



YOUR PARTNER FOR THE BEST QUALITY

TEST REPORT

5, Myeongji ocean city 9-ro, Gangseo-gu, Busan, SEOUL 618-814 Rep. of KOREA

TEL 82-51-464-0771 FAX 82-51-462-2115

Report No : TAP-019708

Receipt Date : Aug.07.2013

Client : Jin-Hyoung Kim

Test Completion Date : Sep.10.2013

DSP Co., Ltd.

#439-24, Jangjae-Ro, Saengrim-Myeon, Kimhae-Si, Gyeongnam, Korea.

Sample : Metallic Specimen(stainless steel ncc coating sheet)

TEST RESULTS

TEST ITEM	UNIT	SAMPLE	RESULT	TEST METHOD
Dry Film Hardness(MITSUBISHI PENCIL)	-	-	9H	KS M ISO 15184 : 2002
Appearance(**) after Boiling Water Resistance Test(1 h)	-	-	No Defects	KS D 8303 : 2009(*)
Appearance(**) after Heat Resistance Test((150 ± 2)°C×24 h)	-	-	No Defects	KS M 5000 : 2009(*)
Appearance(***) after Humidity Resistance Test((55 ± 1)°C×(95 ± 5) % R.H.×1 h)	-	-	No Defects	KS D 6711 : 1992(*)
Appearance(**) after Chemicals Resistance Test((20 ± 1)°C×5 % Acetic Acid×24 h)	-	-	No Defects	KS M ISO 2812-1 : 2012(*)
Appearance(**) after Chemicals Resistance Test((23 ± 1)°C×Xylene×24 h)	-	-	No Defects	KS M ISO 2812-1 : 2012(*)
Appearance(**) after Chemicals Resistance Test((23 ± 1)°C×MEK×24 h)	-	-	No Defects	KS M ISO 2812-1 : 2012(*)
Appearance(**) after Chemicals Resistance Test((23 ± 1)°C×20 % Sodium Carbonate×24 h)	-	-	No Defects	KS M ISO 2812-1 : 2012(*)
Chemicals Resistance Test(Black Oil-based Pen,24 h)	-	-	No Defects	KS M 3802 : 2008(****)
Erichsen Cupping Test	mm	-	14.1	KS B 0812 : 2009

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President

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TEST RESULTS

TEST ITEM	UNIT	SAMPLE	RESULT	TEST METHOD
Adhesion Test(X-Cut)	-	-	5A	ASTM D3359-09(Method A)
Impact Resistance Test(500 g×50 cm×1/2")	-	-	No Defects	KS D 6711 : 1992(*)
Bending Resistance Test(1.5 R,90°)	-	-	No Defects	KS M 5000 : 2009(*)
Neutral Salt Spray Test(360 h,Red Rust)	-	-	No Defects	KS D 9502 : 2009(*)
Appearance(***) after Constant Temperature and Humidity Test((40 ± 2)°C×(95 ± 5) % R.H.×240 h)	-	-	No Defects	KS D 6711 : 1992(*)
Appearance(**) after Cold-Hot Cycle Test	-	-	No Defects	KS D 8502 : 2010(****)
Color Difference(ΔE) after Accelerated Weathering Test(UV,24 h)	-	-	0.2	KS M ISO 4892-3 : 2012,KS A 0066 : 2006(*****)

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TEST RESULTS

TEST ITEM	UNIT	SAMPLE	RESULT	TEST METHOD
(*) Test Condition : By The Client				
(**) Appearance(By The Client)⇒ Confirm occurrence of crack, blister and peel on the coating panel(Except from an edge part).				
(***) Appearance(By The Client)⇒ Confirm occurrence of peel of the coating films by tape.				
(****) Chemicals Resistance Test Condition(By The Client)⇒ Clean with the ethyl alcohol after contaminated the test panel during 24 h.				
(***** Cold-Hot Cycle Test Condition⇒ [(150 ± 1)°C × 1 h] → [(-20 ± 1)°C × 1 h] × 5 cycles]				
(***** Accelerated Weathering Test Condition				
⇒ UV Lamp : UVA-340, Irradiance : 0.76 W/m ² (340 nm),				
Exposure Time/Temp : 4 h UV / (60 ± 1) °C,				
Condensation Time/Temp : 4 h Con / (50 ± 1) °C,				
Total Exposure Time : 24 h.				

USAGE : QUALITY CONTROL

NOTE : 1. The test results on this test report are only limited to the samples and sample names provided by the customer and KTR do not guarantee the quality of all products of the customer.
2. This test report shall not be used for public relation, advertisement, lawsuit and any other purposes outside the scope of its defined usage.

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