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TEST REPORT

No. 103b / 03

Client PETERS RESEARCH GmbH + Co KG
Mrs. Tanja Touré
Hooghe Weg 13
D – 47906 Kempen

Date of order 2003-05-16

Date of receiving the specimens 2003-05-26

Period of testing 2003-05-07 to 2003-06-18

1 TEST OBJECT

1.1 Designation / Number of pieces

Conformal / Permanent Coating SL 1301 ECO-FLZ
applied on printed circuit boards / 3 pieces

1.2 **Producer** see client

2 TASK

Testing to determine the protection effect for copper lamination during exposure of Flowing mixed gas in accordance with DIN EN 60068-2-60 : 1996-09, Test Ke, Methode 4 / BMW GS 95003-4

3 TEST PROGRAMME

3.1 Initial visual inspection

3.2 Loading by Flowing mixed gas in accordance with DIN EN 60068-2-60, Test Ke, Method 4

Measurement of the gas concentration by Zellweger analytics TOX GAS MONITOR 7100

Concentration of H ₂ S	0,01 cm ³ / m ³ (ppm)	(10 ± 5) ppb
Concentration of NO ₂	0,2 cm ³ / m ³ (ppm)	(200 ± 20) ppb
Concentration of Cl ₂	0,01 cm ³ / m ³ (ppm)	(10 ± 5) ppb
Concentration of SO ₂	0,2 cm ³ / m ³ (ppm)	(200 ± 20) ppb

Temperature (25 ± 2) °C

Relative Humidity (75 ± 3) %

Test duration 21 d

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3.3 Examination after the loading by Flowing mixed gas

3.3.1 Visual inspection after 10 d

3.3.2 Final visual inspection after 21 d

4 RESULTS

4.1 Initial visual inspection

Damages or defects are not visible.

4.2 Examination after the loading by Flowing mixed gas

4.2.1 Visual inspection after 10 d

Significant changes are not visible, no corrosion has occurred.

4.2.2 Final visual inspection after 21 d

Significant changes are not visible, no corrosion has occurred.

Leipzig, 2003-06-18

Annex sheet 1/1

**Laboratory for Environmental
Testing and Testing Materials**

p.p. Peters

Dipl.-Chem. Klaus Efer
Laboratory Manager

Measurement of the gas concentration by Zellweger analytics
TOX GAS MONITOR 7100

Chlor 28.05.03 E.

10:14 10 PPB CL2/L
10:04 10 PPB CL2/L
09:54 10 PPB CL2/L
09:44 9 PPB CL2/L
09:34 9 PPB CL2/L
09:23 7 PPB CL2/L

TZO GMGH
LEIPZIG
SERIES 7100 SN-5394

OPTICS
CALIBRATION

PERFORMED
ON AT
05/28/03 09:11:47

NEW @ IS 1.053
OLD @ WAS 1.048
CARD SPAN - 1718
CARD ZERO - 600
ACTUAL SPAN- 2244
ACTUAL ZERO- 1183

28.05.03 E.

CURRENT VALUES ARE:
CARD SPAN - 1718
CARD ZERO - 600

Schwefel dioxide 28.05.03 E.

15:37 200 PPB SO2/L
15:34 206 PPB SO2/L
15:31 203 PPB SO2/L
15:29 196 PPB SO2/L
15:26 197 PPB SO2/L
15:24 204 PPB SO2/L
15:21 207 PPB SO2/L
15:19 211 PPB SO2/L
15:16 203 PPB SO2/L
15:14 189 PPB SO2/L

Schwefelwasserstoff 28.05.03 E.

13:45 7 PPB H2S/L
13:35 7 PPB H2S/L
13:24 7 PPB H2S/L
13:14 7 PPB H2S/L
13:04 7 PPB H2S/L

Stickstoffdioxid 28.05.03 E.

12:12 200 PPB NO2/L
12:10 191 PPB NO2/L
12:08 191 PPB NO2/L
12:05 192 PPB NO2/L
12:03 193 PPB NO2/L
12:01 193 PPB NO2/L
11:58 194 PPB NO2/L
11:56 192 PPB NO2/L
11:53 189 PPB NO2/L
11:51 186 PPB NO2/L