SETAQUA® B E 270

Technical Datasheet

TYPE

Water-thinnable, oil-free, saturated polyester resin

USES

In combination with water-thinnable amino resins in the formulation of industrial stoving coatings and aqueous stoving primer surfacers for online automotive finishing, both with a low co-solvent content.

FORM SUPPLIED

Aprox. 70 % in water/butyl diglycol, neutralized with dimethyl ethanol amine, approx. 11.5 : 13.3 : 5.2

SPECIFICATION

Non-volatile content (1 g, 1 h, 105 °C): DIN EN ISO 3251	70 ± 1 %
Viscosity (23 °C, D = approx. 5.2 s^{-1}): DIN EN ISO 3219/A.3	12,000 ± 3,000 mPa·s
Acid value, supply form: DIN EN ISO 2114	35 ± 3.5 mg KOH/g
pH (10% solution with in water): DIN ISO 976	8 ± 0.5

OTHER DATA*

Appearance:	clear to slightly cloud
Mean particle size:	≤ 20
Density (20 °C): DIN EN ISO 2811-2	approx. 1.1 g/cm³
Flash point: DIN EN ISO 2719	> 110 °C

* These values provide general information and are not part of the product specification.

PROPERTIES / APPLICATIONS

Combined with water-thinnable amino resins, SETAQUA B E 270 is particularly suitable for the formulation of aqueous stoving primer surfacers with low co-solvent content for use in online automotive finishing. To ensure good intercoat adhesion to conventional automotive topcoats, a SETAQUA- /amino resin ratio of 90:10 to 85:15 (calculated on the solvent-free resin) is recommended. The paint films yielded have good hardness, flexibility and adhesion. If above-average stonechip resistance is required, SETAQUA B E 270 should be combined with polyurethane dispersions. SETAQUA B E 270 can also be used in general industrial finishing.

Depending on the reactivity of the melamine resin used, a ratio of 85:15 to 70:30 can be used to formulate highly flexible primers and hard, well crosslinked, high gloss top coats. SETAQUA B E 270 has proved particularly suitable for the formulation of dip primers which are subsequently overcoated with powder coatings.

The stoving conditions for SETAQUA B E 270 depend on the type of amino resin used. The stoving range is between 30 min. at 120 °C and 60 min at 180 °C in the overbaking process. Because of the good shear stability of SETAQUA B E 270, the pigments can be added directly to the binder. Suitable grinding equipment includes the bead mill, dyno mill and red devil. However, the use of suitable wetting agents and antifoams is essential. Optimum pigment wetting is achieved if the entire amount of dimethyl ethanol amine required to adjust the coating to a pH of 8.5 - 8.8 is added to the mill base. Details are given in the guide formulations for SETAQUA B E 270.

SOLUBILITY / THINNABILITY

SETAQUA B E 270 can be thinned to a clear solution with water, alcohols, glycols and glycol ethers

COMPATIBILITY

SETAQUA B E 270 is compatible with, for example, the following amino resins in the ratio 80:20, calculated on the solvent-free components: CYMEL 3031, 325 and 327, Maprenal MF2 900[1], 904, 915, 920 and 927.
It is also compatible with Bayhydrol U 241[2] as well as with Bayhydur BL 5140[2] and VP LS 2310.

[1] INEOS
[2] Covestro

STORAGE

When stored in originally sealed containers at temperatures not exceeding 30 °C, the product will remain stable for 6 months. In tank-containers the product will only remain stable for at least 270 days.

General information: The product is sensitive to frost. Freezing will damage the product irreversibly. Prolonged storage and storage at higher temperatures may result in a decrease of viscosity and/or an increase of average particle size, possibly resulting in sedimentation or coagulation. Contamination with certain bacteria, fungi or algae may render the product unusable.

LABELING AND REACH APPLICATIONS

This product data sheet is only valid in conjunction with the latest edition of the corresponding Safety Data Sheet. Any updating of safety-relevant information – in accordance with statutory requirements – will only be reflected in the Safety Data Sheet, copies of which will be revised and distributed. Information relating to the current classification and labeling, applications and processing methods and further data relevant to safety can be found in the currently valid Safety Data Sheet.