

# Fluorescent Whitening Agents For Paper



## **MEGA WHITE AS LIQUID**

### APPLICATION

Speciality FWA for size press and coating application  
High-yield FWA for very high whiteness & Brightness levels

### FORMULATION

Environmentally friendly product

### SPECIAL BENEFITS

Most Economical

Ideal FWA for size-press application on Acid, Neutral size paper,  
Alkaline size paper to reaching high  
whiteness levels

Out standing performance in the presence of Medium to high  
co-binder level

Works well in size press application.  
Reaching high whiteness levels



## MEGAWHITE AS LIQUID

Megawhite AS Liquid is a hexsulpho type Fluorescent Whitening Agent [FWA] to be used exclusively for application in surface coating and size press liquors. It imparts high to very high whiteness and brightness to the treated paper.

**Uses**            **Megawhite AS Liquid at the Size press.**

**Megawhite AS Liquid** can be incorporated in size press liquors based on Oxidised / Modified starches and applied in combination with PVA, CMC and liquors containing pigments. Performance is almost un-affected by the pH of base paper

**Megawhite AS Liquid in the Surface coatings.**

**Megawhite AS Liquid** gives high and very high whiteness when applied in surface coatings with natural and synthetic binders and commercial pigments at pH 7.0 to 11.0. The effect depends on the type and amount of co-binders such as CMC, PVA and synthetic products.

<b>Properties</b>	<b>Appearance</b>	Light Yellow to yellowish brown Liquid
	<b>Chemical constitution</b>	Diaminostibene disulphonic acid derivative
	<b>Miscibility</b>	Can be mixed with water in all properties
	<b>pH</b>	9.0 -11.0
	<b>Density at 25 °C</b>	1.12 ± 0.05 g/cm <sup>3</sup>
	<b>Viscosity at 25 °C</b>	Lower than 75 mPa.s (D= 10S <sup>-1</sup> )
	<b>Ionic Character</b>	Anionic

### Storage stability

**Megawhite AS Liquid** has good stability to storage an cold temperatures. Prolonged storage at temperatures below 10 °C can result in product freezing. Frozen product can be restored to its original state without loss of effectiveness be leaving to stand at room temperature or heating briefly to temperature no higher than 50 °C.



- **Shade**

**Megawhite AS Liquid** gives a slightly reddish white in Surface Sizing & Surface coating application. It can added up to 30 gpl in size press liquor.

### **Fastness Properties**

The product's light fastness and stability to acids and alkalis are comparable to those of other fluorescent whitening agents with the same chemical constitution.

- **Ecology / toxicology**

The usual hygiene and safety rules for handing chemicals must be observed in storage, handling and use.

Median lethal dose in rats (LD50) is about 5000-mg/kg-body weight. Tests with rabbits showed no irritation on the skin or mucous membranes.

The product is partially eliminated by the microorganisms in activated sludge and does not impair their effectiveness in amounts of up to 400mg/l. Zebra fish withstand up to 1000 mg/l (the highest concentration tested) on brief exposure (48 hours).

- **Megawhite AS Liquid at the size press application**

**Megawhite AS Liquid** performs well with the conventional starch qualities used at the size press. It can be used together with CMC, PVA and anionic and slightly cationic synthetic sizing additives. Its effectiveness is not influenced by the pH of the base paper.

It is preferable to add Megawhite AS Liquid undiluted to the ready-prepared size press liquor.

*Average dosage 2.0-40 g/l Megawhite AS Liquid in size press liquor.*



## Megawhite AS Liquid in coating.

**Megawhite AS Liquid** can be used to produce high and very high white coated papers.

FWAs of the diaminostibene disulphonic acid derivative class have adequate affinity for coating pigments and synthetic binders based on copolymers of acrylic acid ester and butadiene styrene. Carriers, Known as co-binders, are therefore essential in amounts of about 1.0% if the best effects, i.e. the highest whiteness, are to be achieved with Megawhite AS Liquid. Suitable carriers, in order of their effectiveness, are PVA, CMC, Starch and synthetic co-binders.

For coating mixes with a low co-binder content, we recommend Megawhite AS Liquid.

The best effects of Megawhite AS Liquid are obtained with the following amounts of co-binders, based on solids content:

PVA	1.2 parts
CMC	1.2 parts
Starch	6.0 parts
Synthetic co-binders	0.4 parts

For technical reasons, it is not always possible in practice to incorporate the ideal amount of co-binder required for optimum effectiveness of the FWA.

Megawhite AS Liquid has no effect on the flow properties of coating compounds of widely differing compositions. It can be incorporated in coating compounds ranging in pH from 7.0 to 11.0.

The FWA can be added, preferably undiluted, at almost any stage during preparation of the coating compound.

Megawhite AS Liquid can be added undiluted at almost any stage in the preparation of coating compounds.

*Average dosage*            *0.2 - 4.0 parts based on the coating pigment.*

The information and recommendations contained in this data sheet are to the best of our knowledge correct, but no guarantee is given in this respect and no responsibility can be accepted for the results obtained.

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