



Test results

AD International laboratory

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Subject: Corrosion test on steel panels
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Customer: TIB / Zinq Leipzig

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PROCESS DESCRIPTION

Substrate

ALU	GALV. STEEL	STEEL	STAINL. STEEL	OTHER
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Finish

powdercoating 	wet paint 	E-COAT (KTL)	anodizing 	OTHER
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Passivation TIB Finish CH03 6%

Pre-treatment

Mechanical & Chemical

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

TYPE OF TEST

Corrosion tests

	Official standard	Test remarks
<input type="checkbox"/> Filiform Corrosion	ISO 4623-2	HCl = 37% Temp = 38-42 °C Humidity = 77-87%
<input type="checkbox"/> Acetic Acid Salt Spray	ISO 9227	NaCl = 45-55 g/l, pH = 3.1-3.3 Temp = 33-37 °C Spray = 1.0-2.0 ml per hour per 80 cm ²
<input checked="" type="checkbox"/> Neutral Salt Spray	ISO 9227	NaCl = 45-55 g/l, pH = 6.5-7.2 Temp = 33-37 °C Spray = 1.0-2.0 ml per hour per 80 cm ²
<input type="checkbox"/> Constant Condensation	ISO 6270	Temp = 40 °C Humidity = 99%

Test Time Neutral Salt Spray



240 hr	480 hr	720 hr	1440 hr	Other:
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<i>Qualisteelcoat C2</i>	<i>Qualisteelcoat C3</i>	<i>Qualisteelcoat C4</i>	<i>Qualisteelcoat C5</i>	<i>24 / 48 hr</i>

TEST RESULTS

Neutral Salt Spray after 24 hours NSS photo report:

Bath Condition:

TIB FINISH CH03: 6%

Temperature bath at start: 35°C

Dipping times: 2 – 4 – 6 min

Direct after HDG dipped into the TIB finish CH03 solution.

8 Hours NSS (Neutral Salt Spray)



2 min

4 min

6 min

Spray passivation

24 Hours NSS

Front view



2 min

4 min

6 min

Spray passivation

The panels with dipping time 2-4-6 have been dipped (passivated) till the upper hole. The 2 minutes dip does face a light corrosion attack. All others are nice, the white stripes are from the not passivated area above. The Spray passivation has been covered fully and looks nice.

32 Hours NSS



Spray passivation

2 min

4 min

6 min

48 Hours NSS



Backside of the panels



Conclusion:

Beste performance will be achieved with the spray passivation where the material got spray with a mist technology while the material have been cooled down. In dipping procedure the TIB Finish is also working with high quality 4 minutes of dipping time is the ideal pretreatment time. TIB Finish CH03 is a dipping passivation system where directly after galvanization the material got dipped. So this means the technology is a cooling down and passivation in one system.

AD Chemicals: Exceeds the market standard!



Discussion:

The Quality of the TIB Finished can be improved when the bath temperature is between 50-70 degrees Celsius.



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