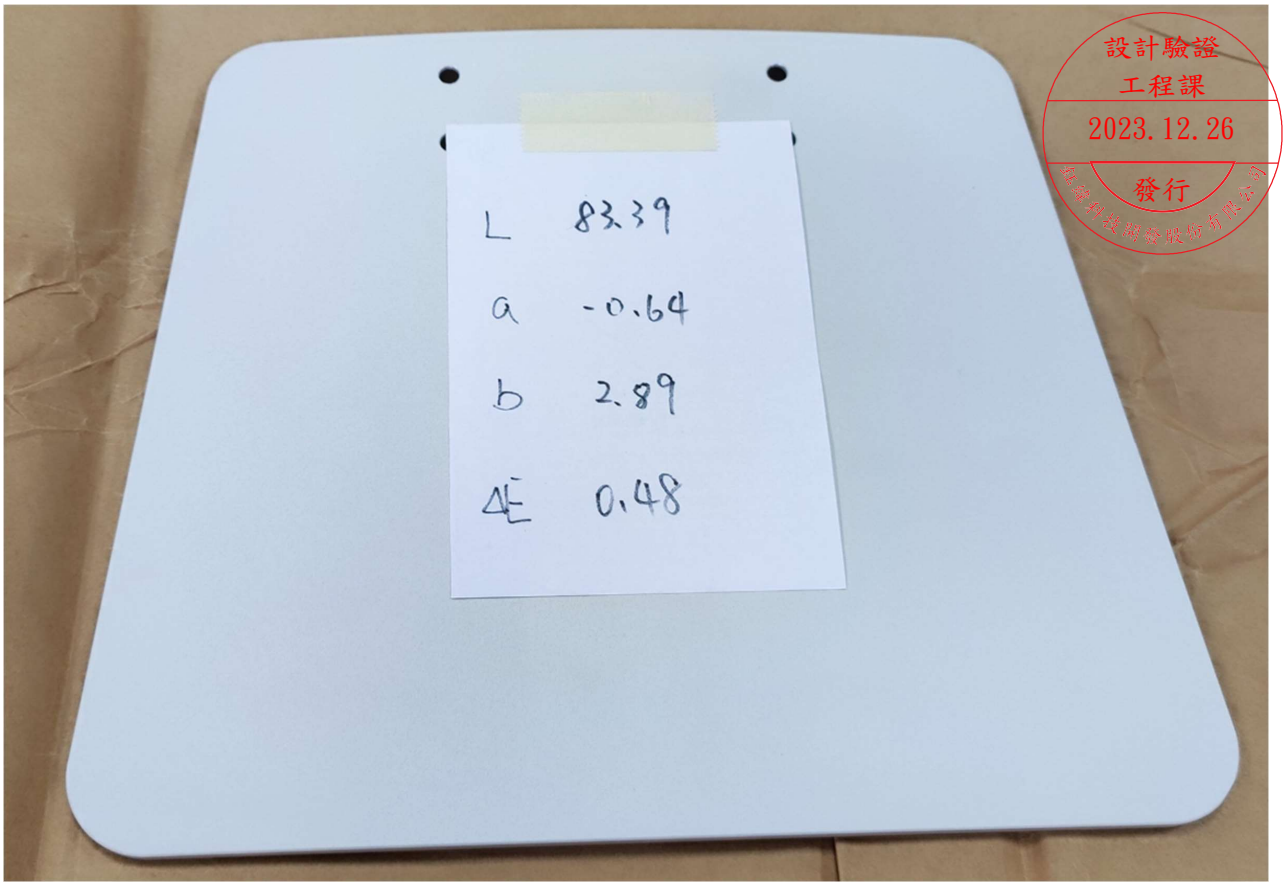



L 83.39
a -0.64
b 2.89
ΔE 0.48
設計驗證
工程課
2023.12.26
發行

雄業實業股份有限公司

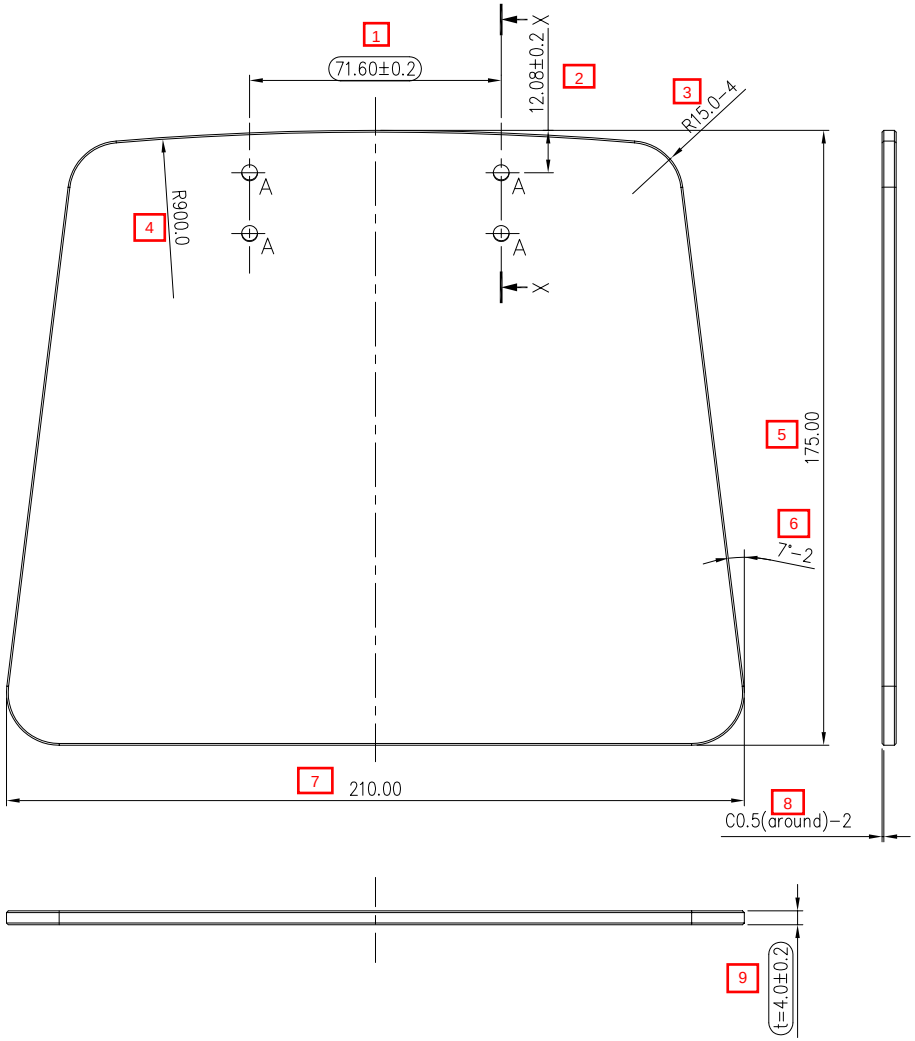
樣 品 承 認 書

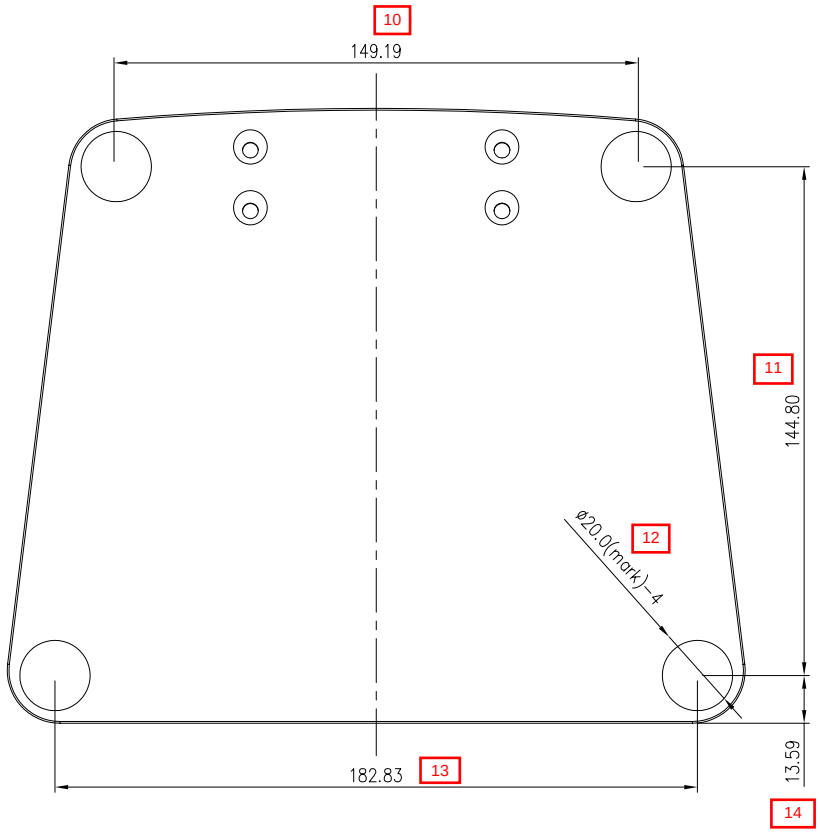


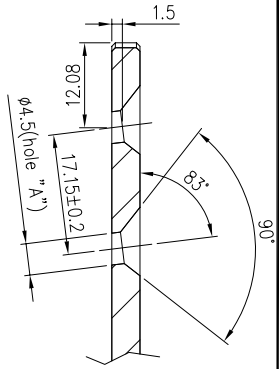
客　　戶：	鈺緯科技
料　　號：	3MDLTWME140 (M1712)
品　　名：	BASE D002
日　　期：	112/12/25
送樣數量：	3　　PCS



