

RDI, Metal surfaces
Leena Kantola

14.7.2014

Requested by: Tikkurila Industrial UK

Order/ Test method: Laboratory performance tests according to ASTM B117 Salt spray test and water immersion test at 40°C. Adhesion test according to ASTM 3359, Method A.

Contact person/ Job number: L.Kantola / M14030068

Sample data: HPS Ultra metallic test panels (arrived 14.3.2014) were cut to smaller pieces, cleaned carefully with Thinner 006 1048 and painted by Tikkurila Oyj, Technical service with the following paint system in the 8-9th of May.

Temadur 50 BS 10 A 11

2*40µm

Three test panels (coded A, B and C) were exposed to neutral salt spray according to ASTM B 117 for 1000 hours. The dry film thicknesses were measured according to ISO 2808 and the panels were scribed manually with a hard metal tool (1 mm) before testing.

Two test panels (coded D and E) were exposed to water immersion at 40°C according to ISO 2812-2 for 1000 hours.

Immediately after exposure, test panels were evaluated according to Tata Steel Testing Requirements.

Panel F was used for adhesion test according to ASTM 3359, Method A.

Date of test: May-July 2014

Results: See details in appendix 1.

Signatures:



Leena Kantola
Research Assistant



Leena Tuisku
RDI Manager

Appendix: Appendix 1. Results and Photographs of the tested panels.

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Measured film thickness according to ISO 2808 of the arrived test panels before painting was 271 (251-284) μ m.

Results after 1000 h neutral salt spray test according to ASTM B117:

Panel	Film thickness ISO 2808 μ m (n=9)	Rusting ISO 4628-3	Delamination / corrosion from scratch * ISO 4628-8 mm	Adhesion ASTM 3359 Method A immediately / 24h after exposure	Tata Steel test requirements
A	367 (354-372)	0	0 / 0	5 / 5	No through film corrosion or disbonding
B	367 (361-376)	0	0 / 0	5 / 5	
C	359 (351-362)	0	0 / 0	5 / 5	

* Paint not removed from scratch

Results after 1000 h water immersion test at +40°C:

Panel	Film thickness ISO 2808 μ m (n=9)	Cracking ISO 4628-4	Crazing	Softening	Adhesion ASTM 3359 Method A immediately / 24h after exposure	Tata Steel test requirements
D	342 (338-346)	0	No	No	5 / 5	No disbonding, cracking, crazing or softening (effects within 5mm of test panel edges to be disregarded)
E	339 (335-344)	0	No	No	5 / 5	

Adhesion after 7 days air drying at 23 \pm 2°C and 2 hours at 2°C:

Panel	Film thickness ISO 2808 μ m (n=9)	Adhesion ASTM 3359 Method A	Tata Steel test requirements
F	337 (331-343)	5,5,5	No detachment of coating system

Photographs of the tested panels:

