

Paper Business

Cartafluor[®] CFX-DP liquid

Technical Product Information



Exactly your chemistry.

Provisional

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

Creating Value in a World of Paper

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Cartafluor CFX-DP liquid is a highly efficient water-based fluoropolymer solution, designed for oil and grease resistance of food packaging paper. It can be applied on the paper surface or in the wet end.

Cartafluor CFX-DP liquid does not contain perfluorooctanoic acid (PFOA), i.e. PFOA level is below the detection limit.

Cartafluor CFX-DP 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.

Cartafluor CFX-DP 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).

Cartafluor CFX-DP liquid is suitable for use in microwave oven.

Specification

These technical data are determined for each batch before its release by our quality control laboratory.

Solid content	19-21%
pH	3 - 6
Viscosity	20 – 50 mPa s

Additional Data

These data are used solely to describe the product. They are not subject to constant monitoring or part of the specification.

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 frost
Density	1.1

1. How to use Cartafluor CFX-DP liquid

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

Usage rates of **Cartafluor CFX-DP 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 fiber, 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 using it and to use it after preparation. To optimise the performance of **Cartafluor CFX-DP 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 media may result in a slight drop in efficiency.

Due to the cationic nature of **Cartafluor CFX-DP liquid**, this product is not sensitive to the presence of hard water ions.

Cartafluor CFX-DP 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 chemical to prevent the build up of foam. Your local Clariant representative will be able to recommend a suitable product for the size-press formulation

The most effective use of **Cartafluor CFX-DP liquid** is often seen on unsized papers, which allow 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.

Cartafluor CFX-DP liquid can be dried under normal conditions (100-130°C).

A typical size-press solution would be made up of: 3% **Cartafluor CFX-DP liquid** of the size-press color and 0.01% Antimussol® AFC as a defoamer

1.2. For wet-end applications

Cartafluor CFX-DP 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.

Cartafluor CFX-DP liquid has good affinity for cellulose fiber and can be retained in the sheet by using products such as fixatives, paper strengthening and sizing agent.

An MSDS is available from your local Clariant representative.

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