

TOR COATINGS
att. Andy Shaw
Portobello Industrial Estate
Birtley
Chester-Le-Street
County Durham DH3 2RE
UNITED KINGDOM

TEST REPORT

ES150610.a p. 1/21

IDENTIFICATION NUMBER: ES-150610.a

DATE: 12.6.2015

LABORATORY: Coatings Research Institute
Avenue P. Holoffe
1342 LIMELETTE

CUSTOMER: TOR COATINGS
Portobello Industrial Estate
Birtley
Chester-Le-Street
County Durham DH3 2RE
UNITED KINGDOM

REFERENCE ORDER: Your order 13498

DATE OF RECEPTION OF THE SAMPLES: 28.5.2015

NUMBER OF THE RECEPTION DOCUMENT: ES 8832

SAMPLES: Zinsser Grade I applied on filter paper (10 m²/l per coat) by Tor Coatings

TEST(S) + METHOD(S):

Water vapour permeability

Realized following ASTM D 1653 "Water vapor transmission of organic coating films" - Method B - Wet cup method - Condition A

A piece of filter paper with paint and also filter paper without paint is brought upon cups filled with water. These cups are placed until constant weight loss in a desiccator at 23°C and 50 % RH.



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The WVT (water vapor transmission) is calculated using the following formula:

$$WVT = G/t.A$$

where: G = weight loss (in g)
 t = time during which this weight loss (G) is established (h)
 A = surface of the free film (m^2)

After that the WVP (water vapour permeance) is calculated using the following formula:

$$WVP = WVT/\Delta p$$

where: $\Delta p = S.(R1-R2)$
 S = mm Hg vapour pressure at test temperature
 $R1$ = relative humidity in the cup
 $R2$ = relative humidity outside the cup

DATE OF EXECUTION OF THE TESTS: May - June 2015

RESULTS:

	Filter paper alone	Filter paper with paint
Film thickness - Mean (μm)	124,7	132,7 (only paint)
Measurement 1	1112,41	316,02
Measurement 2	1063,49	263,76
Measurement 3	1076,97	266,13
Measurement 4	/	261,41
Measurement 5	/	263,78
mean WVT (g/m^2 per 24 h)	1084,29	274,22
WVP (g/m^2 per 24 h per mm Hg)	0,515	0,130

Performed by: R. Guns
Technician

Approved by: S. Vonckx
Resp. testing Dept.

!!!!!!! Samples will be stored at CoRI during 6 months and then removed in accordance with the waste legislation, unless you make an appeal to prolongate this period or you recall the samples yourself (on charge of the customer).

* This test report concerns only the samples subjected to these tests

* This test report can not be copied partially without the written permission of the CoRI

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