



Paramount Minerals and Chemicals Limited

(An ISO 9001- 2000 Certified Company)

Parawhite VPM-AF Liquid

Chemical Description	Disulphonic Derivative of 4,4'-diamino-stilbene-2,2'-disulphonic acid
Ionicity	Anionic
Shade	Bluish Violet
Substantivity	Parawhite VPM-AF Liquid is a high affinity Optical Brightener and is absorbed quickly on cellulosic fibres
Form supplied	Light Yellow to Dark Brownish liquid
Density at 25 deg C	1.18-1.20 g/cm cube
pH value 1% aqueous solution at 25-30 deg C.	8.50-9.50
Fastness	Parawhite VPM-AF Liquid has good fastness to Light, Alkali and Chlorine. Stability to Alum is good at pH 5.5 and above
Miscibility at 10 deg C. and above	Can be mixed with water in all proportions
Viscosity at 25 Deg C	Maximum 50 mPa.s
Storage stability	2 years. Parawhite VPM-AF Liquid is stable at temperatures above 0 deg C. At temperatures of less than 0 deg C. precipitation may occur, but the precipitate dissolves again on heating. This does not impair the effectiveness of the product.
Recommended for Use	In the pulp. Also may be used in some pigment coating formulations.

Application in Paper

In the mass Parawhite VPM-AF liquid should be added where the stock is vigorously agitated. for discontinuous addition, e.g. in the pulper, beater or mixing chest, prior dilution of Parawhite VPM-AF liquid is necessary. It is advisable to prepare a highly dilute Parawhite VPM-AF liquid solution and add it slowly to prevent mottling. Generally 0.2 to 0.3% Parawhite VPM-AF liquid to the weight of the dry pulp is sufficient for the medium degree of whiteness. However, in special cases Parawhite VPM-AF liquid up to 0.75% of the weight of dry pulp can be used to get very high degree of whiteness.

To obtain the highest yield with Parawhite VPM-AF liquid, we recommend that the additions should be made in the following order:

Pulp

Fillers

Parawhite VPM-AF liquid

Rosin size

Shading dyestuff

Alum

Ecology/toxicology

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

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