

#### 適合証明書 ISO12944 C5-High

ISO 12944 :2018 Paint and varnishes — Corrosion protection of steel structures by protective paint system (塗料とワニス — 防食塗装システムによる鋼構造物の腐食防食)

ISO12944 は保護塗料システムによる腐食から鋼を保護するための国際規格です。

ローバル、またはエポローバルの  $80 \mu$  m 塗膜は ISO12944 C5-High で指定された技術要件に適合しています。 つまり下記の表より、

(腐食環境分類:C5) 高湿度且つ腐食の激しい工業地域において、

(期待耐用年数: High) 15~25年の耐用年数が期待できる

ことを意味します。

#### 腐食環境分類

分類	腐食レベル	環境例
C1	極めて低い	清潔な環境の保温のある建物(事務所、店、学校、ホテルなど)
G2	低い	結露が生じる保温のない建物(倉庫、体育館など) 低汚染地域、農村地域
C3	中程度	都市および工業の雰囲気、中程度の二酸化汚染雰囲気、低塩分濃度 の海岸
C4	高い	工業地帯および中塩分濃度の海岸
C5	非常に高い	高湿度且つ腐食の激しい工業地域
СХ	極めて高い	高塩分濃度の海岸および海洋構造物
Im1	淡水浸漬	河川設備、水力発電所
Im2	海水または汽水浸漬	水門、突堤などの構造物のある港湾地域(電気防食なし)
Im3	土中埋設	埋設タンク、鉄杭、鉄製配管
Im4	海水または汽水浸漬	海洋構造物、浸漬構造物(電気防食あり)

#### 期待耐用年数

分類	期待年数			
Low (L)	~7 年未満			
Medium (M)	7~15 年			
High (H)	15~25 年			
Very High (VH)	25 年以上			

注意:期待耐用年数は「保証期間」ではありません。





ローバル

エポローバル







### Test Report

Report Number: TW21527W2 (En)

Product Name of

Roval Cold Galvanizing Compound

Entrusting Corporation

Shanghai Roval Zinc Rich Paint Corporation

Test Category

Entrusting Test

Report Issue Date

May 21, 2021



国家涂料质量监督检验中心回题 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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( )		The state of the s	Page 1 of 2
Name of Produc	ct 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 Entrusti Corporation	ing 021-69156584	Samples Arriving Date	February 20, 2021
Sample Description	The appearance of the 16 test pa entrusting corporation is grey and f	anels on steel plates	s delivered by the
Test Basis	ISO 12944-6:2018 Paints and var structures by protective paint systemethods(Test regime 1,C5, high)	rnishes — Corrosion ms —Part 6: Laborat	protection of steel ory performance test
Test Date	February 24, 2021~May 11, 2021		ALC WIN ARTO
Conclusion	The sample delivered conforms to ISO 12944-6:2018 Paints and varnishes structures by protective paint systemethods(Test regime 1,C5, high)	s — Corrosion prote ms —Part 6: Laborat	etion of etaal
Remarks	1. Information provided by the entrus test panel is steel plate, of which t surface roughness is medium (G), and 2. The items tested of ISO 12944-6:201 accreditation and authorization of ou 3. The photos of the second and third in the appendix.	the surface is sandbithe film thickness is 8 are all within the creater.	lasted to Sa2.5, the is (80 ± 10) µm.

Approver the

Checker 彭带力

Tester

杨俊

#### Test Results:

Report Number: TW21527W2(En) Page 2 of Item's Test Items Technical Requirements Test Results No. Remarks Conclusion 0% adhesive failure between steel/ metalized steel respectively and the first coat (unless QT. Adhesion, MPa  $5.9(5.1\sim7.1)$ , 100%BQualified ISO 4624:2016 pull-off values are at least 5 MPa), minimum pull-off value of 2.5 MPa for each measurement 720h, blistering 0(SO). rusting RiO, 720h, blistering cracking 0(SO), 0(S0),rusting RiO, cracking O(SO), flaking O(SO); flaking 0(SO). 0% adhesive failure ISO between steel/ 6270 - 1Heat and 2 metalized adhesion (pull-Qualified 2017 Humidity Test ISO off test) after steel respectively and the first coat (unless heat and humidity 4624:2016 test is 5.7MPa pull-off values are at least 5 MPa), minimum (5. 1MPa∼6. 2MPa), pull-off value of 2.5 100%B MPa for each measurement 1440h, the creepage from the scribe is≤1.5mm; 1440h, there is no On the unscribed areas creepage from the of scribe on the paint the paint film, film, blistering blistering O(SO), rusting RiO, O(SO), rusting RiO, cracking O(SO), cracking O(SO), flaking O(SO), the flaking 0(SO), Neutral salt ISO 9227:2017 3 whitening area is Qualified spray test 0% adhesive failure ISO 4624:2016 60%; adhesion (pullbetween steel/ off test) after metalized neutral steel respectively and salt spray test is 5.6MPa(4.7MPa~ the first coat (unless pull-off values are at 7.6MPa), 20%A/B, 80% least 5 MPa), minimum pull-off value of 2.5 MPa for each measurement Blank Below.