REV.	DATE	DESCRIPTION	BY	ARRD
1	2020.10.20	UPDATE NOTES	Ferris Tsai	







SECTION X-X (2 : 1)

7	3MDLTWME160	WHITE (D002)		M1712	MIT WHITE, BASE ON COLOR CHIP
6	3MDLTWME140	WHITE (RAL9002)		M1712	
5	3MDLTWME110	WHITE (White-N9)		M1712	
4	3MDLTWME090	WHITE (W96313)		M1712	
3	MDLTWME060	WHITE (D009)		M1706	
2	3MDLTWME030	WHITE (5897)		M1646	
1	3MDLTWME020	BLACK (5816)		M1712	
	PART No.	PAINTING COLOR	USED ON	APPD No.	REMARK

6. 鑽孔及CNC毛邊須去除.
5. 顏色色差 ：依標準色板定義之允收標準檢驗. ⚠
~~5. 顏色色差 ：與標準色板對打ΔE = < 1.0, 前後批須同色相~~ ⚠
4. 尺寸依據圖面為主, 毛邊, 切斷面, 參照承認樣品.
3. 織紋烤漆顏色及紋路請參照色板.
2. 不可有髒污及油污.

註 ： 1. 需符合RoHS. ⚠

設計驗證 工程課 2023.12.26 發行 鈺緯科技開發股份有限公司

RANGE OF DIMENSION	TOLERANCE CLASS DESIGNATION		
	f	V m	c
UP TO 30	±0.10	±0.20	±0.50
ABOVE 30-120	±0.15	±0.30	±0.80
ABOVE 120-315	±0.20	±0.50	±1.20
ABOVE 315-1000	±0.30	±0.80	±2.00
ANGLE ±1° (±1.75/100)			

THIRD ANGLE PROJECTION	UNITS : mm	SCALE : 1 / 1	SHEET : 1 / 1	MODEL NO.: METAL TILT STAND
	MATERIAL :SPCC,t4.0		TREATMENT : PAINTING	
DSGD by Ferris Tsai	2019/10/20	PART NAME: BASE		
APPD by		PART NO.: SEE NOTES		VER. 2
APPD No. : SEE NOTES	FILE NAME : MDLTWMEBAS	DIVA Laboratories ,Ltd.		

Test Result	

DIVA FAI DATA SHEET

Part Number :	3MDLTWME140 (M1712)	Supplier :	雄業	Date:	2023/12/25
Part Description :	BASE D002			Cavity / Tool # :	
Revision :	0	Material Spec:	酸洗板 T=4.0mm	Inspector:	李宥廷

MOI-Method of inspection abbreviation: HG = Height gauge, MIC = Micrometer, DC = Dial Caliper, P = Protractor, OC = Optical Comparator, CG = Checking Gauge, CMM = Coordinate Measuring Machine, OMM = Optical Coordinate Measuring Machine, HT = Hardness Trester, TG = Thickness Gauge, VIS = V D

OTHER:

DRAWING SPECIFICATIONS						INSPECTION RESULTS							INSPECTION ANALYSIS					
						Sample Number							% Tolerance		Alert/Rej		Supplier	RD Engineering
ITEM	LOCATION	NOMINAL	+TOL	-TOL	Method	1	2	3	1	2	3	Mean	UPPER	LOWER	HIGH	LOW	Remarks	Disposition
1	A3	71.60	0.20	0.20		71.570	71.600	71.580	-0.030	0.000	-0.020	71.583	0%	15%				
2	A4	12.08	0.20	0.20		11.820	11.840	11.820	-0.260	-0.240	-0.260	11.827	0%	130%		Reject		
3	A5	15.00	0.20	0.20		15.020	15.000	15.030	0.020	0.000	0.030	15.017	15%	0%				
4	B2	900.00	0.80	0.80		920.550	920.500	920.550	20.550	20.500	20.550	920.533	2569%	0%	Reject			
5	C5	175.00	0.50	0.50		175.480	175.500	175.470	0.480	0.500	0.470	175.483	100%	0%	Alert			
6	D5	7.00	1.00	1.00		5.600	5.630	5.600	-1.400	-1.370	-1.400	5.610	0%	140%		Reject		
7	E3	210.00	0.50	0.50		210.480	210.500	210.480	0.480	0.500	0.480	210.487	100%	0%	Alert			
8	E5	0.50	0.20	0.20		0.340	0.360	0.360	-0.160	-0.140	-0.140	0.353	0%	80%		Alert		
9	F5	4.00	0.20	0.20		4.080	4.080	4.100	0.080	0.080	0.100	4.087	50%	0%				
10	A8	149.19	0.50	0.50		148.090	148.100	148.120	-1.100	-1.090	-1.070	148.103	0%	220%		Reject		
11	C10	144.80	0.50	0.50		145.010	144.980	145.000	0.210	0.180	0.200	144.997	42%	0%				
12	D9	20.00	0.20	0.20		20.710	20.590	20.960	0.710	0.590	0.960	20.753	480%	0%	Reject			
13	E8	182.83	0.50	0.50		182.990	182.980	183.000	0.160	0.150	0.170	182.990	34%	0%				
14	E10	13.59	0.20	0.20		13.680	13.640	13.660	0.090	0.050	0.070	13.660	45%	0%				
15		以下空白																
16																		
17																		
18																		
19																		
20																		
21																		
22																		
23																		
24																		
25																		
26																		
27																		
28																		
29																		
30																		

Instructions:
1.Inspector mest fillout the yellow area.
2. The table will automatically calculate the data in green area.

雄業實業股份有限公司

■ 組立
□ 沖壓

製程作業標準書

頁次： 1/1
文件編號: PA-SOP-3MDLTWME140-A0

客戶	鈺緯	機種		料號	3MDLTWME140 (M1712)		品名	BASE RAL90002
工段		作業別	外觀檢查 包裝	機台編號		噸數		材質	酸洗板 4.0t

使用工具 / 機台設定		零組件 / 數量	
1		1	3-1號箱
2		2	
3		3	
4		4	

工序內容	
1	烤漆-WHITE RAL9002
2	單一包裝 10pcs/箱
3	掛勾痕要補漆
4	
5	
6	
7	
8	
9	
10	

作業重點	
1	不可變形、壓傷、刮傷、生鏽、油汙
2	刮傷小於0.15MM不計 大於0.15-0.25MM一邊一個全部2個
3	汙點小於0.35不計 大於0.5mm一邊一個全部2個
4	烤漆異物小於0.5允許一個
5	
6	







不良履歷			
1		4	
2		5	
3		6	

核准		審核		製表	

製表日期	版本	修定內容
112/12/25	A0	新訂

MSI color report 日期： 2023/12/21

品管色差報表

標準樣: (M1712)3MDLTWME140 李經理提供數據

比較樣: 3MDLTWME140 112.12.21.1

色差公式: CIELAB 允差： 0.8

	L	A	B	C	H
標準樣	83.72	-0.76	2.72	2.82	105.61
比較樣	83.43	-0.68	3.03	3.1	102.72

光源／視角	Delta E	dL*	da*	db*	允拒收	色彩描述		
D65/10	0.43	-0.29	0.08	0.31	允收	較暗	偏紅	偏黃

光源／視角	Delta E	dL*	da*	db*	允拒收	色彩描述		
D65/10	0.34	-0.19	0.07	0.27	允收	較暗	偏紅	偏黃

光源／視角	Delta E	dL*	da*	db*	允拒收	色彩描述		
D65/10	0.43	-0.25	0.07	0.35	允收	較暗	偏紅	偏黃

光源／視角	Delta E	dL*	da*	db*	允拒收	色彩描述		
D65/10	0.33	-0.24	0.05	0.22	允收	較暗	偏紅	偏黃

光源／視角	Delta E	dL*	da*	db*	允拒收	色彩描述		
D65/10	0.44	-0.21	0.08	0.37	允收	較暗	偏紅	偏黃

測試報告
Test Report

中國鋼鐵股份有限公司 (CHINA STEEL CORPORATION)
高雄市小港區中鋼路1號 (1 CHUNG KANG ROAD, HSIAO KANG, KAOHSIUNG 812401, TAIWAN, REPUBLIC OF CHINA)

以下測試樣品係由申請廠商所提供及確認 (The following sample(s) was/were submitted and identified by the applicant as)：

送樣廠商(Sample Submitted By) : 中國鋼鐵股份有限公司 (CHINA STEEL CORPORATION)
樣品名稱(Sample Name) : 熱軋酸洗塗油鋼捲 (HOT ROLLED PICKLED-AND-OILED COIL)

==========

收件日(Sample Receiving Date) : 19-May-2022
測試期間(Testing Period) : 19-May-2022 to 02-Jun-2022

測試需求(Test Requested) : 依據客戶指定，參考RoHS 2011/65/EU Annex II及其修訂指令(EU) 2015/863測試鎘、鉛、汞、六價鉻、多溴聯苯、多溴聯苯醚, DBP, BBP, DEHP, DIBP。 (As specified by client, with reference to RoHS 2011/65/EU Annex II and amending Directive (EU) 2015/863 to determine Cadmium, Lead, Mercury, Cr(VI), PBBs, PBDEs, DBP, BBP, DEHP, DIBP contents in the submitted sample(s).)

