Introduction

An electronic module is only suitable for a specific purpose if it guarantees safe function for a defined time. A large number of modules are installed in the terminal devices without protective coatings and operate fault-free throughout their entire service life. In an increasing number of cases, the module is used with greater electrical sensitivity or even under difficult conditions. The safe function of an assembly is then only ensured by means of a protective coating.

In the German-speaking area, there is only the GfKORR guideline for the application and properties of a protective coating available. The GfKORR working group "Corrosion protection in electronics and micro engineering" produced this guideline in cooperation of designers, producers, coaters and users of electronic construction groups.

The aim of the seminar is to teach the participants about this guideline and the collected knowledge from the working group, so that a comprehensive and fundamental understanding of coatings and their possible applications for the functionality of electronic assemblies is achieved.

Target Groups

Production engineering, quality assurance, process technology, analytics, design and construction as well as all users of coated assemblies

Organisation

Registration

For organisational reasons, please send your registration to:

GfKORR - Gesellschaft für Korrosionsschutz e.V. Theodor-Heuss-Allee 25 60486 Frankfurt / Main Phone: +49 (0) 69 7564-360 /-436 Fax: +49 (0) 69 7564-391 E-Mail: gfkorr@dechema.de Web: https://gfkorr.de/Veranstaltungen

Participation fees *)

Members of GfKORR	860,-€
Non-Members	900,-€
Students (under 30 years)	150,-€

*) no VAT requested according to § 4.22 UStG

The registration fees include the guidelines for the Utilisation and Fabrication of Protective Coatings for Electronic Assemblies.

Conditions of participation

The receipt of the registration is considered as binding confirmation of the participant. Upon receipt, you will receive confirmation and an invoice for the order due. Registered participants can cancel in writing free of charge no later than 16 November 2021. After this date 80% of the participation fee will be charged. In case of absence or cancellation of participation, the full participation fee is to be paid. Furthermore, you may nominate a substitute participant.



Seminar Application and Utilisation of Protective Coatings for Electronic Assemblies



30 November - 1 December 2021 Online-Event

in cooperation with



Programme – 30 November 2021

10:00 Welcome and introduction of participants <u>Dr.-Ing. Helmut Schweigart</u> Dr. O.K. Wack Chemie GmbH, Ingolstadt, Germany

10:30 Requirements of protective coatings for use on assemblies

General requirements, requirements for environmental impact, regulations for protective coatings <u>Beth Turner</u> Electrolube, Leicestershire, United Kingdom

11:15 Classification of protective lacquers

Subdivision according to the binder or solvent, subdivision according to drying or curing mechanism, subdivision according to layer thickness Jens Bürger ELANTAS Europe GmbH, Hamburg, Germany

11:40 Break

13:00 Film properties of protective coatings

Mechanical, electrical and thermal properties, condensation, water absorption and water vapour permeability, thermal resistance, flexibility (modulus of elasticity) and CTE <u>Beth Turner</u> Electrolube, Leicestershire, United Kingdom

14:00 Impact of the assembly on protective coatings Base material, assembly or printed circuit board layout, solder resist, soldering materials and parameters, drying parameters, keeping and uncovering areas Jens Gruse Stannol GmbH & Co. KG, Velbert, Germany

15:00 Break

Programme – 30 November 2021

15:30 Surface and preparation prior to protective coating

Requirements for module cleaning, decision on cleaning, minimum surface cleanliness before protective coating, measurement / analysis of ionic impurities, implementation / optimization of cleaning processes <u>Helmut Schweigart</u> Dr. O.K. Wack Chemie GmbH, Ingolstadt, Germany

16:30 End of first day

Programme – 1 December 2021

09:00 Welcome and summary of day 1 Dr.-Ing. Helmut Schweigart Dr. O.K. Wack Chemie GmbH, Ingolstadt, Germany

09:15 Application procedures for protective coatings

Subdivision of the application processes, application by brush, coating or spray can, application by spraying, dipping, flooding or spraying process, automatic and selective coating in casting process, application by dispensing or vacuum process <u>Gerd Schulze</u> Nordson B.V., Maastricht, Netherlands

10:20 Break

10:55 Handling of protective lacquers Requirements for coating rooms and equipment, monitoring of processing parameters, contamination, maintenance of immersion systems, aging of protective coatings, environmental protection during protective coating Jens Bürger

ELANTAS Europe GmbH, Hamburg, Germany

Programme – 1 December 2021

11:40 Break

13:00 Prevention of typical coating defects Application of excessive layer thicknesses, double coating, early hermetic encapsulation of coated printed circuit boards, avoidance of defects and typical abnormalities in protective coatings <u>Jens H. Klingel</u> KC Kunststoff-Chemische Produkte GmbH, Friolzheim, Germany

14:00 Coating inspection methods

General proof of the protective coating, verification of climate resistance, verification of the coating result <u>Gerd Schulze</u> Nordson B.V., Maastricht, Netherlands

15:00 Break

15:30 Repair of coated assemblies

Paint stripping of assemblies, sound soldering of coatings, repair coating <u>Jens H. Klingel</u> KC Kunststoff-Chemische Produkte GmbH, Friolzheim, Germany

- 16:00 Comparison of the guide to IPC-Handbook Dr.-Ing. Helmut Schweigart Dr. O.K. Wack Chemie GmbH, Ingolstadt, Germany
- 16:30 Summary and end of seminar

Unforeseen program changes are reserved.