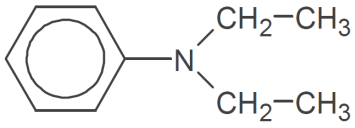
PERGAQUICK A300

Amine accelerators / Curing

Description

N,N-Diethylaniline
99%, Liquid

PERGAQUICK A300 is used as an accelerator for curing of unsaturated polyester resins at ambient temperature in combination with Dibenzoyl peroxide (PEROXAN BP-types).



CAS No.:	**91-66-7**

Technical data

Appearance:	**light yellow, clear liquid**
Active substance assay:	**min. 99%**
Density at 20°C:	**0.935 g/cm³**

Solubility

Insoluble in water, soluble in various organic solvents

Storage

Maximum storage temperature (Ts max):	**30°C**
Minimum storage temperature (Ts min):	**0°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:	85°C

PERGAN The Peroxide Company
Schlavenhorst 71
D-46395 Bocholt
Germany
Phone: +49 (0)2871 / 99 02-0
Fax: +49 (0)2871 / 99 02-50
www.pergan.com

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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 diacyl peroxides like Dibenzoyl peroxide - the PEROXAN BP-types - aromatic tertiary amines have to be used as accelerator.

The following amines are available:
N,N-Dimethyl-p-toluidine PERGAQUICK A100 (high reactivity)
Ethoxylates of p-toluidine PERGAQUICK A150 PM (high/medium reactivity)
N,N-Dimethylaniline PERGAQUICK A200 (medium reactivity)
N,N-Diethylaniline PERGAQUICK A300 (low reactivity)

Each amine type has a different and specific influence on the decomposition of Dibenzoyl peroxide.Therefore, it is possible to adjust a wide variety of gel times and speed of cure by the proper choice of amine type and dosage level.

The cure system Dibenzoyl peroxide / amine accelerator can be characterized as being:
- not sensitive for moisture
- practically not sensitive to pigments and fillers
- applicable at low temperatures

Possible disadvantages can be:
- a limited pot life of the amine accelerator in the resin
- yellow to brown colour of the cured product
- poor UV light stability of the cured product
- a relatively high residual styrene content in the mouldings after a postcure at elevated temperature especially at high amine accelerator dosages.

A special application of the amine accelerator is their use as promotor in a ketone peroxide / cobalt accelerator cure system. For this application mainly PERGAQUICK C24 AX is used.

Depending on application area and working conditions, the following accelerator dosage levels are recommended:

PERGAQUICK A300: 0,2 to 0,5 phr

Packaging

25kg container
190kg steel drum

Major decomposition products

In case of fire toxic fumes of N-oxides 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 A300. 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.

The information presented herein is true and accurate and to the best of our knowledge, but without any guarantee. Since the conditions of use are beyond our control we disclaim any liability, including for patent infringement, incurred in connection with the use of these products, data or suggestions.

Schlavenhorst 71
D-46395 Bocholt
Germany

Phone: +49 (0)2871 / 99 02-0
Fax: +49 (0)2871 / 99 02-50
www.pergan.com