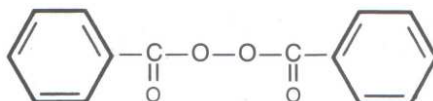


BENOX[®] C-30S

Dibenzoylperoxide
CAS#94-36-0
34 % powder with chalk and phthalate

Structural Formula



Description

White, free-flowing powder, consisting of 34% dibenzoyl peroxide, de-sensitised with a phthalic acid ester. This diaryl peroxide is used as an initiator (radical source) in the curing of unsaturated polyester, as well as hardening of methacrylate resins. Main application: curing of castings and moulded parts at ambient temperature in combination with amine accelerators, curing of roadmarking colours and coatings. Advantages: high solubility, high reactivity, free flowing powder, no acclomeration. BENOX[®] C-30S is available in different weights of minibags (0.1 to 1 kg).

Technical Data

Appearance	White, free-flowing powder
Peroxide Content	34 %
Active oxygen	2.20 %
De-sensitising agent	Chalk and phthalic acid ester
Bulk density	0.62 kg/l
Solubility	Insoluble in water, soluble in phthalates
"Kick-off" Temperature	Approx. 70°C
Critical temperature (SADT)	Approx. 60°C
Recommended storage temperature	Below 30°C
Maintenance of activity as from date of delivery	6 months
This product is in compliance with the ElektroG (EU-Directives: RoHS 2002/95/EG, WEEE 2002/96/EG)	

Half-life data

10h/1h/1min (0.1 m/benzene): 72/91/130°C.

Application

Polyester/Methacrylate curing

Usage level:

Curing agent in powder form for UP and methacrylate resins at ambient temperature in combination with amine accelerators or pre-accelerated resin types. Usage level: Depending on resin types dosage can be 1-5% as supplied, Particular advantages: free-flowing powder, easy to handle, easy to dose.

"Shelf life" (gel time of resin + peroxide) usually several weeks, but not without change in activity. "Pot life" (gel time of resin + peroxide + accelerator) very variable.

Curing characteristics:

Strong evolution of heat, relatively short mould release times, very good mould release factors. In thick laminates danger of stress cracking; in thin laminates tacky surface if air allowed to enter. Even at low ambient temperatures, relatively rapid curing. All amine accelerators cause marked yellowish-brown discolouration in finished parts. Above the "kick-off" temperature of 70°C, curing without accelerator is possible. Degree of cure is only moderate, even after post-curing.

Processing methods:

UP-resins: In particular casting of highly-filled material (sealings, UP-concrete, UP foam), wet press moulding with and without accelerator, hand lay-up, injection and vacuum moulding. Thus, the product is very versatile. Methacrylate resins: Mainly road marking colours and floor coatings as two component systems or with suitable pre-accelerated resins, applied by special machineries. These system can be used even on wet and cold surfaces.

Measurements

Reactivity for the cold curing of polyester resins

Curing after DIN 16945 at 25°C with OPA resin (20g in a test tube)						
Formulation (parts by weight)						
Medium reactive resin type (OPA)	100	100	100	100	100	100
BENOX® C-30S	6.5	6.5	6.5	3.5	3.5	3.5
Accelerator A-305	2	1	0.5	2	1	0.5
Curing data						
Gel time t_{gel} [min]	12.0	21.0	47.5	16.5	31.5	>60
Curing time t_{max} [min]	18.0	30.0	69.0	25.0	44.5	-
Peaktemperature T_{max} [°C]	151	149	108	133	134	-

Reactivity for the cold curing of methacrylate resin

Curing after DIN 16945 at 25°C with methacrylate resin (20g in a test tube)						
Formulation (parts by weight)						
Degaroute® 465	100	100	100	100	100	100
BENOX® C-30S	0.5	1.0	1.5	2.0	2.5	3.0
Curing data						
Gel time t_{gel} [min]	20.0	12.5	9.0	7.0	6.0	5.0
Curing time t_{max} [min]	39.0	28.0	22.5	19.5	18.5	17.5
Peakttemperature T_{max} [°C]	60	66	70	69	70	67

Packaging

The standard package sizes of BENOX® C-30S is 25 kg in a PE bag placed in 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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