94900 Rhodamine B

C.I. Number: 45170
Formula: $C_{28}H_{31}ClN_2O_3$
Molar mass: 479.02 g/mol
CAS Number: 81-88-9

Specification:

Storage temp.	+15 – 25°C
Appearance	powder
Color:	red
Odor:	almost odorless
Solubility in water (20°C)	34 g/l
pH Value: (at 50 g/l H_2O, 20°C)	~ 2.0
Melting point:	199 – 201°C
Density (20°C):	1.31 g/cm^3
Bulk density:	~ 240 kg/m^3

The rhodamine group consists of pyronine derivatives used as fairly lightfast, highly fluorescent dyes for dyeing silk and wool. They are obtained by condensation of phthalic anhydride with alkylated m-aminophenols. This produces bluish-red or bright-red dyes that are chemically related to fluorescein.

Rhodamine B (B=brilliant pink) forms green crystals or a reddish purple powder that dissolves readily in water with a bluish red color and strong fluorescence. It is obtained from diethyl-m-aminophenol and phthalic anhydride. The green complementary color of daylight is absorbed by the substances colored with rhodamine and partly converted into longer-wave, orange rays.

Due to this fluorescence, some fabrics dyed pink show a peculiar orange glow in the folds. Rhodamine B is also used in microscopy for vital staining as well as for the detection of Sb and W. In criminalistics, for example, wallets are inconspicuously dusted with rhodamine B. When the thief touches the bag, he gets colored fingers that allow a conviction.

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