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**ZAG**

**ZAVOD ZA  
GRADBENIŠTVO  
SLOVENIJE**

DEPARTMENT FOR MATERIALS

Laboratory for Polymers

Notified testing laboratory No. 1404 CPR –

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## Translation of REPORT No. 1141/19–460–1

about Product Type Determination (PTD) of  
the "AMK decorative covering"  
according to the requirements of  
SIST EN 15824:2017

Orderer: **TIRUGI STORITVE d.o.o.**  
**Ulica XXX divizije 5A, 5000 Nova Gorica**

Order: **No. 19-011-001141, dated on 10. 12. 2019**

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## Introduction

On the 25<sup>th</sup> of November 2019 the applicant delivered some specimens of the "AMK decorative covering for Product Type Determination (PTD) according to the requirements of the SIST EN 15824:2017. The manufacturer of the product is: SP Dzhelaukhov S.G.344039, Rostov-on-Don, Russia, Piramidnaya st., 41a, Russia.

The product data are given in a table 1. Testing was obtained between the 8. 1. 2019 and 18. 3. 2020.

Table 1: The identification of the product.

Applicant's designation of the product	Description of the product	ZAG designation of the product
AMK decorative covering	Self-adhesive sheets made of marble, acrylic dispersion, inorganic pigments and glass mesh reinforcement to be used as: external render or internal plaster for concrete and foam plastic walls, plasterboards, OSB and mineral wool boards.	D19-93

The product's testing (PTD) was obtained and evaluated according to the requirements of the SIST EN 15824:2017. The application of the products was in agreement with manufacturer's instructions. The following product's characteristics were determined:

- Determination of water-vapour transmission properties (SIST EN ISO 7783:2018)
- Determination of liquid water permeability (SIST EN 1062-3:2008)
- Determination of tensile bond strength (SIST EN 1542:2000)

## Course of testing and testing results

Prior testing, the specimens were conditioned at the standard laboratory conditions (23 °C and 50 % relative humidity) for at least 24 hours.

### Water-vapour transmission properties

Six circle shaped test specimens with a surface area of about 130 cm<sup>2</sup> each, were cut from the product and their thicknesses were determined. The specimens were attached into testing assembly consisted of an aluminium dish, containing a saturated solution of ammonium dihydrogen phosphate (NH<sub>4</sub>H<sub>2</sub>PO<sub>4</sub>) which assures 93 % of relative humidity (r.h.) and test specimen which acted as a water-vapour barrier. In this way, the water vapour permeation from saturated solution to ambient laboratory conditions with 50 % r.h. was assured. The mass of the testing assemblies were gravimetrically monitored for several days. From obtained data the water vapour transmission rate (V), water vapour diffusion resistance factor (μ) and equivalent air layer thickness (s<sub>d</sub>) were calculated. The results are given in a table 2.

Table 2: Water-vapour transmission properties of the "AMK decorative covering".

Results	V [g/m <sup>2</sup> 24 h]	s <sub>d</sub> [m]	μ [l]
Individual values	167	0.1	72.3
	268	0.1	46.9
	219	0.1	57.0
	186	0.1	66.5
	207	0.1	62.1
	246	0.1	52.9
Mean value	216	0.1	62.5
<b>Category according to the SIST EN 15824:2017: V ≥ 150; V1 - High</b>			

## Liquid water permeability

The products of was adhered onto face surface of silicate board with dimensions of 250 mm \* 120 mm \*30 mm. All other surfaces of the board were protected with epoxide adhesive to prevent water intrusion during testing. Three specimens were prepared.

Prior testing the specimens were immersed into water for 24 h and dried for another 24 h at 50°C. In total, three such conditioning cycles was obtained. After conditioning the specimens were conditioned for further 72 hours at standard laboratory conditions (23°C, 50 % r.h.). Further on, the specimens were immersed into the water. The water uptake was determined gravimetrically after 10 min, 1 h, 2 h, 3 h and 24 h of immersion. Based on the water uptake, the liquid water permeability ( $w$ ) was extracted (see table 3).

Table 3: Liquid water permeability of the "AMK decorative covering".

Results	$w$ [kg/m <sup>2</sup> h <sup>1/2</sup> ]
Individual values	0,117
	0,155
	0,131
Mean value	0,19
<b>Category according to the SIST EN 15824:2017: <math>0,1 \leq w \leq 0,5</math>; W2 - Medium</b>	

## Tensile bond strength

The applicable concrete slab was coated with 3 mm thick base coat of type C2 according to the SIST EN 12004-1:2017 and conditioned for 28 days at standard laboratory conditions, Then we the adhered product onto the base coat. After that five pull-off aluminium dollies with diameters of 50 mm were adhered onto the product with epoxide resin. The excess resin was removed. Tensile bond strengths of the specimen were determined using the tensile machine F15D EASY M with loading rate of 0,05 MPa/s. Testing results - pull off stresses at failures ( $\sigma_b$ ) are given in a table 4.

Table 4: Tensile bond strength of the "AMK decorative covering".

Results	$\sigma_b$ [MPa]
Individual values	0,71
	0,69
	0,45
	0,51
	0,53
Mean value	0,58
<b>Category according to the SIST EN 15824:2017: <math>\sigma_b \geq 0,3</math>; Pass</b>	

\* The failure always occurred in product.

Report prepared by:

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