

## Benetex<sup>®</sup> OB-M1 Fluorescent Whitening Agent

**Introduction:** Benetex<sup>®</sup> OB-M1 is a light fast, chlorine stable, highly soluble fluorescent whitening agent. It is compatible with conventional and compact detergent powders, liquid detergents, industrial detergents as well as soap bars, softeners, and boosters. It is effective at relative low loading levels over the whole temperature range from cold to medium washing temperatures. Optical brighteners create brilliance by absorbing UV light, modifying the wavelength of the light and then emitting the light in a fluorescent fashion. Benetex<sup>®</sup> OB-M1 can also be used as a tracer in various water systems.

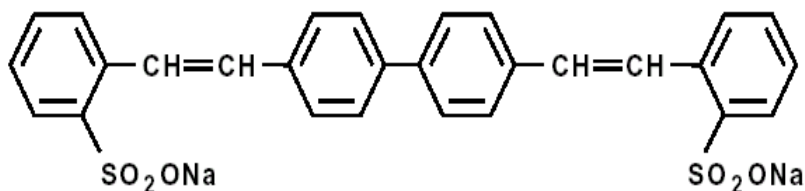
**Material Description:** Fluorescent Whitening Agent

**Chemical Name:** Derivative of distyryl biphenyl (DSBP) compound

**Empirical Formula:** C<sub>28</sub>H<sub>20</sub>S<sub>2</sub>O<sub>6</sub>Na<sub>2</sub>

**CAS #:** 27344-41-8

**Chemical Structure:**



**Physical Properties:**

Appearance:	Yellowish, greenish crystalline powder
Molecular Weight:	562.6
Ionicity:	Anionic
Volatile Matter:	< 0.5% Max
Solubility (in water):	Very soluble ~25gr/l at 25°C ~300 gr/l at 95°C
Absorption maximum:	349-351 nm in distilled water
E (1%, 1 cm):	1143± 38

**Applications:** The recommended areas of application for Benetex OB-M1 and the suggested levels of incorporation are summarized below:

Conventional detergent powders	0.05 – 0.25 %
Compact detergent powders	0.10 – 0.40 %
Unstructured liquid detergent	0.05 – 0.40 %
Structured liquid detergent	0.05 – 0.15%
Anhydrous liquid detergents	0.10 – 0.40 %
Detergent bars	0.05 – 0.15 %
Soap bars	0.02 – 0.05 %
Industrial detergents	0.20 – 1.00 %
Rinse softeners	0.02 – 0.05 %
Boosters	0.20 – 1.00 %

Mayzo, Inc	Product Data Sheet for Benetex OB-M1	Supersedes: 10/23/03
	Creams	0.05 – 0.15 %

**Advantages:**

- Improves detergent color: Benetex® OB-M1 significantly improves the white appearance of detergents.
- Whiteness delivery: Benetex® OB-M1 yields intense white effects on cellulosic fibers over the whole temperature range from cold to hot washings.
- Stability: Benetex® OB-M1 is stable against bleaching agents such as hypo-chlorite and peroxide and also to alkali, acids, and perspiration.
- Excellent exhaustion rate.
- High solubility in water, even at low temperatures.
- Very good wet and dry light fastness.
- Good leveling and low spotting FWA.
- Useful as a tracer in water systems.

**Loading**

**Instructions:**

The loading data and results are based on laboratory work (and field testing) under controlled conditions and do not necessarily indicate the result that the buyer or user will attain. For this reason we strongly recommend testing of your own system under the actual conditions of processing and end-use prior to full scale testing. For the recommended loading concentrations see “**Applications**” above. The Benetex® OB-M1 loading levels are from 0.02 to 1.00 %.

**Packaging:**

Benetex® OB-M1 is available in powder form in a 100 lb fiber drum, net weight, with an inner PE liner.

**Storage:**

This product may be stored up to one year in a sealed container. Containers should be stored in a cool, dry area. Extended storage at elevated temperatures or exposure to direct heat or sunlight could reduce product life. Keep containers sealed when not in use.

**Toxicity & Safety:**

This material is not intended for use in products for which prolonged contact with mucous membranes or abraded skin, or implantation within the human body is specially intended, unless the finished product has been tested in accordance with the Food and Drug Administration and/or other applicable safety testing requirements. Because of wide range of such potential uses, Mayzo, Inc. is not able to recommend this material as safe and effective for such uses and assumes no liability for any such uses. Read and understand the Material Safety Data Sheet before using or handling this product.

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