測試結果(Test Results) : 請參閱下一頁 (Please refer to following pages.)

結　論(Conclusion) : 根據客戶所提供的樣品，其鎘、鉛、汞、六價鉻、多溴聯苯、多溴聯苯醚, DBP, BBP, DEHP, DIBP的測試結果符合RoHS 2011/65/EU Annex II暨其修訂指令(EU) 2015/863之限值要求。 (Based on the performed tests on submitted sample(s), the test results of Cadmium, Lead, Mercury, Cr(VI), PBBs, PBDEs, DBP, BBP, DEHP, DIBP comply with the limits as set by RoHS Directive (EU) 2015/863 amending Annex II to Directive 2011/65/EU.)

報告簽署人/張伯睿 博士/部經理
Ray Chang, Ph.D./ Department Manager
Signed for and on behalf of
SGS TAIWAN LTD.
化學實驗室-高雄/Chemical Laboratory-Kaohsiung

PIN CODE: EFD29B48

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測試報告
Test Report

中國鋼鐵股份有限公司 (CHINA STEEL CORPORATION)
高雄市小港區中鋼路1號 (1 CHUNG KANG ROAD, HSIAO KANG, KAOHSIUNG 812401, TAIWAN, REPUBLIC OF CHINA)

測試部位敘述 (Test Part Description)

No.1 : 銀灰色金屬 (SILVER GRAY METAL)

測試結果 (Test Results)

測試項目 (Test Items)	測試方法 (Method)	單位 (Unit)	MDL	結果 (Result) No.1	限值 (Limit)
鎘 (Cd) (Cadmium (Cd)) (CAS No.: 7440-43-9)	依據IEC 62321-5: 2013，以感應耦合電漿發射光譜儀分析。(According to IEC 62321-5: 2013, analysis was performed by ICP-OES.)	mg/kg	2	n.d.	100
鉛 (Pb) (Lead (Pb)) (CAS No.: 7439-92-1)		mg/kg	2	n.d.	1000
汞 (Hg) (Mercury (Hg)) (CAS No.: 7439-97-6)	依據IEC 62321-4: 2013+ AMD1: 2017，以感應耦合電漿發射光譜儀分析。(According to IEC 62321-4: 2013+ AMD1: 2017, analysis was performed by ICP-OES.)	mg/kg	2	n.d.	1000
六價鉻 (Hexavalent Chromium) Cr(VI) (CAS No.: 18540-29-9) (#2)	依據IEC 62321-7-1: 2015，以紫外光-可見光分光光度計分析。(According to IEC 62321-7-1: 2015, analysis was performed by UV-VIS.)	μg/cm²	0.1	n.d.	-
一溴聯苯 (Monobromobiphenyl)	參考IEC 62321-6: 2015自訂方法，以氣相層析儀/質譜儀分析。(With reference to IEC 62321-6: 2015 in house method, analysis was performed by GC/MS.)	mg/kg	5	n.d.	-
二溴聯苯 (Dibromobiphenyl)		mg/kg	5	n.d.	-
三溴聯苯 (Tribromobiphenyl)		mg/kg	5	n.d.	-
四溴聯苯 (Tetrabromobiphenyl)		mg/kg	5	n.d.	-
五溴聯苯 (Pentabromobiphenyl)		mg/kg	5	n.d.	-
六溴聯苯 (Hexabromobiphenyl)		mg/kg	5	n.d.	-
七溴聯苯 (Heptabromobiphenyl)		mg/kg	5	n.d.	-
八溴聯苯 (Octabromobiphenyl)		mg/kg	5	n.d.	-
九溴聯苯 (Nonabromobiphenyl)		mg/kg	5	n.d.	-
十溴聯苯 (Decabromobiphenyl)		mg/kg	5	n.d.	-
多溴聯苯總和 (Sum of PBBs)		mg/kg	-	n.d.	1000

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高雄市小港區中鋼路1號 (1 CHUNG KANG ROAD, HSIAO KANG, KAOHSIUNG 812401, TAIWAN, REPUBLIC OF CHINA)

測試項目 (Test Items)	測試方法 (Method)	單位 (Unit)	MDL	結果 (Result) No.1	限值 (Limit)
一溴聯苯醚 (Monobromodiphenyl ether)	參考IEC 62321-6: 2015自訂方法，以氣相層析儀/質譜儀分析。(With reference to IEC 62321-6: 2015 in house method, analysis was performed by GC/MS.)	mg/kg	5	n.d.	-
二溴聯苯醚 (Dibromodiphenyl ether)		mg/kg	5	n.d.	-
三溴聯苯醚 (Tribromodiphenyl ether)		mg/kg	5	n.d.	-
四溴聯苯醚 (Tetrabromodiphenyl ether)		mg/kg	5	n.d.	-
五溴聯苯醚 (Pentabromodiphenyl ether)		mg/kg	5	n.d.	-
六溴聯苯醚 (Hexabromodiphenyl ether)		mg/kg	5	n.d.	-
七溴聯苯醚 (Heptabromodiphenyl ether)		mg/kg	5	n.d.	-
八溴聯苯醚 (Octabromodiphenyl ether)		mg/kg	5	n.d.	-
九溴聯苯醚 (Nonabromodiphenyl ether)		mg/kg	5	n.d.	-
十溴聯苯醚 (Decabromodiphenyl ether)		mg/kg	5	n.d.	-
多溴聯苯醚總和 (Sum of PBDEs)		mg/kg	-	n.d.	1000
鄰苯二甲酸丁苯甲酯 (BBP) (Butyl benzyl phthalate (BBP)) (CAS No.: 85-68-7)	依據IEC 62321-8: 2017，以氣相層析儀/質譜儀分析。(According to IEC 62321-8: 2017, analysis was performed by GC/MS.)	mg/kg	50	n.d.	1000
鄰苯二甲酸二丁酯 (DBP) (Dibutyl phthalate (DBP)) (CAS No.: 84-74-2)		mg/kg	50	n.d.	1000
鄰苯二甲酸二異丁酯 (DIBP) (Diisobutyl phthalate (DIBP)) (CAS No.: 84-69-5)		mg/kg	50	n.d.	1000
鄰苯二甲酸二(2-乙基己基)酯 (DEHP) (Di-(2-ethylhexyl) phthalate (DEHP)) (CAS No.: 117-81-7)		mg/kg	50	n.d.	1000

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備註(Note)：

1. mg/kg = ppm；0.1wt% = 0.1% = 1000ppm
2. MDL = Method Detection Limit (方法偵測極限值)
3. n.d. = Not Detected (未檢出)；小於MDL / Less than MDL
4. "-" = Not Regulated (無規格值)
5. (#2) =
   a. 當六價鉻結果大於0.13 μg/cm²，表示樣品表層含有六價鉻。(The sample is positive for Cr(VI) if the Cr(VI) concentration is greater than 0.13 μg/cm². The sample coating is considered to contain Cr(VI).)
   b. 當六價鉻結果為n.d. (濃度小於0.10 μg/cm²)，表示表層不含六價鉻。(The sample is negative for Cr(VI) if Cr(VI) is n.d. (concentration less than 0.10 μg/cm²). The coating is considered a non-Cr(VI) based coating)
   c. 當六價鉻結果介於 0.10 及 0.13 μg/cm² 時，無法確定塗層是否含有六價鉻。(The result between 0.10 μg/cm² and 0.13 μg/cm² is considered to be inconclusive - unavoidable coating variations may influence the determination.)
6. 除非另有說明，參照ILAC-G8:09/2019，採用簡單二元(w=0)允收規則進行符合性判定；根據此規則，符合性結果之判定係以測試結果與限值做比較。(Unless otherwise stated , the decision rule for conformity reporting is based on Binary Statement for Simple Acceptance Rule (w=0) stated in ILAC-G8:09/2019. According to this rule, the judgement of conformity is based on the comparing test results with limits.)

