

## BENOX<sup>®</sup>A-70

Dibenzoyl Peroxide/Water wet granules

CAS# 94-36-0

Solid

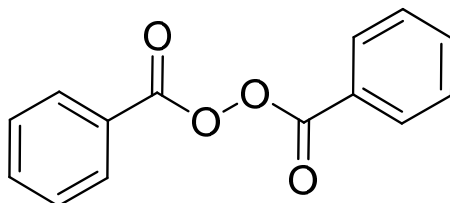
### Description

BENOX<sup>®</sup>A-70 is a free flowing, water-wet granular forms of dibenzoyl peroxide. In this form, this product are less flammable and shock sensitive than granular formulas containing little or no water. This Benox dibenzoyl peroxide products can be used as polymerization initiators for vinyl monomers and unsaturated polyester resins when the presence of water is not detrimental.

### Technical Data

Dibenzoyl Peroxide Content:	67-70
Water Content:	30-33
Assay:	99
Active Oxygen:	4.4-4.6
Form:	Fine, free-flowing
Color:	White
Iron, dry basis, max:	10 ppm
Total Chloride(as NaCl) Dry basis, max	1500 ppm
Organic Chloride(as BzCl) Dry basis, max	1100 ppm
Hydrogen Chloride, dry basis:	0.04
Benzoic Acid, dry basis:	0.30
Soluble In: (water compatibility varies with solvent concentration)	Organic Solvents
Insoluble In:	Water
SADT:	>176°F (80°C)
Storage Temp:	<80°F(27°C)
Max Transport Temp:	<80°F(27°C)

## CHEMICAL STRUCTURE



**Molecular Weight – 242.2**

**CAS No. 94-36-0**

THERMAL DECOMPOSITION DATA (Half-life in benzene):

Temperature (°C)	60	70	80	90	100	110
Hours	43	13	4	1	0.4	0.1

Half-life data is generated by using 0.2 moles/liter of the specific peroxide dissolved in a solvent, generally benzene. The half-life of this highly diluted peroxide is the time required for decomposition of one-half of the peroxide. The rate of decomposition is directly related to the rate of generation of free radicals, and this half-life data can provide guidance in the selection of the optimum peroxide for a given application. This half-life data is specific to the solvent used and applies to thermal decomposition rather than activated decomposition.

## Application

BENOX<sup>®</sup>A-70 product can be used as free radical polymerization initiators and cross-linking agents in a wide variety of applications. The water wet dibenzoyl peroxide dissolves more rapidly than the dry form of the product. The water separates and settles to the bottom where it can be withdrawn if desired.

BENOX<sup>®</sup>A-70 is an effective initiator in the polymerization and co-polymerization of numerous vinyl monomers which include styrene, methyl methacrylate, acrylic esters, acrylonitrile, vinyl acetate, vinyl chloride, and ethylene. Typical use levels are 0.1% to 2.0% in bulk, solution, emulsion and suspension polymerizations that operate at temperatures from 180°F/82°C to 300°F/149°C.

Dibenzoyl peroxide is also used in chemical reactions that produce styrenated and methacrylated alkyd resins and other epoxy resin esters. Other uses include drying agents for printing inks, bleaching agents, pharmaceutical preparations, organic chemical synthesis, and vulcanization of natural and synthetic rubbers.

One of the more frequent uses of dibenzoyl peroxide is for the free radical initiated polymerization and cross-linking of vinyl monomer unsaturated polyester resin systems. Generally, the granular dibenzoyl peroxide is dispersed in the vinyl monomer before addition to the monomer/resin system. Dibenzoyl peroxide may be used as an elevated temperature cure initiator or ambient temperature cure initiator after addition of an amine accelerator (e.g.

dimethylaniline) to the resin system. Use levels of peroxide initiator are from 0.75% to 2.0% (dry weight basis) on the weight of resin.

**CAUTION: NEVER MIX PROMOTERS AND PEROXIDES DIRECTLY TOGETHER. RAPID DECOMPOSITION RESULTING IN FIRE AND/OR EXPLOSION WILL OCCUR!**

BENOX<sup>®</sup>A-70 product is an excellent ambient temperature initiators when used in “two-pot” spray systems for unsaturated polyester resins. The accelerator is mixed with the resin in one side while the peroxide initiator is added to the second side. The two sides are then combined through a mixed chamber in the spray gun immediately prior to spraying.

#### SPECIAL NOTE

Users of BENOX<sup>®</sup>A-70 should be aware that after packaging, the water in the product would migrate to the bottom of the package. As a result, the assay of dibenzoyl peroxide will vary from the top to the bottom of the package. Therefore, if less than a package of BENOX<sup>®</sup>A-70 is to be used, the material should be well mixed before removing the required amount of the product.

#### PACKAGING, SHIPPING & AVAILABILITY

- The standard package sizes of BENOX<sup>®</sup>A-70 Granular Product is cases of 1x25 lb. polyethylene bag inside a fiberboard container. For custom package sizes, please contact your local distributor or United Initiators Inc.
- Classification – Please refer to the specific BENOX<sup>®</sup>A-70 Safety Data Sheet (SDS) under section 14 & 15, shipping & regulatory information. **NOTE:** SDS's for all United Initiators, Inc. products may be requested by contacting the company.
- BENOX<sup>®</sup>A-70 is available through a global network. Call United Initiators, Inc. for the name of the distributor in your area.

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