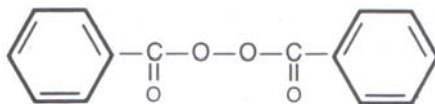


## BENOX<sup>®</sup>A-75

Dibenzoylperoxide  
CAS#94-36-0  
75 % water-wet granules

### Structural Formula



### Description

BENOX<sup>®</sup>A-75 is a free-flowing, water-wet granular form of dibenzoyl peroxide. In this form, this product is less flammable and shock sensitive than granular forms containing little or no water. This BENOX<sup>®</sup> dibenzoyl peroxide product can be used as a polymerization initiator for vinyl monomers and unsaturated polyester resins when the presence of water is not detrimental.

### Technical Data

Dibenzoyl Peroxide	73,5 – 76,5 %
Water	23 – 26%
Assay (as dry dibenzoyl peroxide), min.	99%
Active oxygen (wet basis)	4.86 – 5.05 %
Form	Fine, free-flowing granules
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%
Critical temperature (SADT)	70°C
Soluble in	Organic Solvents (water compatibility varies with solvent conc.)
Insoluble in	Water
Recommended storage temperature	Max 30°C (86°F) and Min 5°C (41°F)
Maintenance of activity as from date of delivery	6 months

## Half-life Data

### THERMAL DECOMPOSITION DATA (Half-life in Benzene)

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

Half-life data is generated by using 0.2 moles/litre 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-75 can be used as free radical polymerization initiator and cross-linking agent 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 The water separates and settles to the bottom where it can be withdrawn if desired.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-75 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 82°C to 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, bleach agent, 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.

The BENOX<sup>®</sup>A-75 is not suitable for medical and pharmaceutical application.

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 1 to 3% on the weight of resin.

BENOX<sup>®</sup>A-75 is an excellent ambient temperature initiator 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.

## Storage

Users of BENOX<sup>®</sup>A-75 should be aware that after packaging, the water in the product will 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 full package of BENOX<sup>®</sup>A-75 is to be used, the material should be well mixed before removing the required amount of product.

## Packaging

The standard package size of BENOX<sup>®</sup>A-75 is 3 x 5 kg (dry weight, 25 lb) polyethylene bags packed in a cardboard box. Weights are on a net weight basis.

## Disclaimer

This information and all further technical advice are reflecting our present knowledge and experience based on internal tests with local raw materials with the purpose to inform about our products and applications. The information should not be construed as guaranteeing specific properties of products described or their suitability for a particular application, nor as providing complete instructions for use. The information implies no guarantee for product and shelf life properties, nor any liability or other legal responsibility on our part, including with regard to existing third party intellectual property rights, especially patent rights. We reserve the right to make any changes according to technological progress or further developments.

Application and usage of our products based on our technical advice is out of our control and sole responsibility of the user. The user is not released from the obligation to conduct careful inspection and testing of incoming goods in order to verify the suitability for the intended application.

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