



Testing Laboratory
0292

Material & Engineering Laboratory-Taichung

TEST REPORT



REPORT NO. TV-16-01058ZA

PAGE NO. 1 OF 2

DATE Apr. 27, 2016

Applicant KWO LIN CO., LTD.
Product Description Fluoropolymer powder coating
Product Type FR
Product Submitted By KWO LIN CO., LTD.
Received Date Jul. 30, 2015
Tested Date Jul. 30, 2015~Apr.27, 2016
Remark The information mentioned in the above section is provided by Client
(Exclude Date of Sample Received and Date of Testing)

Test Result :

Test Item	Test Method	Result	Standard
Specular gloss (60 degree)	AAMA 2605-13	34	---
Film adhesion		5B(100%)	100%
Dry		5B(100%)	100%
Wet		5B(100%)	100%
Boiling water		No Crack	No Crack
Impact resistance (5/8",160in-lb)		104	---
Dry film thickness (μ m)		>40 (Note 3)	40 Min.
Abrasion resistance (L/mil)		2H	---
Dry film hardness		No Corrosive	No corrosive
Humidity resistance (100% RH,100° F, 5000 hrs.)		No blister 、 No significant changes in appearance	No blister 、 No significant changes in appearance

----- 1 -----

The required specification(s) offered in this test report is/are for reference only.
The conformity judgment is at the Applicant's final verdict.

Signed for and on behalf of
SGS TAIWAN Ltd.

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.

SGS Taiwan Ltd.
台灣檢驗科技股份有限公司

No. 9, 14th Rd, Taichung Industrial Park, Taichung 40755, Taiwan / 40755 台中市台中工業區14路9號
☎ (886-4) 2359-1515

☎ (886-4) 2359-2557

www.sgs.tw

Member of SGS Group

9767848

amoon_chou

TEST REPORT



REPORT NO. TV-16-01058ZA

PAGE NO. 2 OF 2

DATE Apr. 27, 2016

Test Result :

Test Item	Test Method	Result	Standard
Weather test (5000 hrs.) a. Color retention (ΔE) b. Gloss retention (%) c. Surface View	ASTM G155-13	0.77 100 Surface no effect	5 Max. ---- Surface no effect
Salt spray test (5%NaCl, 5000 hrs.)	ASTM B117-11 (Ref. ASTM D1654-05)	No blister, No Crack Rate 10. Rate 10.	Scribe on cut edges rate ≥ 7 Blister rate ≥ 8
Chemical resistance Muriatic Acid Nitric Acid (ΔE) Mortar	AAMA 2605-13	Color no change Color no change (0.13) Color no change	No effect No effect, Color change below 5E Color no change
Resistance to erosion (%)	AAMA 2605-13	100	---

Note: 1. Gloss, Film adhesion, Impact resistance, Dry film hardness, Chemical resistance and Salt spray test are accredited by TAF.

2. Abrasion resistance test is subcontracted to SGS M&E Laboratory-Kaohsiung.

3. Abrasion resistance condition provided by Client, testing to >40 L/mil stop, The coating were broken, But not over 4mm limit.

4. Test Conditions below:

- (1) Type of salt used in preparing the salt solution : Class 1
- (2) Concentration of solution collected : 5 w/v % NaCl
- (3) Type of water used in preparing the salt solution : Distilled water
- (4) The temperature within the exposure zone of the closed cabinet ($^{\circ}\text{C}$) : 35.0 ± 1.0
- (5) Salt solution collected (ml/h/80cm²) : 1.6 (Avg.)
- (6) Air pressure (kgf/cm²) : 1.0 (Avg.)
- (7) Method of Cleaning specimen : Maintain initial condition prior to test
: After test by 38 $^{\circ}\text{C}$ warm water cleaning & dry
- (8) pH of collected solution : 6.6 (Avg.)
- (9) Method of supporting or suspending article in the salt spray chamber : 15 $^{\circ}$
- (10) Description of protection used : The back and sides seal by wax

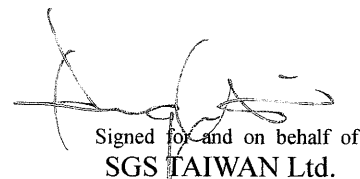
5. Humidity resistance, Weather test, salt spray test were test on the chromate pretreated Q-Panel AL-36 (provided by Clientware)

6. This Test Report is an additional original report of TV-16-01058Z. Issued date : Apr. 27, 2016.

-- -oOo- --

The required specification(s) offered in this test report is/are for reference only.

The conformity judgment is at the Applicant's final verdict.



Signed for and on behalf of
SGS TAIWAN Ltd.

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.