

**S5 SURVEY
 REPORT**

Group 5

Auxiliary products
 for circuit printing

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15



This survey report gives a comprehensive overview of product group 5. For further information please refer to the technical reports (TR), in which the mentioned products are described in detail.

For more extensive advice, our application technology department (ATD) is at your disposal at any time.

The products mentioned in this survey do not contain substances listed in the RoHS directive 2002/95/EC, the EU End-of-Life Vehicle directive 2000/53/EC ("lead-free regulation") and the WEEE directive 2002/96/EC. Detailed information on these directives that restrict or prohibit the use of certain hazardous substances can be accessed in the "Service" section on our website www.peters.de – "Directives/restrictions of substances".

Contents

1. Thinners and retarders.....	2
2. Screen openers.....	2
3. Thick-film emulsion for the production of screen printing stencils	2
4. Anti-static agents.....	2
5. Cleaning and deoxidizing agents	3
6. Special strippers.....	3
7. Cleaning agents	3
8. Defoamants	4

1. Thinners and retarders

Product (series)	Field of application/Special properties
Universal thinner UV 5000 Universal retarder UZ 5100	<ul style="list-style-type: none"> • for conventional circuit printing lacquers, as far as a special thinner and/or retarder is not necessary. (For many products special/reactive thinners/retarders must be used. This is described in the corresponding technical reports of these products.) • suitable for many 1- and 2-pack screen printing lacquers • highly efficient even in low concentrations • UV 5000: for viscosity reduction • UZ 5100: also for viscosity reduction and simultaneously extends the screen open time

2. Screen openers

Product (series)	Field of application/Special properties
Screen opener HP 5200	<ul style="list-style-type: none"> • spray for dissolving dried circuit printing inks on screens; particularly suitable for 2-pack inks • CFC-free propellant (CFC = fluoro-hydrocarbon) • easy and reliable to use in screen printing technology after breaks in work • highly active and immediately effective, after brief spraying screens/ screen meshes are already “unblocked” and usable within 30 - 60 s • silicone- and grease-free, i.e. no surface disturbances / dewettings or smearing during the subsequent printing process • highly economic since complicated screen cleaning processes after breaks in work can be avoided

3. Thick-film emulsion for the production of screen printing stencils

Product (series)	Field of application/Special properties
Thick-film emulsion HP 5400 , red	<ul style="list-style-type: none"> • 1-pack emulsion for low cost production of screen printing stencils with high layer structure • thus particularly suitable for the production of printing screens for peelable solder masks • optimum flow properties for easy processing • extremely short processing and curing times • good bonding with the screen fabric, thus high stability and high definition • very easy to decoat, e. g. with a high pressure cleaner and warm water

4. Anti-static agents

Product (series)	Field of application/Special properties
Anti-static spray HP 5500 and Anti-static agent HP 5501	<ul style="list-style-type: none"> • prevents and eliminates static build-up on nylon and polyester fabrics during circuit printing • reduces errors caused by dust during screen printing and the processing of dry film resists • highly effective, easy and reliable to use • HP 5500: practical spray can with CFC-free propellant • HP 5501: for application by means of spraying, dipping, brushing/wiping

5. Cleaning and deoxidizing agents

Product (series)	Field of application/Special properties
Cleaning and deoxidizing agent HP 5625	<ul style="list-style-type: none"> • for the pretreatment of pcbs prior to ink/resist application • fast and thorough degreasing and deoxidation of copper surfaces • no copper degradation • especially for conveyORIZED spraying processes; minimum foaming • for optimum pretreatment in combination with mechanical precleaning processes

6. Special strippers

Product (series)	Field of application/Special properties
Special stripper HP 5707	<ul style="list-style-type: none"> • in its concentrated form suitable for removing exposed and if necessary cured photoimageable solder resists (for instance after faulty exposure) • does not attack copper or lead/tin layers and FR4 material only after longer exposure • thinned with water also suitable for cleaning ink developing and resist stripping equipment; solution used for equipment cleaning purposes can be reused • extremely economical

