

tegotalk

Technews from Evonik Tego Chemie GmbH

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SILIKOPON® EF

Modern High Solids Coatings with Silicone-Epoxy-Hybrids

The VOC Guideline (VOC = Volatile Organic Compound) has attained great importance particularly in the field of environmental protection. The aim is to limit solvent emissions because of their role in the formation of tropospheric ozone which is damaging to health and the environment.

Although all efforts must be made to reduce solvent emissions, high-solids coatings systems must nevertheless still provide high performance such as corrosion protection, resistance to weathering and long service life combined with colour-fastness. This is achieved by the use of the silicone-epoxy-hybrid resin, SILIKOPON® EF, from Evonik Tego Chemie GmbH.

Editorial



Dear Reader,

For over 25 years our additives and binders have been offering you a decisive advantage in functionality for your products. Functionality and sustainability play

the central role in our innovations so that we can provide solutions for your new products.

Our new Tego-Design introduced at the start of the year underlines this commitment. We hope that you enjoyed the Tego-Plus bonbons. Wait and see – you will come across the Tego-Plus again and again.

Today's topic deals with High Solids coatings systems. Here, our silicone-epoxy-hybrid resin SILIKOPON® EF offers you the possibility of satisfying future VOC guidelines.

Yours sincerely

Udo Dalig, Vice President Marketing & Sales Europe

SILIKOPON® EF can be used as a binder in anti-corrosion coatings for steel, coatings for wood, and concrete and marine, biocide-free, easy-to-clean coatings. Because of the high cross-link density (see fig.1), the finishes are highly dirt-repellent and therefore very effective against graffiti.

Aminosilanes are used as hardeners – the amino groups react with the epoxide groups. In the presence of water/humidity, the three alkoxy groups undergo hydrolysis/condensation with the alkoxy groups of the silicone resins. Because of the “double cross-linking”, the positive properties of organic and inorganic polymers can be combined in a new class of binders.

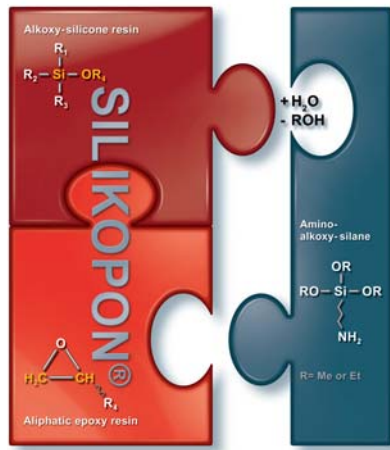
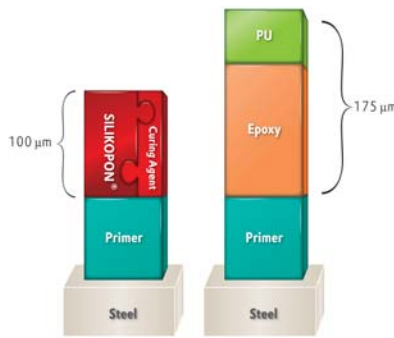


fig. 1

The Ultra-High-Solids Binder SILIKOPON® EF is a product for particularly ecofriendly formulations. Its specific advantage is that isocyanate-free 2-pack coatings can be formulated with a VOC content < 250 g/L.



By chemically combining silicone and epoxy resins it is possible to produce anti-corrosion coatings with SILIKOPON® EF which, when used in a two coat finish, replace a classical three coat finish.

SILIKOPON® EF is effective not only on steel but also offers advantages on various types of wood. In such applications, the VOC content can be reduced to less than 100 g/L. Other advantages, particularly for wood applications, are low flammability, high abrasion resistance and brilliant burnishing of the surface.

Furthermore, SILIKOPON® EF can be used in the formulation of highly chemical-resistant coatings utilised for example, in flooring and industrial plant.

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Tego Sales Support Fax +49 (0)201 173-1939

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SILIKOPON® EF Product Overview Tego Journal Please contact me

S = Sample D= Datasheet

Right of refusal: You may request to discontinue the mailing of information and advertising at any time.

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Further information you can find under www.tego.de