

Chứng nhận phù hợp ISO12944 C5-High

ISO12944: 2018 Sơn và vecni – Bảo vệ chống ăn mòn kết cấu thép bằng hệ thống sơn bảo vệ

Đây là tiêu chuẩn quốc tế về bảo vệ thép chống ăn mòn bằng hệ thống sơn bảo vệ.

Lớp phủ 80µm của ROVAL hoặc EPO ROVAL tuân thủ các yêu cầu kỹ thuật được quy định bởi ISO12944 C5-High. Điều này có nghĩa là ROVAL hoặc EPO ROVAL có thể có tuổi thọ sử dụng từ 15 đến 25 năm trong môi trường ăn mòn C5.

Các loại ăn mòn

Phân loại	Sự ăn mòn	Ví dụ về các môi trường điển hình
C1	Rất thấp	Bên trong các tòa nhà với bầu không khí trong lành
C2	Thấp	Khí quyển có mức độ ô nhiễm thấp: chủ yếu là các vùng nông thôn Các tòa nhà không được làm ẩm, nơi có thể xảy ra ngưng tụ
C3	Trung Bình	Môi trường đô thị và công nghiệp, ô nhiễm lưu huỳnh dioxide vừa phải, các khu vực ven biển có độ mặn thấp
C4	Cao	Vùng công nghiệp và vùng ven biển có độ mặn vừa phải
C5	Rất cao	Các khu công nghiệp có độ ẩm cao với khí hậu khắc nghiệt và các khu vực ven biển có độ mặn cao
CX	Cực kỳ cao	Các khu vực xa bờ có độ mặn cao và các khu công nghiệp có độ ẩm cực kỳ cao với khí hậu khắc nghiệt, khí hậu nhiệt đới và cận nhiệt đới
Im1	Nước ngọt	Các công trình trên sông, nhà máy thủy điện
Im2	Biển hoặc nước lợ	Các công trình chìm không sử dụng phương pháp chống ăn mòn cao tốt (ví dụ: các khu vực bến cảng với các cấu trúc như cửa cống, khóa, hoặc cầu tàu)
Im3	Đất	Các bể ngầm, cọc thép, ống thép ngầm
Im4	Biển hoặc nước lợ	Các công trình chìm có sử dụng phương pháp chống ăn mòn cao tốt (ví dụ: các công trình ngoài khơi)

Thời gian bền mong đợi

Phân loại	Thời gian
Thấp (Low)	Up to 7 years
Trung bình (Medium)	7-15 years
Cao (High)	15-25 years
Rất cao (Very High)	More than 25 years

Lưu ý: Thời gian bền không phải là “thời gian đảm bảo”.

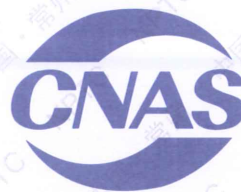


ROVAL

EPO ROVAL



170014240442 (2020)国认监认字(054)号



中国认可
国际互认
检测
TESTING
CNAS L0896

Test Report

Report Number: TW21527W2 (En)

Name of Product	<u>Royal Cold Galvanizing Compound</u>
Entrusting Corporation	<u>Shanghai Royal Zinc Rich Paint Corporation</u>
Test Category	<u>Entrusting Test</u>
Report Issue Date	<u>May 21, 2021</u>



国家涂料质量监督检验中心
National Quality Supervision Testing Center for Paint
国恒信(常州)检测认证技术有限公司
National GoldSun(Changzhou) Test & Certification Technology Co.,Ltd.



National Quality Supervision Testing Center for Paint

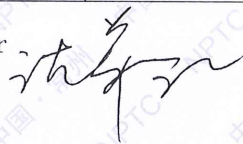
Test Report

Report Number: TW21527W2 (En)

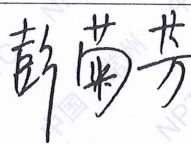
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Name of Product	Roval Cold Galvanizing Compound	Number of Sample	TW21527
Manufacturer	Shanghai Roval Zinc Rich Paint Corporation	Trademark	ROVAL
Address Of Entrusting Corporation	No. 393 Fenggong Road, Malu Town, Jiading District, Shanghai	Entrusting Date	February 20, 2021
Tel Of Entrusting Corporation	021-69156584	Samples Arriving Date	February 20, 2021
Sample Description	The appearance of the 16 test panels on steel plates delivered by the entrusting corporation is grey and flat.		
Test Basis	ISO 12944-6:2018 Paints and varnishes — Corrosion protection of steel structures by protective paint systems —Part 6: Laboratory performance test methods (Test regime 1, C5, high)		
Test Date	February 24, 2021 ~ May 11, 2021		
Conclusion	<p>The sample delivered conforms to the technical requirements specified in ISO 12944-6:2018 Paints and varnishes — Corrosion protection of steel structures by protective paint systems —Part 6: Laboratory performance test methods (Test regime 1, C5, high)</p> <p style="text-align: right;">Date of Sign and Issue: May 21, 2021</p>		
Remarks	<p>1. Information provided by the entrusting corporation: the substrate of the test panel is steel plate, of which the surface is sandblasted to Sa2.5, the surface roughness is medium (G), and the film thickness is $(80 \pm 10) \mu\text{m}$.</p> <p>2. The items tested of ISO 12944-6:2018 are all within the scope of accreditation and authorization of our center.</p> <p>3. The photos of the second and third items before and after tests are shown in the appendix.</p>		

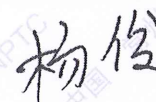
Approver



Checker




Tester




Test Results:

