

# MAYZO

**Benacure® 651**

**Photoinitiator**



*“Customer Focused Innovative Solutions”*

6577 Peachtree Industrial Blvd. • Norcross, Georgia 30092-3757

Phone: (770) 449-9066 • Fax: (770) 449-9070

[www.mayzo.com](http://www.mayzo.com)

# Benacure<sup>®</sup> 651

## Photoinitiator

### Introduction:

Benacure 651 (Benzil Dimethyl Ketal) is an efficient photoinitiator used to initiate the photopolymerization by UV or visible light of unsaturated polyesters and acrylates, in combination with mono- or multifunctional monomers.

### Material Description:

Photoinitiator

### Chemical Name:

2,2-Dimethoxy-1,2-diphenylethan-1-one

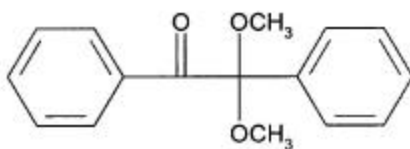
### Empirical Formula:

C<sub>16</sub>H<sub>16</sub>O<sub>3</sub>

### CAS #:

24650-42-8

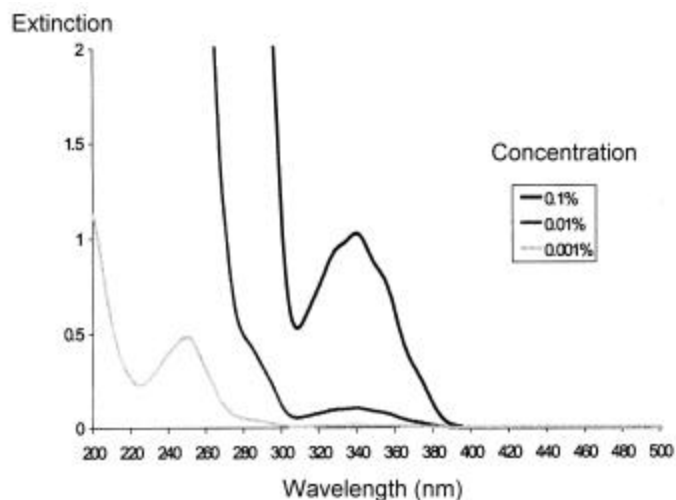
### Chemical Structure:



### Physical Properties:

Appearance:	White Crystalline powder
Molecular Weight:	256
Melting Range:	64-67°C
Specific Gravity:	1.17 (25°C)
Miscibility:	Insoluble in water
Assay:	99.0% min.

### Absorption Spectrum:



**Solubility at 20° C (g/100g solvent):**

Solvent	Solubility
Butyl Acetate	> 50%
Dipropylene Glycol Diacrylate (DPGDA)	30%
Glycerol Propoxylate Triacrylate (GPTA)	26%
Hexanedioldiacrylate (HDDA)	30%
Isobornyl Acrylate (IBOA)	>50%
Oligomeric Triacrylate	25%
Trimethylolpropanetrisacrylate (TMPTA)	26%
Tripropyleneglycoldiacrylate (TPGDA)	32%

**Applications:** Benacure 651 is especially efficient for acrylate and unsaturated polyester UV curable systems. Specific applications include: adhesives, printing inks, surface mount applications and photoresists. It is also recommended for use in clear coatings for plastic, paper and metal materials as well as fillers and topcoats for coating of wood and wood substitutes.

- Advantages:**
- High compatibility with acrylate and unsaturated polyester chemistries
  - Exhibits low odor in cured formulations
  - Low volatility
  - Excellent cure speed and hardness

**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. The recommended loading concentration varies depending on system composition, thickness, desired cure speed and hardness.

<b>Recommended concentrations:</b>	
Wood Fillers and Topcoats:	1.0 – 3.0 % Benacure 651
Printing inks:	2.0 – 6.0 % Benacure 651
Printing plates:	1.0 – 1.5% Benacure 651
Laminating adhesives:	2.0 – 4.0% Benacure 651
Photoresists:	2.0 – 6.0% Benacure 651

**Packaging:** Benacure 651 is available in 50 kgs (110lb) fiber drum.

**Storage:** This product should be stored at room temperatures below 30°C and should be kept dry. Extended exposure to elevated temperatures or visible light could reduce product life. Keep product away from ignition sources.

**Toxicity & Safety:** Read and understand the Material Safety Data Sheet before using or handling this product.

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 specifically 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.

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