7. Cleaning agents

Product (series)	Field of application/Special properties
Cleaning agents of the series R 5800 R 5814 R 5817 R 5821	<ul style="list-style-type: none"> • cleaning agents for 1- and 2-pack lacquers (circuit printing inks, conformal/permanent coatings, thick film lacquers, adhesive varnishes, insulating lacquers, etc.) • fast and thorough cleaning effect • high ink dissolving performance • residue-free evaporation • R 5814/R 5817: to remove lacquer from printing screens, work tools and in case of misprints; R 5814 has slightly less odour compared to R 5817, however R 5817 exhibits a slightly faster cleaning effect • R 5821: on account of its high flash point (+32 °C [+89.6 °F]) particularly suitable for automatic screen washing units and cleaning ink coating equipment <p>When selecting a cleaning agent please also pay attention to the indications in the technical reports on the corresponding lacquers.</p>
Cleaning agent R 5804	<ul style="list-style-type: none"> • cleaning agent for humidity curing conformal/permanent coatings such as SL 1400 ECO-FLZ • fast and intensive cleaning effect • high ink dissolving performance • residue-free evaporation
Cleaning agent R 5851	<ul style="list-style-type: none"> • excellently suitable for the removal of solder residues, solder flux lacquers and fluxing agents on assembled pcbs • no risk of incipient dissolution of components and legend/marketing inks

Product (series)	Field of application/Special properties
Cleaning agent R 5899	<ul style="list-style-type: none"> • cleaning agent for 1- and 2-pack circuit printing inks • on account of its high flash point (> 100 °C [212 °F]) particularly suitable for screen washing units • can also be used for manual screen cleaning and for cleaning ink coating equipment • due to low vapour pressure (0.08 hPa / 20 °C [68 °F]) not classified as a VOC (Volatile Organic Compound) per EU regulation 1999/13/EC • must not be marked acc. to German dangerous goods regulation • flash point > 100°C [212 °F] • easily bio-degradable per OECD Test 301 A (OECD = Organization for Economic Cooperation and Development)

8. Defoamants

Product (series)	Field of application/Special properties
Defoamant HP 5910	<ul style="list-style-type: none"> • combats foam in acid to weakly alkaline baths, particularly suitable for plating baths • highly effective • silicone-free; biologically degradable
Defoamant HP 5911	<ul style="list-style-type: none"> • defoams aqueous-alkaline developer solutions, e.g. 1% soda solution, as used to develop photo resists (ELPEMER® 2054) and/or aqueous-alkaline developable solder resists (ELPEMER® 2467 or ELPEMER® 2463 FLEX) • highly effective • silicone-free, biologically degradable
Defoamant HP 5914	<ul style="list-style-type: none"> • defoams highly alkaline baths, such as resist strippers (e.g. caustic soda) • also for aqueous-alkaline developing media, as used to develop photo resists (ELPEMER® 2054) or photoimageable solder resists (ELPEMER® 2467 or ELPEMER® 2463 FLEX) • high and long lasting efficiency even in very low concentrations over a wide temperature range at pH values > 10 • silicone-free, biologically degradable • not suitable for soft PVC

Any questions?

We would be pleased to offer you advice and assistance in choosing a suitable product and solving your problems. Free samples and technical literature are available upon request.

The above information as well as advice given by our Application Technology Department whether in verbal or written form or during product evaluations is provided to the best of our knowledge, but must be regarded as non-binding recommendations, also with respect to possible third-party proprietary rights.

The products are exclusively intended for the applications indicated in the corresponding technical data sheets.

The advisory service does not exempt you from performing your own assessments, in particular of our material safety data sheets and technical information sheets, and of our products as regards their suitability for the applications intended. The application, use and processing of our products and of the products manufactured by you based on the advice given by our Application Technology Department are beyond our control and thus entirely your responsibility. The sale of our products is effected in accordance with our current terms of sale and delivery.

Lackwerke Peters GmbH + Co KG **Internet: www.peters.de** **Phone: 0049-21 52-20 09-0**
Hooghe Weg 13, 47906 Kempen **E-Mail: peters@peters.de** **Fax: 0049-21 52-20 09-70**