

## **Test report**

Test report number:	1-010/08
Customer:	SC KÖBER SRL TURTURESTI Ms. Mirela Buzdugan Neamt District 617221 Turturesti-Girov (ROMANIA)
Order number of the customer:	-
Date of contract:	04.02.08
Sub-orders:	-
Archiving acc. to the contract:	test documents according to the general terms of business, samples remain according to the contract for 6 months at iLF
Test sample acc. to the contract:	“ZERTIFIKAT” PAINT V 8130
Test aim acc. to the contract:	tests according to offer BS-Bö 01/08 of January 21, 2008
Source of the samples:	mail order
Date of receipt of the samples:	06.02.08
Start of the tests:	06.02.08
End of the tests:	06.03.08
Test laboratory:	Institut für Lacke und Farben e.V., Laboratory Coating Materials, Fichtestraße 29, 39112 Magdeburg, Germany
Test method:	see paragraph 2 “Test methods and evaluation”
Number of pages:	6
Enclosures:	1

## 1 Test sample

The sample "ZERTIFIKAT" V 8130 is a water-based paint based on polymer acryl-styrene-dispersion. The recommended use is for interior walls and ceilings.

## 2 Test methods and evaluation

### 2.1 Product characterisation

#### 2.1.1 Determination of pH

The determination of pH was carried out according to **DIN ISO 976** (05/98). The sample was diluted 50 % with distilled water.

#### 2.1.2 Determination of density (pycnometer method)

The determination of density was carried out according to **DIN EN ISO 2811-1** (10/06) as repeat determination (pycnometer method):

- type of the used pycnometer: metal pycnometer with a volume of 100 mL (BYK-Gardner, Geretsried)
- test temperature:  $(23 \pm 0,5) ^\circ\text{C}$

#### 2.1.3 Determination of non-volatile-matter content

The determination of non-volatile-matter content was carried out according to **DIN EN ISO 3251** (07/03) as repeat determination:

- type of the used cup: aluminium cup with shallow bottom,  $\varnothing$  96 mm
- type of the used heating cabinet: ULM 500 (Mettler, Schwabach)
- test temperature:  $125 ^\circ\text{C}$ , test duration: 60 min

### 2.2 Testing and classification according to DIN EN 13300

#### 2.2.1 Determination of specular gloss

The determination of specular gloss was carried out according to **DIN EN ISO 2813** (06/99) at  $60^\circ$  and  $85^\circ$ .

The paint sample was applied with a wet-film thickness of 200  $\mu\text{m}$  at a glass panel and dried for two days at  $(23 \pm 2) ^\circ\text{C}$  and  $(50 \pm 5) \%$  relative humidity before measurement.

Classification of gloss according to **DIN EN 13300**:

<i>designation</i>	<i>angle of incidence</i>	<i>reflectance</i>
Gloss	60°	≥ 60
Mid sheen <sup>1</sup>	60°	< 60
	85°	≥ 10
Matt	85°	< 10
Dead-matt	85°	< 5

### 2.2.2 Determination of fineness of grind

The determination of fineness of grind was carried out according to **DIN EN ISO 1524** (06/02). A grindometer (Cat-No. 1512; BYK-Gardner, Geretsried) with a maximum groove depth of 25 µm was used. The determination was done three times.

Classification of largest grain size (granularity) according to **DIN EN 13300**:

- a) fine up to 100 µm
- b) medium up to 300 µm
- c) coarse up to 1500 µm
- d) very coarse above 1500 µm

### 2.2.3 Determination of wet-scrub resistance

The determination of wet-scrub resistance was carried out according to **DIN EN ISO 11998** (10/06). The paint sample was applied with an automatic film applicator on a foil. After drying/hardening and conditioning the coated test foil was weighed and subjected 200 resp. 40 scrubs in a scrub testing machine. Then the test foil was washed, dried and weighed again. The mass loss was determined and the average loss of film thickness was calculated herefrom.

Classification of wet-scrub resistance according to **DIN EN 13300**:

<i>class</i>	<i>average loss of film thickness</i>
1	< 5 µm at 200 scrubs
2	≥ 5 µm and < 20 µm at 200 scrubs
3	≥ 20 µm and < 70 µm at 200 scrubs
4	< 70 µm at 40 scrubs
5	≥ 70 µm at 40 scrubs

### 2.2.4 Determination of contrast ratio (opacity)

<sup>1</sup> According to national preference, the designation of „mid sheen“ can vary: e.g. semi-gloss, semi matt, satin.

The determination of contrast ratio was carried out according to **VdL-RL 09** (07/02). The paint sample was applied on black-white contrast charts (type 13.22/4 B; Bernd Schwegmann, Grafschaft-Gelsdorf) at five different wet-film thicknesses with an automatic film applicator. Special focus was on keeping the applied amounts close to the coverage recommended by the manufacturer of the paint. The contrast ratio  $Y_b/Y_w$  was determined in accordance with **DIN EN ISO 6504-3** (05/07).

Classification of contrast ratio according to **DIN EN 13300**:

<i>class</i>	<i>contrast ratio</i>
1	$\geq 99,5$
2	$\geq 98$ und $< 99,5$
3	$\geq 95$ und $< 98$
4	$< 95$

The classes shall be given together with the spreading rate, in square metres per litre, at which the measurement is performed.

## 2.3 Practical application

The workability test was conducted manually. The paint sample (diluted with 10 % distilled water) was applied using rollers onto papered areas of 2 m<sup>2</sup> (two coats). The surfaces displayed transversal black and medium-grey stripes.

Evaluation of the following parameters:

- workability
- tendency to splash
- tendency towards sagging
- application rate
- cleanability of the tools
- hiding power
- drying time
- surface appearance
- smell nuisance