BRIGHT DYES ®
Division of Kingscote Chemicals

WATER TRACING DYE

FLT ORANGE PRODUCTS

TECHNICAL DATA BULLETIN

Bright Dyes FLT Orange products are specially formulated versions of Xanthene dye for convenient use in water tracing and leak detection studies. This fluorescent orange dye is certified by NSF International to ANSI/NSF Standard 60 for use in drinking water. It may be detected visually, by ultraviolet light and by appropriate fluoremetric equipment. Today it is most often used visually. Visually the dye appears orange to red-orange, depending on its concentration and under ultraviolet light as bright yellow.

The dye is resistant to absorption on most suspended matter in fresh and salt water. However, compared to Bright Dyes FLT Yellow/Green products it is slightly more resistant to degradation by sunlight but less resistant than our FWT Red products. As always the suitability of these products for any specific application should be evaluated by a qualified hydrologist or other industry professional.

General Properties	Tablets	Liquids	Powders
Detectability of active ingredient [1]	Visual <100 ppb	Visual <100 ppb	Visual <100 ppb
Maximum absorbance wavelength [2]	515/535 nm	515/535 nm	515/535 nm
Appearance	Brick red convex 1.6cm diameter	Reddish-Orange aqueous solution	Brick red fine powder
NSF (Max use level in potable water)	0.3 ppb	0.8 ppb	0.1 ppb
Weight	1.35 gms $\pm$ 0.05		
Dissolution Time [3]	50% < 3 minutes 95% < 6 minutes		50% < 3 minutes 95% < 6 minutes
Specific Gravity		1.05 $\pm$ 0.05 @ 25° C	
Viscosity [4]		1.8 cps	
pH		8.5 $\pm$ 0.5 @ 25° C	

Coverage of Products	One Tablet	One Pint Liquid	One Pound Powder
Light Visual	350 gallons	40,000 gallons	604,000 gallons
Strong Visual	35 gallons	4,000 gallons	60,400 gallons

Caution: These products may cause irritation and/or staining if allowed to come in contact with the skin. The use of gloves and goggles is recommended when handling this product, as with any other dye or chemical.

[1] In deionized water in 100 ml flask. Actual detectability and coverage in the field will vary with specific water conditions.
[2] No significant change in fluorescence between 6 and 11 pH.
[3] (One tablet, 1 gram of powder), in flowing deionized water in a 10 gallon tank.
[4] Measured on a Brookfield viscometer, Model LV, UL adapter, 60 rpm @ 25° C.

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