Technical Data Sheet

Basonat® HW 1180 PC

Product description	Basonat® HW 1180 PC is an aliphatic emulsifier-modified isocyanurate for lightfast and weather-resistant water-based 2K polyurethane coatings.
Key benefits	• 80% solution of Basonat® HW 1000 in propylene carbonate • Based on isocyanurate oligomer • High weather resistance • Good light fastness • Easy dispersable • Good potlife and reactivity behavior
Chemical nature	Emulsifier-modified isocyanurate based on Hexamethylenediisocyanate (HDI)

Properties

Physical form

Transparent, viscous liquid

Technical data (no supply specification)

NCO content	DIN EN ISO 11909	13 – 14%
Non-volatile fraction	DIN EN ISO 3251	79 – 81%
Viscosity at 23 °C (73 °F) D = 100 s^{-1}	DIN EN ISO 3219	450 - 850 mPa*s
Platin cobalt color number (Hazen)	DIN EN ISO 6271	≤ 100

Application

Basonat® HW 1180 PC is a solution of an emulsifier-modified polyfunctionell isocyanurate oligomer in Propylene carbonate.

Basonat® HW 1180 PC is used as hardener for polymerdispersions, alone and in combination with hydrophobic polyisocyanates. It can be directly incorporated into the formulated dispersion. However an ideal stoichiometric reaction of OH and NCO groups cannot be expected.

Basonat® HW 1180 PC can be directly used as hardener for water-based 2K PU top coats for interior and exterior application. Add of 5% Basonat® HW on non OH-functional polymerdispersions could improve chemical resistances and adhesion on difficult substrates.

Formulation guidelines

In primary dispersions, Basonat® HW 1180 PC ideally crosslinks at a stoichiometric proportion of 100% NCO on OH groups of the dispersion without any drawback on potlife or reactivity. It is also possible to use lower stoichiometric levels for sufficient coatings properties from 40 to 70%.

For the use in secondary dispersions mostly the Index of NCO to OH of 150 is used for sufficient drying at an acceptable potlife. Basonat® HW could be combined with low viscous polyisocyanates like Basonat® HI 2000 or Basonat® HA to improve specific properties.

To ease the incorporation of Basonat® HW 1180 PC it is possible to solve the polyisocyanate additionally around 10 - 30 % in the coalescent solvent used in the formulation (e.g. butyl glycol acetate, butyl diglycol acetate, methoxypropyl acetate, dipropylene glycol dimethyl ether).

When formulating coatings, care must be taken that film-forming agents (e.g. solvents), additives and gelling agents do not react with isocyanate groups, i.e. any substances containing active hydrogen groups should be avoided.

The pH value can be adjusted with tertiary amines such as dimethylethanolamine, triethylamine and triethanolamine.
The pH value of the formulation decisively influences the pot life.
The higher the pH, the shorter the potlife. A pH > 7 promotes the reaction of polycyanate with water and the amine.

Storage

Basonat® HW 1180 PC is sensitive to moisture. The ideal temperature range for storage is 0 - 30 °C (32 - 86 °F) and under airtight conditions (exclusion of humidity and atmospheric oxygen). Reaction with moisture will generate carbon dioxide which can lead to dangerous increase in pressure, while storage at high temperature will increase color and viscosity. After re-filling from original containers, a shorter shelf life should be expected. Containers should be flushed with nitrogen before resealing.

Safety
When handling this product, please comply with the advice and information given in the safety data sheet and observe protective and workplace hygiene measures adequate for handling chemicals.

Note
The data contained in this publication are based on our current knowledge and experience. In view of the many factors that may affect processing and application of our product, these data do not relieve processors from carrying out their own investigations and tests; neither do these data imply any guarantee of certain properties, nor the suitability of the product for a specific purpose. Any descriptions, drawings, photographs, data, proportions, weights, etc. given herein may change without prior information and do not constitute the agreed contractual quality of the product. The agreed contractual quality of the product results exclusively from the statements made in the product specification. It is the responsibility of the recipient of our product to ensure that any proprietary rights and existing laws and legislation are observed.

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