



Defoamer based on tri-n-butyl phosphate

Description

High effective silicone-free defoamer for emulsion paints, paper coatings, glues, adhesives, textile auxiliaries and concrete additives

Characteristic data

Appearance:	nearly colourless liquid	
Acid value, mg KOH/g:	max. 0.05	DIN 53402
Density (20 °C), g/cm ³ :	0.975 – 0.980	DIN 51757
Hazen color value, Pt/Co:	max. 50	DIN EN ISO 6271
Refractive index (20 °C), nD:	1.423 – 1.425	DIN 53491
Water content, %:	max. 0.2	DIN 51777
Content of TBP, %:	min. 99.0	GC TBP
Content of n-Butanol, %:	max. 0.1	GC TBP
Flash point, °C:	> 150 (typical)	in crucible DIN 51376

Properties

Borchers® AF T both destroys foam and prevents its formulation. In general, no chemical reaction takes place with the product to which it is added. Only in high alkaline media is very slow hydrolysis to be expected.

Applications

Borchers® AF T is used successfully in many applications. This is demonstrated by the following examples:

Emulsion paints

Borchers® AF T is used successfully to break down foam formed during the manufacture of emulsion paints. The concentration required for this purpose is in the range 0.05 - 0.20 %, calculated on the ready-to-use formulation. The optimum addition must be determined by trials carried out under operating conditions. If the emulsion paints are stored for prolonged periods, **Borchers® AF T** may migrate into the synthetic binder used and lose its effect during application of the paint. If an antifoam effect is required in the paint during application, it should be formulated using our *Baysilone®* Antifoam.

Glues and adhesives

Borchers® AF T is ideal for improving the wettability of animal glues (powders or flakes). The concentrated product is sprayed in an addition of up to 0.05 % on the supply form. Suitable precautions must be taken to prevent irritation of the respiratory organs. When working with casein glues, e.g. in the manufacture of paper tubes, the concentrated **Borchers® AF T** is stirred slowly into the casein solution. It should be ensured that the antifoam is distributed well. Generally speaking, an addition of approx. 0.1 % **Borchers® AF T** is required.



Paper coatings (printed and colored paper, wallpaper)

Destructive foam formation often occurs in paper coatings formulated with binders based on casein, carboxy methyl cellulose, starch and other such substances, either used alone or in combination with synthetic emulsions, such as are used in the manufacture of printed and colored paper and as the base coat on wallpaper, etc. Particularly when working with coating machines, cratering is caused by the bursting of air bubbles which have been incorporated during application and spreading of the coating on the paper. This can be prevented by adding **Borchers® AF T**.

It is best to add the antifoam in concentrated form when pasting up the white or color pigments. If necessary however, the product can be thinned - approx. 1:1 to 1:10 in hydrocarbons such as white spirit - and added to the finished coating. Alcohol is less suitable as the solvent as it may cause precipitation of the casein solution or the polymer dispersion. Flocculation can be prevented by ensuring the good distribution of the antifoam in the coating.

The required addition of antifoam, which depends both on the composition of the coating and on the method of application, should be determined in trials. As a guide value we recommend an addition of 0.05 - 0.30 % **Borchers® AF T**, calculated on the ready-to-use coating.

Textile auxiliaries

Borchers® AF T is used successfully to overcome the foaming problems experienced in the textile industry. It is used with particular success in wetting agents which must retain their effect in the presence of large amounts of alkalis or salts, e.g. in combinations containing Bayer's Mersolat® products.

Concrete additives

Borchers® AF T is a valuable aid in the manufacture of concrete additives, especially liquifiers. In suitable combinations, e.g. with products based on lignin sulfonate, it is possible to reduce the water content of concrete whilst increasing its compressive strength or to improve the flow properties without reducing the water content. In Germany, certification (PA test symbol) must be obtained for the ready-to-use formulation from the institute for Construction Technology in Berlin for application in standard types of concrete.

Use and Dosage

Borchers® AF T can be used in its supply form or thinned in the ratio approx. 1:1 to 1:10 in suitable organic solvents, e.g. alcohols, hydrocarbons, esters, etc. It is best to add the antifoam to the product at risk of foaming during manufacture as this prevents the formation of foam right from the start.

To break down foam which has already formed, we recommend finely distributing the product on the foam layer, e.g. by spraying. As the amount of antifoam required depends largely on the amount of foam which has formed, the addition must be determined in each individual case. Generally speaking, additions of 0.01 - 0.50 % are used

Articles for food-contact applications and food packages

According to the following recommendation of the German Federal Institute for Consumer Health and Veterinary Medicine (BGVV), **Borchers® AF T** is suitable for use in the manufacture of articles for food-contact applications as defined in § 5 Para. 1 No. 1 of the German Law on Articles for Food-Contact Applications:

- XIV:** Polymer Dispersions of July 1, 1979: as an antifoam in coating articles for food-contact applications (dispersion films may not contain more than 0.1 %)
- XXI:** Articles Based on Natural and Synthetic Rubber for Food-Contact Applications, September 1, 1979
- XXXVI:** Paper and Board for Food Packaging, August 1, 1978

Borchers® AF T is not suitable for direct application in foodstuffs



Storage

Protect from the effects of weathering and store at temperatures between 5 and 30 °C.
Once opened, containers should be resealed immediately after each removal of the product.

Safety

Please refer to our safety data sheet for information relating to product safety.

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