representative.



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