Report Number: TW21527W2(En)

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No.	Test Items	Technical Requirements	Test Results	Item's Conclusion	Remarks
1	Adhesion, MPa	0% adhesive failure between steel/metalized steel respectively and the first coat (unless pull-off values are at least 5 MPa), minimum pull-off value of 2.5 MPa for each measurement	5.9(5.1~7.1), 100%B	Qualified	ISO 4624:2016
2	Heat and Humidity Test	720h, blistering 0(S0), rusting Ri0, cracking 0(S0), flaking 0(S0), 0% adhesive failure between steel/metalized steel respectively and the first coat (unless pull-off values are at least 5 MPa), minimum pull-off value of 2.5 MPa for each measurement	720h, blistering 0(S0), rusting Ri0, cracking 0(S0), flaking 0(S0); adhesion (pull-off test) after heat and humidity test is 5.7MPa (5.1MPa~6.2MPa), 100%B	Qualified	ISO 6270-1:2017 ISO 4624:2016 
3	Neutral salt spray test	1440h, the creepage from the scribe is ≤1.5mm; On the unscribed areas of the paint film, blistering 0(S0), rusting Ri0, cracking 0(S0), flaking 0(S0), 0% adhesive failure between steel/metalized steel respectively and the first coat (unless pull-off values are at least 5 MPa), minimum pull-off value of 2.5 MPa for each measurement	1440h, there is no creepage from the scribe on the paint film, blistering 0(S0), rusting Ri0, cracking 0(S0), flaking 0(S0), the whitening area is 60%; adhesion (pull-off test) after neutral salt spray test is 5.6MPa(4.7MPa~7.6MPa), 20%A/B, 80% B	Qualified	ISO 9227:2017 ISO 4624:2016
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检测
TESTING
CNAS L0896

Test Report

Report Number: TW233597W1 (En)

Name of Product	Epo Roval Cold Galvanizing Compound
Entrusting Corporation	Shanghai Roval Zinc Rich Paint Corporation
Test Category	Entrusting Test
Report Issue Date	February 8, 2024



国恒信(常州)检测认证技术有限公司
National GoldSun(Changzhou) Test & Certification Technology Co.,Ltd.
国家涂料质量检验检测中心
National Quality Inspection & Test Center for Paint



National GoldSun (Changzhou) Test & Certification Technology Co., Ltd.



报告真伪查询

Test Report

Report Number: TW233597W1 (En)

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Name of Product	Epo Roval Cold Galvanizing Compound	Number of Sample	TW233597
Manufacturer	Shanghai Roval Zinc Rich Paint Corporation	Trademark	ROVAL
Address Of Entrusting Corporation	No.393 Fengong Road, Malu Town, Jiading District, Shanghai	Entrusting Date	October 23, 2023
Tel Of Entrusting Corporation	021-69156584	Samples Arriving Date	October 23, 2023
Sample Description	The appearance of the 10 test panels on steel plates delivered by the entrusting corporation is grey and flat.		
Test Basis	ISO 12944-6:2018 Paints and varnishes—Corrosion protection of steel structures by protective paint systems—Part 6: Laboratory performance test methods(C5, Test regime 1, High)		
Test Date	October 31, 2023~January 11, 2024		
Conclusion	The delivered samples conform to the technical requirements specified in ISO 12944-6:2018 Paints and varnishes—Corrosion protection of steel structures by protective paint systems—Part 6: Laboratory performance test methods(C5, Test regime 1, High). <div style="text-align: center; margin-top: 10px;"> <p>Date of Sign and Issue: February 8, 2024</p> </div>		
Remarks	Information provided by the entrusting corporation: the substrate of the test panels is steel plate, the grade of surface treatment is Sa2.5, the profile grade is "medium (G)", and the dry film thickness of the test panels is (80±10) μm.		

Approved by

Verified by

Prepared by

Test Results:

Report Number: TW233597W1(En)

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No.	Test Items	Technical Requirements	Test Results	Item's Conclusion	Remarks
1	Adhesion, MPa	0% adhesive failure between steel/metalized steel respectively and the first coat (unless pull-off values are at least 5MPa), minimum pull-off value of 2.5MPa for each measurement	6(3.2~6.9), 100%B	Qualified	
2	Resistance to humidity	720h, blistering 0(S0), rusting Ri0, cracking 0(S0), flaking 0(S0); 0% adhesive failure between steel/metalized steel respectively and the first coat (unless pull-off values are at least 5MPa), minimum pull-off value of 2.5MPa for each measurement	720h, blistering 0(S0), rusting Ri0, cracking 0(S0), flaking 0(S0), the whitening area is 40%; adhesion (pull-off test) after resistance to humidity is 4MPa (2.6MPa~ 4.8MPa), 100%B	Qualified	
3	Neutral salt spray test	1440h, the creepage from the scribe is ≤ 1.5 mm; on the unscribed areas of the paint film, blistering 0(S0), rusting Ri0, cracking 0(S0), flaking 0(S0), 0% adhesive failure between steel/metalized steel respectively and the first coat (unless pull-off values are at least 5MPa), minimum pull-off value of 2.5MPa for each measurement	1440h, there is no creepage from the scribe on the paint film; on the unscribed areas of the paint film, blistering 0(S0), rusting Ri0, cracking 0(S0), flaking 0(S0), the whitening area is 80%; adhesion (pull-off test) after neutral salt spray test is 6MPa (5.0MPa~ 6.7MPa), 40%A/B, 60%B	Qualified	
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