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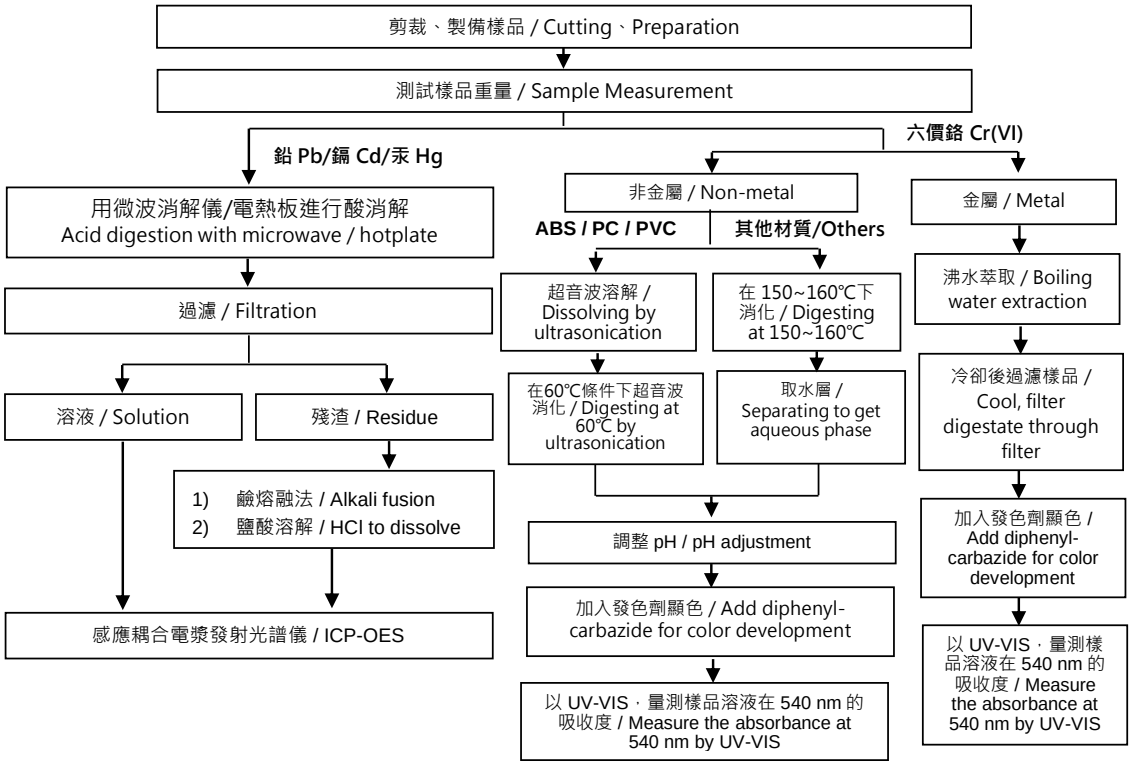
高雄市小港區中鋼路1號 (1 CHUNG KANG ROAD, HSIAO KANG, KAOHSIUNG 812401, TAIWAN, REPUBLIC OF CHINA)

重金屬流程圖 / Analytical flow chart of Heavy Metal

根據以下的流程圖之條件，樣品已完全溶解。（六價鉻測試方法除外）
These samples were dissolved totally by pre-conditioning method according to below flow chart. (Cr^{6+} test method excluded)



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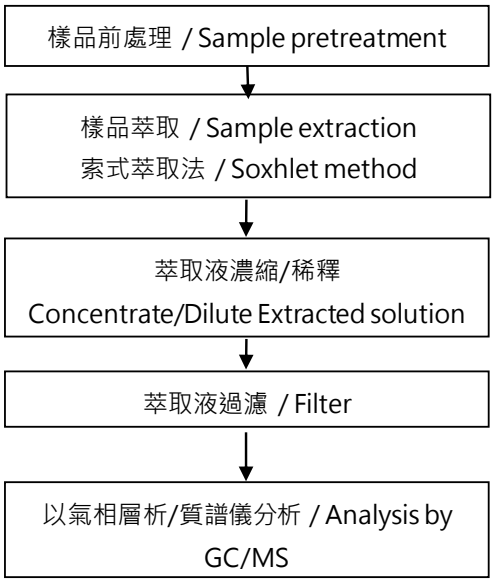
中國鋼鐵股份有限公司 (CHINA STEEL CORPORATION)
高雄市小港區中鋼路1號 (1 CHUNG KANG ROAD, HSIAO KANG, KAOHSIUNG 812401, TAIWAN, REPUBLIC OF CHINA)

多溴聯苯/多溴聯苯醚 分析流程圖 / PBB/PBDE analytical FLOW CHART



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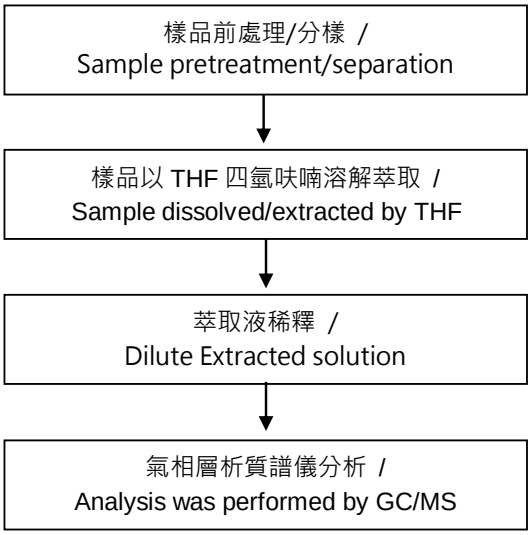
可塑劑分析流程圖 / Analytical flow chart - Phthalate

【測試方法/Test method: IEC 62321-8】



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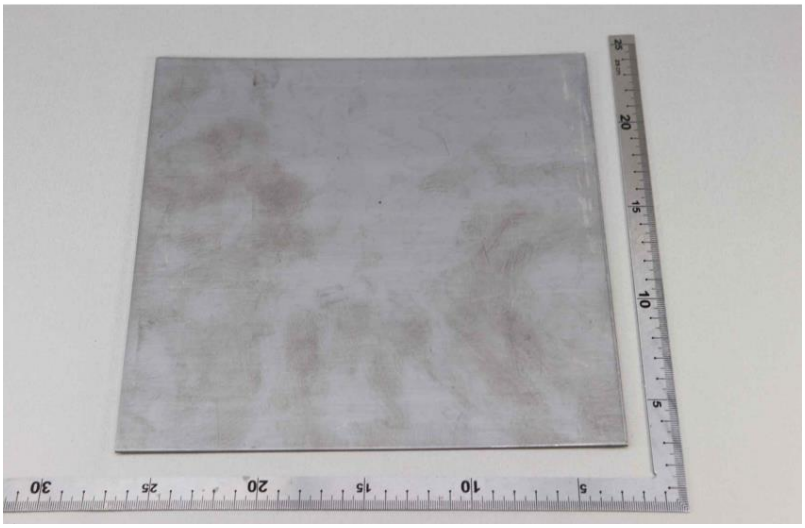
*** 照片中如有箭頭標示，則表示為實際檢測之樣品/部位. ***
(The tested sample / part is marked by an arrow if it's shown on the photo.)

EKR22501091



** 報告結尾 (End of Report) **

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安全資料表(SDS)

一、物品與廠商資料

物品名稱：線材、棒鋼、鋼板、熱軋鋼捲片、熱軋 P/O(Wire Rods，Steel Bars，Steel Plates，Hot-Rolled Steel Coils & Sheets & Plates、Hot-Rolled P/O)	
物品編號：	
製造商或供應商名稱、地址及電話：中國鋼鐵股份有限公司 812 高雄市小港區中鋼路 1 號	
緊急聯絡電話：(07)802-1111	傳真電話：(07)8039553

二、危害辨識資料

重要物理性及 化學性危害與效應	1.與強酸接觸會起反應產生可燃性氫氣。 2.銲接或加熱會產生氧化鐵燻煙。

三、成分辨識資料

純物質：

物品中（英）文名稱：鋼(STEEL)		
同義名稱：		
化學文摘社登記號碼(CAS.NO.)：鐵：07439-89-6		
危害物質成分(成分百分比)：鐵>96%		
危害物質成分之中（英）文名稱	濃度或濃度範圍(成分百分比)	危害物質分類及圖式
鐵(Fe)	>96%	

