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## Technical Information

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# Styronal<sup>®</sup> D 516 ap

(Formerly Styronal D 516 )

**Aqueous polymer dispersion used in coating of paper and board.**

<sup>®</sup> = Registered trademark of  
BASF Aktiengesellschaft

## Styronal D 516 ap

**Nature** Aqueous dispersion of styrene & butadiene.

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### Product specifications

Colour & appearance	: White viscous liquid
Solids content ( 140°C / 30 minutes)	: 49 - 51 %
Viscosity at 23°C ( Brookefield RVT, Spindle 2, 20 rpm)	: 120 - 420 mPas
pH ( as such )	: 6.0 - 7.0

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### Other properties

Density	: 1.01 g/cm <sup>3</sup>
Dispersion type	: Anionic
Plasticizer content	: None
Thinnability with water	: Freely miscible
Pigment binding capacity	: Very high
Resistance to frost	: Not resistant.
Minimum film forming temperature	: < 2°C
Mean particle size	: ca. 0.175 microns

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### Properties of the film

Hardness	: Low
Tack	: Slight tack.
Stability to light	: Very slight yellowing.

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### Compatibility

When used properly, Styronal D 516 ap is compatible with other inputs used conventionally in coating colours for paper / board coating.

Manufacturers must carry out their own trials for developing products based on Styronal D 516 ap as, in manufacture and use, the compatibility of their components and final performance is affected by a large number of factors, which we cannot cover exhaustively in our own trials.

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### Application

Styronal D 516 ap is a binder suitable for coating paper and board. It is mainly used for sheet offset papers.

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### Processing

The pH of pigment slurries should be in the neutral-to-alkaline range (7.0 – 9.0) before Styronal D 516 ap is added. The dispersion should not be subjected to excessive shear, and care should be taken to avoid air being entrained.

We recommend the use of rotary displacement pumps for coating colours prepared with Styronal D 516 ap. All pipelines and coating equipment should be flushed thoroughly with cold water immediately after shutting down the coater.

Paper coaters have to carry out their own trials when developing products based on Styronal D 516 ap. Its compatibility with other ingredients, its stability during coating, and its ability to adhere to different substrates, are affected by a variety of factors which are too numerous for us to take into account in our own trials.

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## Safety

Attention should be paid to the normal precautions for handling chemicals and to the measures prescribed in the local health regulations. The place of work must be well ventilated, skin care measures should be adopted and safety goggles should be worn. A MSDS for Styronal D 516 ap is available.

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## Physiological Data

Styronal D 516 ap does not pose any risk to health when it is used for the purpose for which it is intended and principles of sound industrial practice are observed.

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## Labelling

According to the data available at our disposal, Styronal D 516 ap is not a hazardous product as per guidelines for Classification, Packaging and Labelling of Dangerous Substances.

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## Food Contact Applications

The composition of Styronal D 516 ap conforms to the requirement of the following legislation.

- The German health authorities' recommendations\* on paper and board for food-contact applications.
- United States Food and Drug Administration Regulations 21 CFR 176.170(Component of paper board in contact with aqueous and fatty foods) and 21 CFR 176.180(Component of paper and paper board in contact with dry foods), according to current status.

There are no objections under German regulations\*\*to Styronal D 516 ap being used for toys or for consumer articles that come into contact with food, provided its processed properly. Manufacturers are responsible for ensuring that their consumer goods conform to these regulations.

\*Deutsches Bundesinstitut fuer gesundheitlichen Verbraucherschutz und Veterinaermedizin(BgVV),and Empfehlung XXXVI,"Papiere,Kartons und Papen fuer Lebensmittel kontakt", according to current status.

\*\*Lebensmittel-und Bedarfsgegenstaendegesetz, Paragraph 5,Section 1, No.1(lebensmittelbedarfsgegenstaende) and No.5(Spielwaren).

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## Storage

Provided that Styronal D 516 ap is stored in tightly closed containers or tanks and not kept under direct sunlight, it has a shelf life of approximately 6 months.

Styronal D 516 ap should not be allowed to come into contact with any unprotected metals except stainless steel during storage and processing.

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## Note

The information submitted in this publication is based on our current knowledge and experience. In view of the many factors that may affect processing and application, these data do not relieve processors of the responsibility of carrying out their own tests and experiments; neither do they imply any legally binding assurance of certain properties or of suitability for a specific purpose. It is the responsibility of those to whom we supply our products to ensure that any proprietary rights and existing laws and legislation's are observed.

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