



L.V.H.T.

Lehr- und Versuchsgesellschaft für innovative Hygienetechnik mbH

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Registered as a test laboratory in accordance with the Drinking Water Regulation of 2001 (Registration No. AKS-P-20706-EU) and in accordance with Sections 37 to 39, IfSG (Infection Protection Act) for analyses of the physical, chemical and microbiological properties of drinking and swimming pool water and for the inspection of technical equipment at public bathing facilities in accordance with Information Sheet 65.04 of OGfDB e.V.

### CERTIFICATE

ELBTAL PLASTICS  
GmbH & Co. KG  
Grenzstraße 9  
01640 Coswig  
45307 Essen – Kray

L.V.H.T. GmbH  
Institut für angewandte Bau- und  
Bäderhygiene  
Am Zehnthof 191 a  
45307 Essen

U 1424 / 05. 1998 / 04

#### Testing the suitability of plastic materials for use in public swimming pools and commercial facilities

**IN THIS CASE: Pool lining, type TYP SBG 150, manufactured from PVC-P with synthetic fibre reinforcement**

The results obtained show that none of the tested components of the plastic material mentioned above promote the growth of micro-organisms in practical operation by analogy with the provisions of DVGW Code of Practice W 270.

The plastic material intended for use in pool lining must therefore be considered to be suitable for use in public swimming pools and commercial facilities.

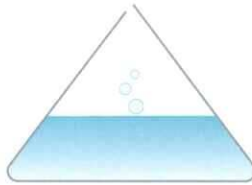
#### Note:

Thorough testing has shown that neither the components nor the composition of the pool lining material have changed. The certificate therefore remains in force for a further period of four years.

45307 Essen, 12.12.2007



(Dr. D. Pacik)

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## Test Report

**in accordance with the Recommendation of the BGA (Federal Health Office) for Plastic Materials for Use in Baths and Swimming Facilities  
(German Abbreviation: KSW)**

**for**

**ELBTAL PLASTICS  
GmbH & Co. KG  
Grenzstraße 9  
01640 Coswig**

**Material tested:** Pool lining material, type SBG 150

**Date of receipt:** 1 December 2003

**Sample:** Plates, size 200 mm x 200 mm

**Area of use:** Swimming and bathing pool water

**Material type:** PVC – P (with synthetic fibre reinforcement)

**Type of test:** Migration behaviour of material exposed to chlorine

**Validity:** 4 years, until 2011

### **Assessment of results:**

The results show that the material tested (for characteristics, see above), is virtually inert to chlorinated swimming and bathing pool water. The product tested must therefore be assessed as suitable for installations in the recirculation systems (lining of pools or water tanks) in public swimming pools and commercial facilities.

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**Test conditions:** for indoor swimming pools

**Migration test:** yes

**Chlorine consumption test:** yes

**Temperature (C°):** 30 ± 0.5

**Initial Cl<sub>2</sub> concentration (mg/l):** 1 ± 0.05

**Pre-treatment:** exposure to chlorine-free water from the central drinking water system for 72 hours

**Contact time:** 9 days for one test

Parameter	Test water			Change compared with water at start of test
	Days 1–3	Days 4–6	Days 7–9	after day 9
Colour	none	none	none	none
Turbidity	none	none	none	none
Odour	none	none	none	none
Foaming tendency	none	none	none	none
	<b>Material surface values relevant to KSW</b> <b>M = mg/m<sup>2</sup> x day</b>			<b>Maximum limit</b> <b>M = mg/m<sup>2</sup> x day</b>
Org. C	0.72	0.61	0.42	≤ 10
Chlorine consumption (free chlorine)	0.05	0.02	≤ 0.01	≤ 8
	<b>Additional material values</b> <b>M = mg/m<sup>2</sup> x day</b>			<b>Recommended limit</b> <b>M = mg/m<sup>2</sup> x day</b>
Chloramine	≤ 0.01	≤ 0.01	≤ 0.01	≤ 2
THM concentration	≤ 0.5	≤ 0.5	≤ 0.5	≤ 15
Oxidation capacity	1.42	1.02	0.88	≤ 14

THM = trihalomethanes (calculated as trichloromethane)

L. V. H. T. GmbH

(Dr. D. Pacik)

45307 Essen, 12.12.2007 / c