四、急救措施

不同暴露途徑之急救方法：

- 吸入：本產品形態食入之可能性相當低。
- 眼睛接觸：立即將眼皮撐開，用大量水沖洗 15 分鐘。本產品形態進入眼睛之可能性相當低。
- 皮膚接觸：立即用肥皂和水清洗，本產品形態造成刺激皮膚之可能性相當低。

五、滅火措施

適用滅火劑：使用適合週遭火災之滅火器。

滅火時可能遭遇之特殊危害：1.此物若以大塊型式存在時，不可燃。
2.若以微細粉末存在時，遇火源有引起爆炸的危險。
3.本產品若熔化或燃燒，則會產生毒性或刺激性蒸汽，請使用個人呼吸防護器具。

六、洩漏處理方法

本產品為固體狀不適用。

七、安全處置與儲存方法

一般使用：本產品邊緣為尖銳薄片或捲片，進行各項作業必須使用個人防護器具，所有員工必須接受訓練以安全地進行各項作業。

儲存建議：建議儲存於可防止實體破壞、濕氣、直接日曬之場所。

八、暴露預防措施

重要成分	化學文摘社登記號碼 CAS NO.	重量比例 (%)	暴露限制	
			OSHA PEL	ACGIH TLV
鐵 Iron	7439-89-6	96	未建立	未建立

工程控制：

1. 在進行燃燒、銅鑄、切割、研磨、打光、銲接或其他機械加工時，應使用機械通風裝置。
2. 若在進行機械加工時，有產生粉塵或微粒狀物質，建議採用局部及一般通風裝置以預防過多的危害物質暴露。

個人防護設備：

眼睛防護：在進行本產品作業時請穿戴化學安全護目鏡。

呼吸防護：如需符合暴露標準 在進行切割、研磨、打光或銲接等機械加工作業時，應使用自攜式呼

吸防護具。 皮膚防護：1.使用皮革或防割傷手套以免被尖銳薄片或捲片割傷。 2.使用防滲透手套以免被皮膚接觸表面油污。 身體防護：1.連身式防護衣。 2.工作鞋。 3.工作區要有淋浴/沖眼設備。
衛生措施： 1.工作場所嚴禁飲用、抽煙或飲食。 2.處理此物後，須徹底洗手。

九、物理及化學性質

物質狀態：固體	形狀：薄片或捲片
顏色：金屬性灰色	氣味：無味
pH 值：不適用	閃火點：不適用
熔解溫度：1535℃	
自燃溫度：不適用	爆炸界限：不適用
密度：7.5 – 8.0（水＝1）	溶解度：不溶於水
熔點/凝固點：不適用	揮發速率：不適用
易燃性(固態、氣態）：不適用	分配係數(正辛醇/水）：不適用

十、安定性及反應性

安定性：正常狀況下安定
應避免之狀況：濕氣及腐蝕性物質會氧化本物質
應避免之物質：酸類、A 類及 B 類爆炸物、強性氧化物、腐蝕劑
危害分解物：引燃或熔解可能會產生有產生毒性或刺激性蒸汽

十一、毒性資料

急毒性(Acute Effects)：

鐵(Iron) LD50(測試動物暴露途徑)：30 g/kg(大鼠，吞食)

過度暴露效應(Symptoms of Overexposure)：

鐵**(Iron Oxide)**：過度暴露或重覆暴露於高濃度狀況下，可能造成塵肺病 pneumoconiosis，吸入氧化鐵可能會刺激眼睛、鼻子及喉嚨。

矽**(Silicon):** 主要為厭惡性粉塵(Nuisance Dust)，可能會刺激眼睛及黏液薄膜(Mucous Membranes)，本產品型態無此危害。

十二、生態資料

現有資料無影響生態之考量

十三、廢棄處置方法

廢棄處置方法：1.參考相關法規處理。
2.相關法規可能會限制金屬性廢棄物之處置。
3.建議採取回收金屬性廢棄物。

十四、運送資料

無特殊運送方法

十五、法規資料

適用法規：
職業安全衛生設施規則
危害性化學品標識及通識規則
勞工作業環境空氣中有害物容許濃度標準
事業廢棄物貯存清除處理方法及設施標準

安全資料表(SDS)

十六、其他資料

參考文獻		
製表者單位	名稱：中國鋼鐵股份有限公司	
	地址/電話：812 高雄市小港區中鋼路 1 號，Tel：(07)8021111	
製 表 人	職稱：工 程 師	姓名（簽章）：胡哲源
製表日期	2020.01.07	
備　　註	1. 本安全資料表僅供參考，中國鋼鐵股份有限公司對使用本資料不承擔任何法律責任或提供任何保證。 2. 本安全資料表之提供是基於對本產品的安全及健康危害相關資訊之最佳瞭解，以安全地進行本產品之各項作業及處理。 3. 每位進行本產品之各項作業及處理之人員應先閱讀本安全資料表，瞭解如何進行本產品之各項作業及處理；也應考量本產品與其他製造廠商產品可能之應用。	

測試報告
Test Report

晉利實業有限公司 (JINN LIN PAINTS CO., LTD.)
新北市樹林區大安路145巷8號 (NO. 8, LANE 145, DAH AN RD., SHU LIN DISTRICT, NEW TAIPEI CITY, TAIWAN, R. O. C.)

以下測試樣品係由申請廠商所提供及確認 (The following sample(s) was/were submitted and identified by the applicant as)：

送樣廠商(Sample Submitted By) : 晉利實業有限公司 (JINN LIN PAINTS CO., LTD.)
樣品名稱(Sample Name) : 混合塗料

==========

收件日(Sample Receiving Date) : 03-May-2023
測試期間(Testing Period) : 03-May-2023 to 10-May-2023

測試需求(Test Requested) :
(1) 依據客戶指定，測試鎘、鉛、汞、六價鉻、多溴聯苯、多溴聯苯醚, DBP, BBP, DEHP, DIBP。 (As specified by client, to test Cadmium, Lead, Mercury, Cr(VI), PBBs, PBDEs, DBP, BBP, DEHP, DIBP contents in the submitted sample(s).)
(2) 依據客戶指定，測試鹵素-氟、氯、溴、碘。 (As specified by client, to test Halogen-Fluorine, Chlorine, Bromine, Iodine in the submitted sample.)

測試結果(Test Results) : 請參閱下一頁 (Please refer to following pages.)

Troy Chang / Department Manager
Signed for and on behalf of
SGS TAIWAN LTD.
Chemical Laboratory - Taipei

PIN CODE: E8EA38DE

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Test Report

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新北市樹林區大安路145巷8號 (NO. 8, LANE 145, DAH AN RD., SHU LIN DISTRICT, NEW TAIPEI CITY, TAIWAN, R. O. C.)

測試部位敘述 (Test Part Description)

No.1 : 灰色塗料(客戶自行調配之樣品) (GRAY PAINT (SAMPLE IS BLENDED BY CLIENT))

測試結果 (Test Results)

測試項目 (Test Items)	測試方法 (Method)	單位 (Unit)	MDL	結果 (Result)
				No.1
鎘 (Cd) (Cadmium (Cd))	參考IEC 62321-5: 2013，以感應耦合電漿發射光譜儀分析。(With reference to IEC 62321-5: 2013, analysis was performed by ICP-OES.)	mg/kg	2	n.d.
鉛 (Pb) (Lead (Pb))		mg/kg	2	n.d.
汞 (Hg) (Mercury (Hg))	參考IEC 62321-4: 2013+ AMD1: 2017，以感應耦合電漿發射光譜儀分析。(With reference to IEC 62321-4: 2013+ AMD1: 2017, analysis was performed by ICP-OES.)	mg/kg	2	n.d.
六價鉻 Cr(VI) (Hexavalent Chromium Cr(VI))	參考IEC 62321-7-2: 2017，以紫外光-可見光分光光度計分析。(With reference to IEC 62321-7-2: 2017, analysis was performed by UV-VIS.)	mg/kg	8	n.d.
一溴聯苯 (Monobromobiphenyl)	參考IEC 62321-6: 2015，以氣相層析儀/質譜儀分析。(With reference to IEC 62321-6: 2015, analysis was performed by GC/MS.)	mg/kg	5	n.d.
二溴聯苯 (Dibromobiphenyl)		mg/kg	5	n.d.
三溴聯苯 (Tribromobiphenyl)		mg/kg	5	n.d.
四溴聯苯 (Tetrabromobiphenyl)		mg/kg	5	n.d.
五溴聯苯 (Pentabromobiphenyl)		mg/kg	5	n.d.
六溴聯苯 (Hexabromobiphenyl)		mg/kg	5	n.d.
七溴聯苯 (Heptabromobiphenyl)		mg/kg	5	n.d.
八溴聯苯 (Octabromobiphenyl)		mg/kg	5	n.d.
九溴聯苯 (Nonabromobiphenyl)		mg/kg	5	n.d.
十溴聯苯 (Decabromobiphenyl)		mg/kg	5	n.d.
多溴聯苯總和 (Sum of PBBs)		mg/kg	-	n.d.

