PERGAQUICK CP12

Cobaltpolymer accelerators / Curing

Description

Cobaltpolymer
1%, Solution with stabilizing agent

PERGAQUICK CP12 is used as an accelerator for curing of unsaturated polyester resins at ambient temperature in combination with Ketone peroxides

CAS No.:	**-**

Technical data

Appearance:	**red liquid**
Active substance assay:	**appx. 1%**
Density at 20°C:	**0.96 g/cm³**

Solubility

Insoluble in water, soluble in various organic solvents

Storage

Maximum storage temperature (Ts max):	**30°C**
Minimum storage temperature (Ts min):	**5°C**
Storage stability as from date of delivery:	**6 months**

Keep packaging tightly closed in a well ventilated place at indicated storage temperature.

Hazardous reactions

Might react violently with organic peroxides. It is therefore not allowed to store or transport the product together with peroxides. NEVER BRING AN ACCELERATOR INTO DIRECT CONTACT WITH PEROXIDES!

Safety characteristics

Flash point:	>100°C

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Application

The curing of unsaturated polyester resins at ambient temperatures can in general not be performed by an organic peroxide alone. The radical formation which is necessary - to start the polymerisation reaction - is too slow at ambient temperatures with most generally applied organic peroxides. To speed up the radical formation in a controllable way, organic peroxides must therefore be used in combination with a so called accelerator. For ketone peroxides - like methylethylketone peroxides, cyclohexanone peroxides and acetylacetone peroxide - a cobaltpolymer accelerator must be used. For this purpose the following formulations of cobalt octoate are available:

PERGAQUICK CP40, 4% cobalt
PERGAQUICK CP12, 1% cobalt with stabilizing agent

The reactivity of the various cobalt accelerator formulations is directly correlated with the cobalt content. Apart from the choice of the ketone peroxide, the cure characteristics of an unsaturated polyester resin/ ketone peroxide mixture can be influenced very effectively by the dosage level of the cobaltpolymer accelerator. When the right peroxide has been chosen and still the required gel time and cure characteristics can not be obtained with the cobaltpolymer accelerator alone, it is possible to increase the reactivity of the cobaltpolymer accelerator by the extra addition of a promotor like PERGAQUICK A200 (DMA). This adaptation of the accelerator system may be necessary when:
- a very short gel time and/or fast cure is required, e.g. for RTM or manufacture or polymer concrete
- highly inhibited and/or low reactive resins must be cured e.g. bisphenol A/fumarate or vinylesters

The cure system ketone peroxide/cobaltpolymer accelerator can be characterized by:
- the relatively low colour, related to cobaltpolymer dosage, of the cured moulding
- a very good UV light stability of the moulded parts
- the long pot life of the cobalt polymer accelerator in the polyester resin

Disadvantages can be that the cure system is more sensitive to moisture, pigments and fillers than the cure system Dibenzoyl peroxide / Amine accelerator.

Depending on application area and working conditions, the following accelerator dosage levels are recommended:
PERGAQUICK CP12: 0,02 to 2,0 phr

Packaging

25kg container
200kg steel drum

Avoid contact with oxygen, close container carefully after removal.

Major decomposition products

In case of fire, Cobalt oxides and carbonmonoxide may be formed

Safety and handling

Please refer to the material safety data sheet (MSDS) for information concerning safe storage, use and handling of PERGAQUICK CP12. This information should be thoroughly reviewed prior to acceptance of this product. The MSDS is available for downloading at **www.pergan.com** or through contacting Pergan directly.

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