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Dear Valued Customer,

As per your request, below is a copy of the laboratory results for the system(s) of interest. This document contains excerpts from the full third party report summarizing the specified coating system(s) and third party laboratory conclusion(s).

For additional information, please contact your local PPG representative.



INSTITUTE FOR ENGINEERING
OF POLYMER MATERIALS AND DYES
87-100 Toruń ul. M. Skłodowskiej-Curie 55



AB 163

Paint and Plastics Department
44 – 100 Gliwice
ul. Chorzowska 50 A

Analytical Research Laboratory

Test Report No. 370/2015

Type of test	Test subject	Name and address of the Client
Corrosion resistance of coating system acc. to PN-EN ISO 12944-6:2001 corrosivity category: C3 term of protection; high	Coating system: - build coat: SIGMAFAST 278 - top coat: SIGMADUR 550H	Mrs. Céline Tessont PPG Industries Amsterdam Kopraweg 35 1047 DP Amsterdam

SAMPLE		TESTS	
No.	Acceptance	Beginning	End
370/2015	14.10.2015	16.10.2015	10.11.2015

Performer:

Emilia Bielecka
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Emilia Bielecka
15.10.15

Report performed by:

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Emilia Bielecka
10.11.2015

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Authorized by:

10.11.15 *Kesavel*
/Date, Sign/

Accepted by:

10.11.2015 *Emilia Bielecka*
/Date, Sign/

Test results apply only to tested sample. Test Report cannot be copied differently than in the whole form without written permission of Analytical Research Laboratory DF.

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Sample description:

Client has provided for tests 7 plates (150x75x2) mm, with coating system:

- build coat: SIGMATAST 278
- top coat: SIGMADUR 550H

Plates marked by No. 19 ÷ 25. The total dry film thickness (DFT) specified by the Client: 150 µm (build coat: 100 µm; top coat: 50 µm).

Test description:

The evaluation of coating system intended to corrosion protection was performed acc. to PN-EN ISO 12944-6:2001 *Paint and varnishes -- Corrosion protection of steel structures by protective paint systems -- Part 6: Laboratory performance test methods*,

for corrosivity category: C3, term of protection: high, by carrying out the following tests:

- **coating system resistance to humidity for 240 h** acc. to PN-EN ISO 6270-2:2006 *Points and varnishes -- Determination of resistance to humidity -- Part 2: Procedure for exposing test specimens in condensation-water atmospheres. Method CH.*

Assessment after exposure:

- | | | |
|--------------------------------|-----------------------|--|
| a/ degree of blistering | PN-EN ISO 4628-2:2005 | <i>Points and varnishes -- Evaluation of degradation of coatings -- Designation of quantity and size of defects, and of intensity of uniform changes in appearance -- Part 2: Assessment of degree of blistering</i> |
| b/ degree of rusting | PN-EN ISO 4628-3:2005 | <i>Points and varnishes -- Evaluation of degradation of coatings -- Designation of quantity and size of defects, and of intensity of uniform changes in appearance -- Part 3: Assessment of degree of rusting</i> |
| c/ degree of cracking | PN-EN ISO 4628-4:2005 | <i>Points and varnishes -- Evaluation of degradation of coatings -- Designation of quantity and size of defects, and of intensity of uniform changes in appearance -- Part 4: Assessment of degree of cracking</i> |
| d/ degree of flaking | PN-EN ISO 4628-5:2005 | <i>Points and varnishes -- Evaluation of degradation of coatings -- Designation of quantity and size of defects, and of intensity of uniform changes in appearance -- Part 5: Assessment of degree of flaking</i> |

In a humidity chamber were exposed two test plates (No. 20; 21).

➤ **coating system resistance to neutral salt spray for 480 h acc. to PN-EN ISO 9227:2012 Corrosion tests in artificial atmospheres -- Salt spray test.**
Test NSS.

Before inserting the four plates in a salt spray chamber for two of them (No. 22; 23), made linear cut to the substrate using a knife with a blade of the width of 1 mm; the remaining plates were exposed without a cut (No. 24; 25).

Assessment after exposure:

- | | | |
|---|--------------------------------|---|
| a/ degree of blistering | PN EN ISO 4628-2:2005 | <i>Paints and varnishes -- Evaluation of degradation of coatings -- Designation of quantity and size of defects, and of intensity of uniform changes in appearance -- Part 2: Assessment of degree of blistering</i> |
| b/ degree of rusting | PN-EN ISO 4628-3:2005 | <i>Paints and varnishes -- Evaluation of degradation of coatings -- Designation of quantity and size of defects, and of intensity of uniform changes in appearance -- Part 3: Assessment of degree of rusting</i> |
| c/ degree of cracking | PN-EN ISO 4628-4:2005 | <i>Paints and varnishes -- Evaluation of degradation of coatings -- Designation of quantity and size of defects, and of intensity of uniform changes in appearance -- Part 4: Assessment of degree of cracking</i> |
| d/ degree of flaking | PN-EN ISO 4628-5:2005 | <i>Paints and varnishes -- Evaluation of degradation of coatings -- Designation of quantity and size of defects, and of intensity of uniform changes in appearance -- Part 5: Assessment of degree of flaking</i> |
| e/ degree of delamination and corrosion around a cut | PN-FN ISO 4628-8:2013 | <i>Paints and varnishes -- Evaluation of degradation of coatings -- Designation of quantity and size of defects, and of intensity of uniform changes in appearance -- Part 8: Assessment of degree of delamination and corrosion around a scribe or other artificial defect</i> |
| f/ corrosion of substrate from a cut | PN-EN ISO 12944-6:2001 Annex A | <i>Paint and varnishes -- Corrosion protection of steel structures by protective paint systems -- Part 6: Laboratory performance test methods</i> |
- Adhesion of coating system acc. to PN-EN ISO 2409:2013 *Paints and varnishes -- Cross-cut test*, was performed on the unexposed plate (No. 19) and the plates after exposure in a humidity chamber (No. 20; 21) and a salt spray chamber (No. 24; 25).

Test results: presented in the Tables 1-3

Coating system (build coat: SIGMAFAST 278 + top coat: SIGMADUR 550H) meets the requirements PN-EN ISO 12944-6:2001 for corrosivity category C3 and high term of protection.