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新北市樹林區大安路145巷8號 (NO. 8, LANE 145, DAH AN RD., SHU LIN DISTRICT, NEW TAIPEI CITY, TAIWAN, R. O. C.)

測試項目 (Test Items)	測試方法 (Method)	單位 (Unit)	MDL	結果 (Result)
				No.1
一溴聯苯醚 (Monobromodiphenyl ether)	參考IEC 62321-6: 2015，以氣相層析儀/質譜儀分析。(With reference to IEC 62321-6: 2015, analysis was performed by GC/MS.)	mg/kg	5	n.d.
二溴聯苯醚 (Dibromodiphenyl ether)		mg/kg	5	n.d.
三溴聯苯醚 (Tribromodiphenyl ether)		mg/kg	5	n.d.
四溴聯苯醚 (Tetrabromodiphenyl ether)		mg/kg	5	n.d.
五溴聯苯醚 (Pentabromodiphenyl ether)		mg/kg	5	n.d.
六溴聯苯醚 (Hexabromodiphenyl ether)		mg/kg	5	n.d.
七溴聯苯醚 (Heptabromodiphenyl ether)		mg/kg	5	n.d.
八溴聯苯醚 (Octabromodiphenyl ether)		mg/kg	5	n.d.
九溴聯苯醚 (Nonabromodiphenyl ether)		mg/kg	5	n.d.
十溴聯苯醚 (Decabromodiphenyl ether)		mg/kg	5	n.d.
多溴聯苯醚總和 (Sum of PBDEs)		mg/kg	-	n.d.
鄰苯二甲酸丁苯甲酯 (BBP) (Butyl benzyl phthalate (BBP))	參考IEC 62321-8: 2017，以氣相層析儀/質譜儀分析。(With reference to IEC 62321-8: 2017, analysis was performed by GC/MS.)	mg/kg	50	n.d.
鄰苯二甲酸二丁酯 (DBP) (Dibutyl phthalate (DBP))		mg/kg	50	58.5
鄰苯二甲酸二異丁酯 (DIBP) (Diisobutyl phthalate (DIBP))		mg/kg	50	n.d.
鄰苯二甲酸二(2-乙基己基)酯 (DEHP) (Di-(2-ethylhexyl) phthalate (DEHP))		mg/kg	50	n.d.
氟 (F) (Fluorine (F)) (CAS No.: 14762-94-8)	參考BS EN 14582: 2016，以離子層析儀分析。(With reference to BS EN 14582: 2016, analysis was performed by IC.)	mg/kg	50	109
氯 (Cl) (Chlorine (Cl)) (CAS No.: 22537-15-1)	參考BS EN 14582: 2016，以離子層析儀分析。(With reference to BS EN 14582: 2016, analysis was performed by IC.)	mg/kg	50	261
溴 (Br) (Bromine (Br)) (CAS No.: 10097-32-2)	參考BS EN 14582: 2016，以離子層析儀分析。(With reference to BS EN 14582: 2016, analysis was performed by IC.)	mg/kg	50	n.d.
碘 (I) (Iodine (I)) (CAS No.: 14362-44-8)	參考BS EN 14582: 2016，以離子層析儀分析。(With reference to BS EN 14582: 2016, analysis was performed by IC.)	mg/kg	50	n.d.

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晉利實業有限公司 (JINN LIN PAINTS CO., LTD.)
新北市樹林區大安路145巷8號 (NO. 8, LANE 145, DAH AN RD., SHU LIN DISTRICT, NEW TAIPEI CITY, TAIWAN, R. O. C.)

備註(Note)：

1. mg/kg = ppm；0.1wt% = 0.1% = 1000ppm
2. MDL = Method Detection Limit (方法偵測極限值)
3. n.d. = Not Detected (未檢出)；小於MDL / Less than MDL
4. "-" = Not Regulated (無規格值)

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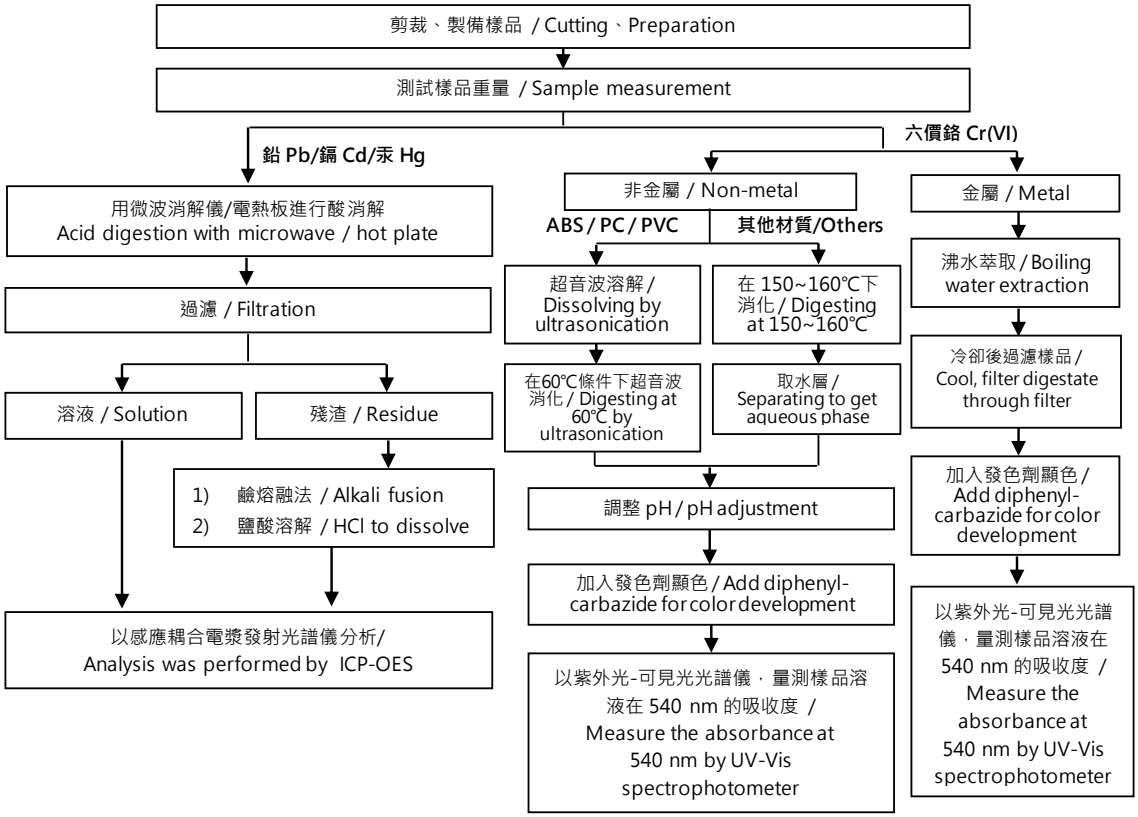
重金屬流程圖 / Analytical flow chart of heavy metal

根據以下的流程圖之條件，樣品已完全溶解。（六價鉻測試方法除外）
These samples were dissolved totally by pre-conditioning method according to below flow chart.
（Cr^{6+} test method excluded）



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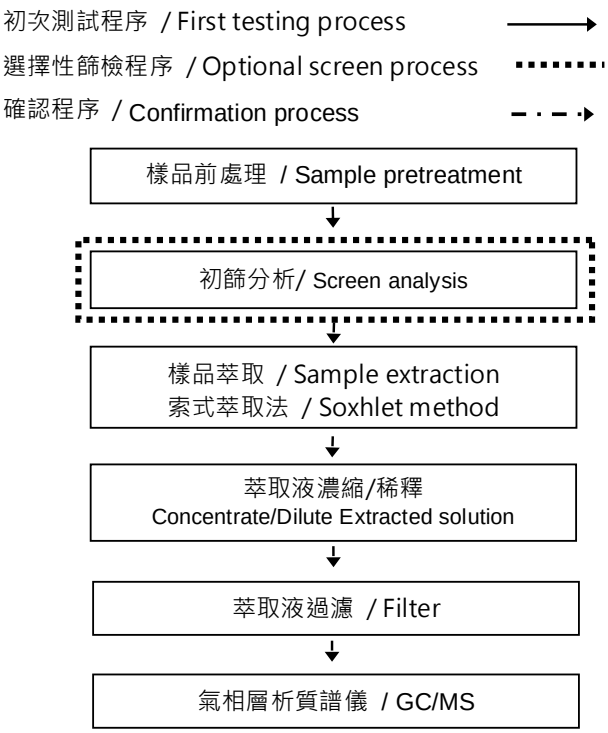
多溴聯苯/多溴聯苯醚分析流程圖 / Analytical flow chart - PBBs/PBDEs