# 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)检测决证技术有限公司 回磁型图 National GoldSun(Changelion) Test & Certification Technology Co., Ltd. 家涂料质量检验检测 National Quality Inspection & Test Center for Paint



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

### Test Report



Page 1 of 2

report number. 1 1120	70031 HI (DII)		rage Tor 2
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 Fenggong 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 parentrusting corporation is grey and fl		delivered by the
7	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	- X - X	
	ON (Mr. 1882)		
Test Basis	ISO 12944-6:2018 Paints and varni structures by protective paint system methods (C5, Test regime 1, High)		
- 4° - 2-	- K - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1		, % 4 <u>X</u>
	8, V., YO V.		
Test Date	October 31, 2023~January 11, 2024		
TOST Date	January II, 2021		
W. 1/10		· . A	
	XO (1) (1)		
	The delivered samples conform to	the technical requi	rements energified in
	ISO 12944-6:2018 Paints and varnishes	Corrosion protect	ion of steel
Conclusion	structures by protective paint system	s—Part 6: Laborato	ry performance test
11, 17,	methods (C5, Test regime 1, High)	1	1000
		1 3	
	Land Control of the C	74 1.111 -14	TEN
		"粉专用草"。	<b>心心的</b> 专用音 /
		Date of Sign	and Issue: February
	X0 - # 11	2021	
	21, 21, X.		
	Information provided by the entru	sting corporation:	the substrate of the
Remarks	test panels is steel plate, the grad profile grade is "medium (G)", and the is $(80\pm10) \mu m$ .	le of surface treatm ne dry film thicknes	ent is Sa2.5, the s of the test panels
	<u> </u>		
	\$, 10 x, 4,		
	10 O. May 7/20 Mg		
	AC (A) AC		

Approved by

Report Number: TW233597W1 (En)

Verified by

Prepared by

#### Test Results:

Report Number: TW233597W1 (En) Page 2 of 2 Technical Item's Test Items Test Results Remarks No. Conclusion Requirements 0% adhesive failure between steel/ metalized steel respectively and the first coat 6(3.2~6.9), 100%B Adhesion, MPa Qualified (unless pull-off 01 values are at least 5MPa), minimum pull-off value of 2.5MPa for each measurement 720h, blistering 0 (S0), rusting RiO, cracking O(SO), flaking O(SO); 0% 720h, blistering 0 (S0), rusting RiO, adhesive failure cracking 0(S0), flaking O(SO), the between steel/ metalized steel whitening area is Qualified Resistance to 2 respectively and 40%; adhesion humidity the first coat (pull-off test) (unless pull-off after resistance to humidity is 4MPa (2.6MPa~ 4.8MPa), values are at least 5MPa), minimum pull-off value of 100%B 2.5MPa for each measurement 1440h, the creepage from the scribe 1440h, there is no is≤1.5mm; on the creepage from the unscribed areas of scribe on the paint the paint film. film; on the blistering O(SO), unscribed areas of rusting RiO, the paint film, cracking 0(S0), flaking 0(S0), 0% blistering O(SO), rusting RiO, cracking O(SO), flaking O(SO), the Neutral salt spray adhesive failure Qualified 3 between steel/ test metalized steel whitening area is respectively and 80%; adhesion the first coat (pull-off test) (unless pull-off after neutral salt values are at least spray test is 6MPa 5MPa), minimum (5.0MPa~ 6.7MPa), pull-off value of 40%A/B, 60%B 2.5MPa for each measurement Blank Below

---- End of the Report