Technical Data Sheet

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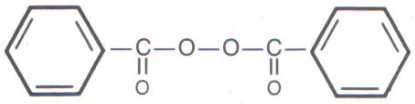
BP-50-FT/BP-50-FT1 (MINIBAGS)

Dibenzoylperoxide
CAS#94-36-0
50 % powder with phthalate

Structural Formula



Description

White, free-flowing powder, consisting of 50% dibenzoyl peroxide, de-sensitised with a phthalic acid ester .This diaroyl peroxide is used as an initiator (radical source) in the curing of unsaturated polyester and methacrylate resins .Main application: curing of castings and moulded parts at ambient temperature in combination with amine accelerators, curing of roadmarking colours and coatings. BP-50-FT1 is available in different weights of minibags (0.1 to 1kg) and contains an additive to make this product non-caking.

Technical Data

Appearance	White, free-flowing powder
Peroxide Content	50 %
Active oxygen	3.30 %
De-sensitising agent	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 curing

Usage level:
Curing agent in powder form for UP resins at ambient temperature in combination with amine accelerators. Usage level: 2-4% as supplied, together with 1-3% Accelerator A-305. 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 temperatures below 20℃, relatively rapid curing. All amine accelerators cause marked yellowish-brown discolouration in finished parts. Above the "kick-off" temperature of 70℃, curing without accelerator is possible. Degree of cure is only moderate, even after post-curing.

Processing methods:
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 curing

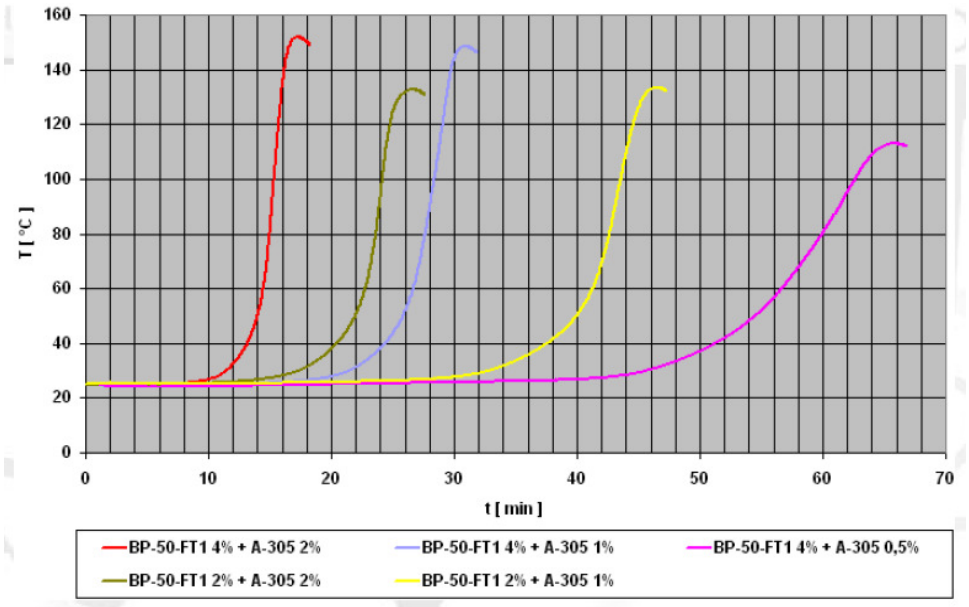
Usage level:
Curing agent in powder form for methacrylate resins at ambient temperature.
Usage level: 0.5-3% as supplied, together with 1-3% Accelerator A-305.
Particular advantages: free-flowing powder, easy to handle, easy to dose. Also available in minibags (BP-50-FT1)
"Shelf life" (gel time of resin + peroxide) usually several hours or days, but not without change in activity .The peroxide dosage has hardly an effect on the "Pot life"

Processing methods:
Mainly roadmarking colours and floor coatings as a 2-component system, applicated with special machines .The decisive factor for the use of BP-50-FT1 is the reactivity on a cold and wet ground.

Measurements

Reactivity for the cold curing of polyester resins

Curing after DIN 16945 at 25℃ with OPA resin (20g in a test tube)						
Formulation (parts by weight)						
Medium reactive resin type (OPA)	100	100	100	100	100	100
BP-50-FT(1)	4	4	4	2	2	2
Accelerator A-305	2	1	0.5	2	1	0.5
Curing data						
Gel time t_{gel} [min]	11.5	21.5	46.0	17.5	33.0	>60
Curing time t_{max} [min]	17.5	31.0	66.0	27.0	46.5	-
Peaktemperature T_{max} [℃]	152	148	112	132	133	-



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
BP-50-FT(1)	0.5	1.0	1.5	2.0	2.5	3.0
Curing data						
Gel time t_{gel} [min]	12.5	7.5	6.0	5.0	4.5	4.0
Curing time t_{max} [min]	28.0	20.5	18.5	17.5	17.5	17.5
Peaktemperature T_{max} [°C]	66	71	70	67	65	61

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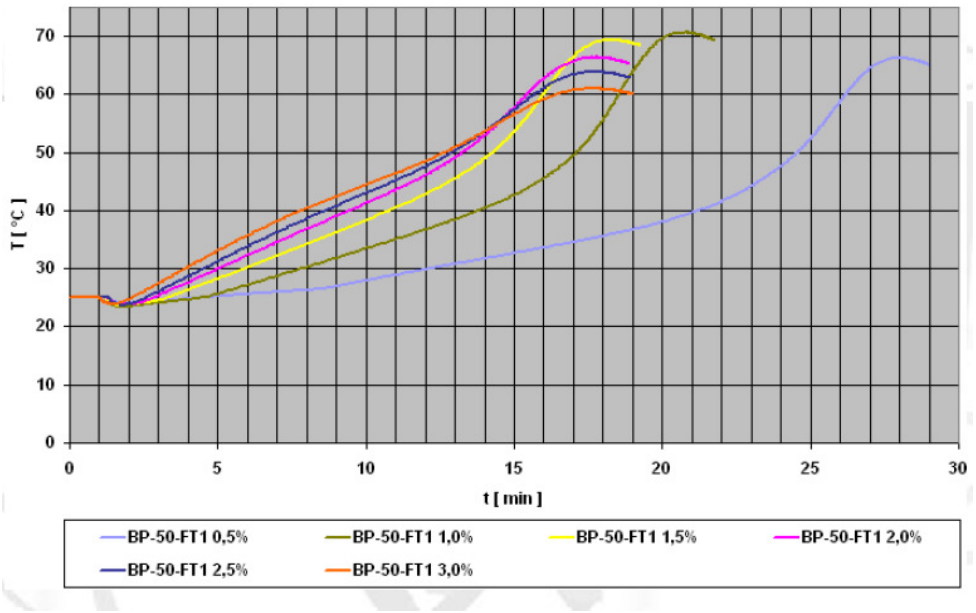

Packaging

The standard package sizes of BP-50FT/BP-50FT1 is 25 kg in a PE bag placed in cardboard box. Weights are on a net weight basis.

Disclaimer

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