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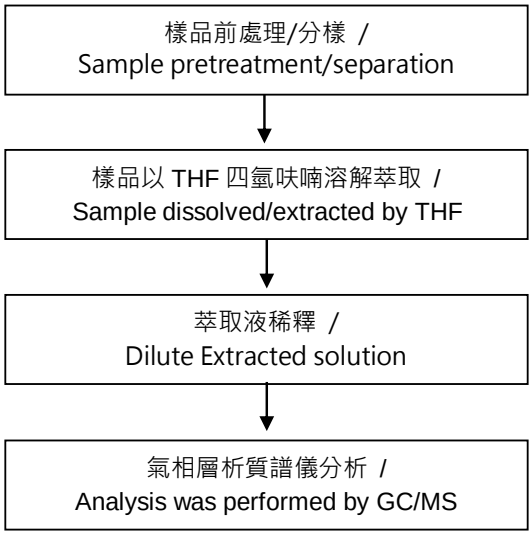
可塑劑分析流程圖 / Analytical flow chart - Phthalate

【測試方法/Test method: IEC 62321-8】



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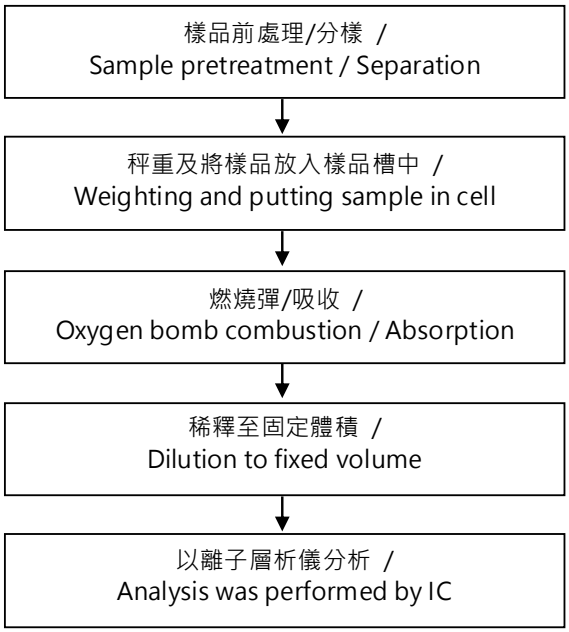
鹵素分析流程圖 / Analytical flow chart - Halogen



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測試報告
Test Report

晉利實業有限公司 (JINN LIN PAINTS CO., LTD.)
新北市樹林區大安路145巷8號 (NO. 8, LANE 145, DAH AN RD., SHU LIN DISTRICT, NEW TAIPEI CITY, TAIWAN, R. O. C.)

*** 照片中如有箭頭標示，則表示為實際檢測之樣品/部位. ***
(The tested sample / part is marked by an arrow if it's shown on the photo.)

ETR23500344



** 報告結尾 (End of Report) **

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物質安全資料表

一、物品與廠商資料

物品名稱：油漆溶劑-100(High-Flash Aromatic Naphtha-100)
其他名稱：芳烴碳氫化合物、Aromatic 100
建議用途及限制使用：高溶解力之溶劑，廣用於烤漆、油漆、凡立水等塗料調製，工業上多 用作殺蟲劑、木材防腐劑、人造樹脂、紡織品印染劑等之溶劑。
製造商或供應商名稱：晉利實業有限公司 地址：新北市樹林區潭底里大安路 145 巷 8 號 電話：02-2683-4494

二、危害辨識資料

物品危害分類：易燃液體第 3 級、腐蝕／刺激皮膚物質第 2 級、嚴重損傷／刺激眼睛物質 第 2 級、吸入性危害物質第 1 級、水環境之危害物質第 2 級（慢毒性）。
標示內容：  1.象徵符號：火焰、驚嘆號、健康危害及環境。 2.警示語：危險 3.危害警告訊息：(1)易燃液體和蒸氣。(2)造成皮膚刺激。(3)造成眼睛刺激。(4)如果吞食 並進入呼吸道可能致命。(5)對水生生物有毒並具有長期持續影響。 4.危害防範措施：(1)嚴禁煙火。(2)使用個人防護具。(3)火災時使用乾粉、泡沫、二氧化 碳、水霧等滅火。(4)皮膚沾染，眼睛濺傷，速以大量水沖洗。(5)誤食入 勿催吐，儘速送醫。
其他危害： -

三、成分辨識資料

混合物：

化學性質：芳香烴類	
危害物質成分之中、英文名稱	濃度或濃度範圍（成分百分比）
三甲苯 (Trimethylbenzene) CAS NO.25551-13-7	55～65

四、急救措施

不同暴露途徑之急救方法：

●吸入：趕快將中毒者帶離現場，移至安靜涼爽，通風良好的地方，如面色蒼白，使其平 躺，雙腳墊高; 如面色紅赧，則頭側向一邊，雙腳墊高，鬆開領口及皮帶，立即 送醫。

●皮膚接觸：將中毒者移開污染區，將感染皮膚外的衣服脫除，在水龍頭下用清水和肥皂 清洗感染處，如果皮膚感覺炙痛或刺痛，立刻送醫急救，將視同燙傷處理。 如果皮膚不痛不紅而只有乾燥感覺，可觀察六小時 再決定是否送醫。

●眼睛接觸：將中毒者移開污染區，在水龍頭或洗眼器下沖洗眼睛十五分鐘以上，並將上 下眼皮翻開慢慢轉動眼睛 使沖洗澈底，如果疼痛持續則送至眼科醫生處進一 步治療。

●食入：必須儘快將胃內之溶劑移除（可用活性碳 1g/kg 體重）。不要對中毒者施行催吐， 以免引起肺部併發症，同時鬆開領口及皮帶，立刻送醫。

最重要症狀及危害效應：會引起呼吸道、眼睛及皮膚之刺激作用，亦可能影響中樞神經系統。慢性與急性健康 危害效應相似，同時可能會影響生殖功能、肝、腎及心臟功能。

對急救人員之防護：

1.穿戴防護衣服(包含防溶劑手套)在安全區實施急救，以免接觸污染物。

2.戴化學護目鏡。

對醫師之提示：吸入中毒，可考慮用氧氣輔助呼吸。患者吞食時，考慮洗胃。

五、滅火措施

適用滅火劑：化學乾粉、泡沫、二氧化碳、水霧（勿用水柱大量噴灑）

滅火時可能遭遇之特殊危害：

加熱燃燒可能會釋出有毒碳氧化物或環狀碳氫化合物。易燃液體，蒸氣比空氣重，洩漏 會延地面傳播至遠處，遇著火源立即引燃，並有回火之危險。

特殊滅火程序：

(1) 用水滅火是無效的，但可噴水以冷卻火場之容器，以防膨脹爆炸。

(2) 滅火人員須穿戴防護具，在上風處滅火。

(3) 停止溶劑的外洩與流動並覆上滅火劑，隔離外洩區所有的火源如果可能儘量移開儲存 容器，或用水冷卻災區附近之容器，注意噴水時不要太靠近。

(4) 溶劑液體會浮於水面上，可能傳播至遠處而將火勢蔓延開。

(5) 易與氧化劑劇烈反應。

(6) 儘量使用自動或固定式滅火設備滅火，人員避免進入災區。

(7) 若外洩區還未著火，以水霧分散蒸氣，並保護阻止外洩人員的安全，但不得以水霧直 接噴灑洩出之油面。

消防人員之特殊防護設備：

消防人員須穿戴防護具，在上風處救火。若未攜帶適當防護裝置及空氣呼吸器，不得進 入密閉之空間。

六、洩漏處理方法

個人應注意事項： (1)污染區尚未完全清理乾淨前，限制非必要人員接近該區。 (2)確定止漏及清理工作是由受過訓練人員負責。 (3)穿戴防護裝備才能進入洩漏區，不可直接接觸漏出液，可能會導致中毒。
環境注意事項： (1)對該區進行通風換氣，注意機具要用防爆型。 (2)隔絕所有火源、熱源等發火源。 (3)通知政府安全衛生、環保、消防相關單位。 (4)避免洩出物進入下水道或密閉空間。
清理方法： (1)移走所有火源，不可接觸漏出液。 (2)封閉汙染區，附近人員撤離。 (3)用水噴灑現場，降低空氣中蒸氣濃度。 (4)洩漏時救災人員須配戴正壓式全面型自攜式呼吸防護具，其他人員速遠離現場。 (5)災區附近絕對嚴禁煙火。 (6)洩漏區施行有效通風，阻斷溶劑源，注意引爆濃度。 (7)如為小規模洩漏，可用砂或其他吸附劑吸收後放入乾淨密閉容器中再行處理。 (8)如為大規模洩漏則須建堤圍堵 (用土、砂袋、混凝土或 Polyurethane)，避免讓其擴散出去，再收集一起處理。 (9)不可將漏出液倒入排水溝中，以免燃燒爆炸。

