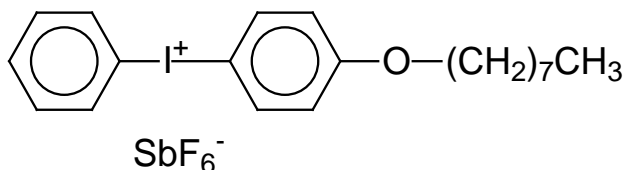


UVACURE® 1600

Cationic Photoinitiator

August 2017



INTRODUCTION

Thermally stable iodonium salt photoinitiators are used to induce the polymerization of epoxides and other cationically polymerizable materials on exposure to UV light. UVACURE 1600 is p-(octyloxyphenyl)phenyliodonium hexafluoroantimonate in solid form. It is compatible with most UV cationic cure systems and is especially useful for the rapid polymerization of thin clear coatings on metal, plastic, and paper substrates. Coatings cured using UVACURE 1600 generally exhibit excellent adhesion, particularly on metal substrates.

PERFORMANCE HIGHLIGHTS

UVACURE 1600 is characterized by:

- Finely divided, crystalline powder
- Excellent solubility in epoxy resin systems

UV cured products containing UVACURE 1600 are generally characterized by the following performance properties:

- No oxygen inhibition for UV cure
- Low shrinkage on curing
- Excellent adhesion to metals and plastics
- High gloss
- Resistance to yellowing
- Excellent electrical properties

The actual properties of UV/EB cured products also depend on the selection of other formulation components such as co-reactants, additives and photoinitiators.

SUGGESTED APPLICATIONS

UV cured coatings formulated with UVACURE 1600 can be used for:

- Metal coatings
- Overprint varnishes
- Plastic coatings
- Photoresists

SPECIFICATIONS

	VALUE
Melting point, °C	56-58
Sb Content, %	18.5-19.0

TYPICAL PROPERTIES

Appearance	White to tan powder
Soluble in methanol	

CHEMICAL ABSTRACT SERVICE NUMBER

121239-75-6

USAGE

The recommended level of UVACURE 1600 is 1-3% in clear coatings. The use of a sensitizer such as isopropylthioxanthone (ITX) or anthracene, and/or higher levels of UVACURE 1600 may be required in pigmented systems.

UVACURE 1600 can be blended with liquid UV cationic curable materials (epoxides, hydroxy functional materials, vinyl ethers) by simple mixing. Heating is not normally required.

Typically, UV cationic systems will be tack free within seconds after UV exposure. However, the UV energy level, formula composition, temperature, and relative humidity will influence this tack free time. UV cationic systems continue to polymerize after UV exposure, and full properties may not develop until several hours afterwards. This post UV curing will take place under ambient conditions, but can be accelerated with heat (65-200°C for 5-30 minutes). The application of heat immediately prior to UV exposure can allow faster line speeds and/or lower UV dose levels, and can mitigate the effects of high relative humidity.

PRECAUTIONS

Before using UVACURE 1600, see the Safety Data Sheet (SDS) for information on the identified hazards of the material and the recommended personal protective equipment and procedures.

STORAGE AND HANDLING

Care should be taken not to expose the product to sunlight, ignition sources, oxidizing agents, alkalis or acids. Storage and handling should be in stainless steel, amber glass, amber polyethylene or baked phenolic lined containers. Wash thoroughly after handling. Keep container tightly closed. Use with adequate ventilation.

UVACURE 1600 is thermally stable up to approximately 100°C for short periods of time; however, consult the SDS for the recommended storage temperature range for UVACURE 1600.

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