七、安全處置及儲存方法：

處置： (1)此物質是易燃性液體及毒性液體，處置時工程控制應運轉及善用個人防護設備；工作人員應受適當有關物質之危險性及安全使用法之訓練。 (2)除去所有發火源並遠離熱及不相容物。 (3)工作區應嚴禁煙火，並有“禁止抽煙”標誌。 (4)液體會累積電荷，考慮額外之設計以增加電導性。如所有桶槽、轉裝容器和管線都要接 地，接地時必須接觸到裸金屬，輸送操作中，應降低流速，增加操作時間，增加液體留 在管線中之時間或低溫操作。 (5)當調配之操作不是在密閉系統進行時，確保調配的容器和接收的輸送設備和容器要等電 位連接。 (6)空的桶槽、容器和管線可能仍有具危害性的殘留物，未清理前不得從事任何焊接、切割、 鑽孔或其它熱的工作進行。 (7)作業避免產生霧滴或蒸氣，在通風良好的指定區內操作並採最小使量用，操作區與貯存 區分開。
儲存：

(1)使用相容物質製成的貯存容器，分裝時小心不要噴灑出來。不要在貯存區進行調配工作。
(2)不要與不相容物一起使用(如強氧化劑)以免增加火災和爆炸的危險。
(3)不要將受污染的液體倒回原貯存容器。
(4)容器要標示，不使用時保持緊密並避免受損。
(5)貯存區應標示清楚，通道無障礙物，限指定或受過訓的人員進入。
(6)檢查所有新進容器是否適當標示並無破損。
(7)貯存在陰涼、乾燥、通風良好以及陽光無法直接照射的地方，遠離熱源、發火源及不相 容物。
(8)以相容物質製成的貯存容器裝溢漏物。
(9)貯存區和大量操作的區域，考慮安裝溢漏和火災偵測系統及適當的自動消防系統或足夠 且可用的緊急處理裝備。
(10)門口設斜坡或門檻或挖溝槽使洩漏物可排放至安全的地方。
(11)貯槽須為地面貯槽，底部整個區域應封住以防滲漏，周圍須有能圍堵整個容量之防溢堤。

八、暴露預防措施

工程控制：
(1)使用不會產生火花且接地之通風系統並與其他排氣裝置系統分開，而直接排放至戶外。
(2)要採用局部排氣通風及製程隔離來控制空氣中蒸氣及霧滴之量。
(3)採排氣系統時須提供足夠之空氣來置換被排除之空氣。

控制參數：

危害物質成分	八小時日時量 平均容許濃度 TWA	短時間時量 平均容許濃度 STEL	最高容許濃度 CEILING	生物指標
三甲苯 (Trimethylbenzene）	25ppm (123 mg/m^3）	37.5ppm (184.5 mg/m^3）	-	-

個人防護設備：
呼吸防護：在危害濃度大於容許濃度以上，應使用適當呼吸防護具。
手部防護：若需接觸油料時，則戴適當的防護手套。
眼睛防護：不要讓油料進入眼睛。若有可能接觸到眼睛時，戴化學護目鏡。
皮膚及身體防護：若有可能接觸到皮膚與身體時，穿適當的防護衣服。

衛生措施：
(1)應使用合格之防護具，並每日檢查是否有破損，隨時更新。
(2)工作後儘速脫掉污染衣物，洗淨後才可穿戴或丟棄，且須告知清洗人員污染物之危害性。
(3)工作場所嚴禁抽煙或飲食。
(4)維持作業場所清潔。

九、物理及化學性質

外觀（物質狀態、顏色等）：無色液體	氣味：特殊芳香味

嗅覺閾值:-	熔點:-
pH 值：-	沸點／沸點範圍：155～175℃(311～347℉)
易燃性(固體、氣體)：／	閃火點： 38℃(100℉) 測試方法：閉杯
分解溫度：-	
自燃溫度：～250 ℃(～482℉)	爆炸界限：1.2%～7.5%（參考值）
蒸氣壓：0.2 kpa(25℃)	蒸氣密度（空氣=1）：>1
密度（水=1）：0.86~0.88 (15℃)	溶解度：微溶於水
辛醇/水份配係數(log Kow):-	揮發速率(正醋酸丁酯=1):0.2

十、安定性及反應性

安定性：常溫常壓下安定。
特殊狀況下可能之危害反應：避免加熱、嚴禁煙火及靜電產生，與空氣混合有爆炸之可能。
應避免之狀況：避免加熱、嚴禁煙火及靜電產生，隔絕各種發火源。
應避免之物質：強氧化劑（如過氧化物、硝酸鹽、過氯酸鹽）、羰基鎳(NICKEL CARBONY L) +氧(OXYGEN)。
危害分解物：熱分解會釋出有毒碳氧化物，如一氧化碳。

十一、 毒性資料

暴露途徑：吸入、皮膚、食入、眼睛
症狀：咳嗽、無胃口、反胃、嘔吐、頭痛、麻痺、肺充血、痙攣、皮膚炎、支氣管炎、記 憶衰退、四肢疼痛及麻痺、胸部緊和昏睡。
急毒性： 吸入： 三甲苯： 1.霧滴和蒸氣會造成鼻、咽喉及肺之刺激感。 2.症狀有頭痛、頭昏眼花、噁心、平衡感及注意力降低以及中樞神經系統機能抑制等其他症狀。 皮膚： 三甲苯：此物質為原發性皮膚刺激劑，會引起發紅、乾燥及脫脂等症狀。但未必會經 由皮層吸收。 食入： 三甲苯： 1.造成噁心、嘔吐、頭痛、頭昏眼花、精神混亂及其他中樞神經系統機能抑制之症狀。 2.大量則會失去意識甚至死亡，若液體被吸入肺部，會對肺部造成嚴重傷害 或死亡。 3.及其他影響與食入芳香烴類似。 眼睛：

三甲苯：霧滴及蒸氣可能造成刺激感，但無人類之研究資料。

(1)LC50（測試動物、暴露途徑）： 三甲苯：24 g/m3/4H (大鼠，吸入)。
(2)LD50（測試動物、暴露途徑）： 三甲苯：8970 mg/kg（大鼠，吞食）。

慢毒性或長期毒性：
吸入：
三甲苯：困倦、疲勞、頭痛、支氣管炎、血液凝結系統干擾、記憶衰退、四肢疼痛及 麻痺、行為改變等。

皮膚：
三甲苯：皮膚炎(腫包、發紅、發癢及龜裂)。此物質之毒性效應可能會因酒精之作用 而增加。不會累積於體內，小量會由肺排出，大部份會因新陳代謝而產生水 溶性化合物並由尿液排出。

十二、 生態資料

生態毒性：
1. LC50(魚類)：-
2. EC50(水生無脊椎動物)：-
3.生物濃縮係數(BCF)：-

持久性及降解性：
三甲苯：
1.氣態在大氣中會與光化學產物作用分解，其半衰期約一週至兩個月。
2.在土壤或水體中有氧情況下可被微生物分解。無氧情況下之厭氧微生物則無 法分解。
3.其在水體中會揮發至大氣中，由模擬河流及模擬湖泊試驗，半衰期分別為 3 小時及 4 天。
4.6.EC50：50mg/L,24 小時（水蚤）。
5.非脊椎動物毒性試驗 LC50：5400μg/L 96 小時（草蝦）。

生物蓄積性：三甲苯：水體中生物體內會蓄積。

土壤中之流動性：三甲苯：其在土壤中之移動性低，易被土壤吸附。

其他不良效應：若洩漏流佈至下水道或地下室，遇火源可能造成火災或爆炸。

十三、 廢棄處置方法

廢棄處置方法：
(1)安全且可行情況下，回收廢溶劑，其處理必須由受過訓且有經驗的人使 用適當防護設備於合格之操作設施執行。
(2)參考相關廢棄物法規處理。
(3)可採用特定焚化法處理。
(4)需符合相關環保法規。

十四、 運送資料

聯合國編號：UN 1268
聯合國運輸名稱：油漆溶劑-100
運輸危害分類：第三類易燃液體。
包裝類別：Ⅲ
海洋污染物（是/否）：否
特殊運送方法及注意事項：-

十五、 法規資料

適用法規： 1.勞工安全衛生設施規則。 2.危險物與有害物標示及通識規則。 3.有機溶劑中毒預防規則。 4.勞工作業環境空氣中有害物質容許濃度標準。 5.道路交通安全規則。 6.廢棄物清理法。 7.事業廢棄物貯存清除處理方法及設施標準。 8.公共危險物品及可燃性高壓氣體設置標準暨安全管理辦法。

十六、 其他資料

參考文獻	1.行政院勞工委員會 GHS 網站。 2.HSDB 資料庫，CHEMpendium 光碟，99-3。 3.OHS 光碟資料庫。 4.TLVs and Other Occupational Exposure Values，ACGIH 光碟，1999.
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