

號碼(No.): ETR24A05675 日期(Date): 06-Nov-2024

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明輝化工實業有限公司 (MIN HUEY CHEMICALS INDUSTRIES CO., LTD.) 新北市土城區大安路138巷32號 (NO. 32, LN 138, DA'AN RD., TUCHENG DIST., NEW TAIPEI CITY 23673, TAIWAN)

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 樣品名稱(Sample Name) 樣品型號(Style/Item No.)	) : : :	明輝化工實業有限公司 (MIN HUEY CHEMICALS INDUSTRIES CO., LTD.) MIN HUEY SCREEN INK (明輝油墨) 金色系列 (無鹵) (GOLD (NON-HALOGEN))
收件日(Sample Receiving Date) 測試期間(Testing Period)	:	30-Oct-2024 30-Oct-2024 to 06-Nov-2024
測試需求(Test Requested) :	(1)	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).) 其他測試項目請見下一頁。 (Please refer to next pages for the other item(s).)
測試結果(Test Results)   :		請參閱下一頁 (Please refer to following pages.)
結 論(Conclusion) :	(1)	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,

amending Annex II to Directive 2011/65/EU.)





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SGS Taiwan Ltd. 台灣檢驗科技股份有限公司

新北市五股區新北產業園區五權七路 25 號 t+886(02)2299 3939 f+886(02)2299 3237 25, Wu Chyuan 7th Road, New Taipei Industrial Park, Wu Ku District, New Taipei City, Taiwan

DEHP, DIBP comply with the limits as set by RoHS Directive (EU) 2015/863



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#### 測試部位敘述 (Test Part Description)

No.1 : 金色油墨 (GOLDEN COLORED INK)

### 測試結果 (Test Results)

測試項目	測試方法	單位	MDL	結果	限值
(Test Items)	(Method)	(Unit)		(Result)	(Limit)
				No.1	
鎘 (Cd) (Cadmium (Cd))	參考IEC 62321-5: 2013 · 以感應耦合電漿發射	mg/kg	2	n.d.	100
鉛 (Pb) (Lead (Pb))	光譜儀分析。(With reference to IEC 62321-5: 2013, analysis was performed by ICP-OES.)	mg/kg	2	n.d.	1000
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.	1000
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.	1000
一溴聯苯 (Monobromobiphenyl)		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)	參考IEC 62321-6: 2015 · 以氣相層析儀/質譜儀	mg/kg	5	n.d.	-
六溴聯苯 (Hexabromobiphenyl)	分析。(With reference to IEC 62321-6: 2015,	mg/kg	5	n.d.	-
七溴聯苯 (Heptabromobiphenyl)	analysis was performed by GC/MS.)	mg/kg	5	n.d.	-
八溴聯苯 (Octabromobiphenyl)	1	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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測試項目	測試方法	單位	MDL	結果	限值
(Test Items)	(Method)	(Unit)		(Result)	(Limit)
				No.1	
一溴聯苯醚 (Monobromodiphenyl ether)		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)	參考IEC 62321-6: 2015 · 以氣相層析儀/質譜儀	mg/kg	5	n.d.	-
六溴聯苯醚 (Hexabromodiphenyl ether)	分析。(With reference to IEC 62321-6: 2015,	mg/kg	5	n.d.	-
七溴聯苯醚 (Heptabromodiphenyl ether)	analysis was performed by GC/MS.)	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))	 参考IEC 62321-8: 2017 · 以氣相層析儀/質譜儀	mg/kg	50	n.d.	1000
鄰苯二甲酸二丁酯 (DBP) (Dibutyl phthalate (DBP))		mg/kg	50	n.d.	1000
鄰苯二甲酸二(2-乙基己基)酯 (DEHP) (Di- (2-ethylhexyl) phthalate (DEHP))		mg/kg	50	n.d.	1000
鄰苯二甲酸二異丁酯 (DIBP) (Diisobutyl phthalate (DIBP))		mg/kg	50	n.d.	1000
鄰苯二甲酸二異癸酯 (DIDP) (Diisodecyl phthalate (DIDP)) (CAS No.: 26761-40-0, 68515-49-1)	分析。(With reference to IEC 62321-8: 2017, analysis was performed by GC/MS.)	mg/kg	50	n.d.	-
鄰苯二甲酸二異壬酯 (DINP) (Diisononyl phthalate (DINP)) (CAS No.: 28553-12-0, 68515-48-0)		mg/kg	50	n.d.	-
鄰苯二甲酸二正辛酯 (DNOP) (Di-n-octyl phthalate (DNOP)) (CAS No.: 117-84-0)		mg/kg	50	n.d.	-

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測試項目 (Test Items)	測試方法 (Method)	單位 (Unit)	MDL	結果 (Result)	限值 (Limit)
		× ,		No.1	
六溴環十二烷及所有主要被辨別出的異構物 (HBCDD) ( $\alpha$ - HBCDD, $\beta$ - HBCDD, $\gamma$ - HBCDD) (Hexabromocyclododecane (HBCDD) and all major diastereoisomers identified ( $\alpha$ - HBCDD, $\beta$ - HBCDD, $\gamma$ - HBCDD)) (CAS No.: 25637-99-4, 3194-55-6 (134237-51-7, 134237-50-6, 134237-52-8))	參考IEC 62321-9: 2021 · 以氣相層析儀/質譜儀 分析。(With reference to IEC 62321-9: 2021, analysis was performed by GC/MS.)	mg/kg	20	n.d.	-

### 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. 除非另有說明,參照ILAC-G8:09/2019決定規則,採用簡單允收規則之二分法(w=0)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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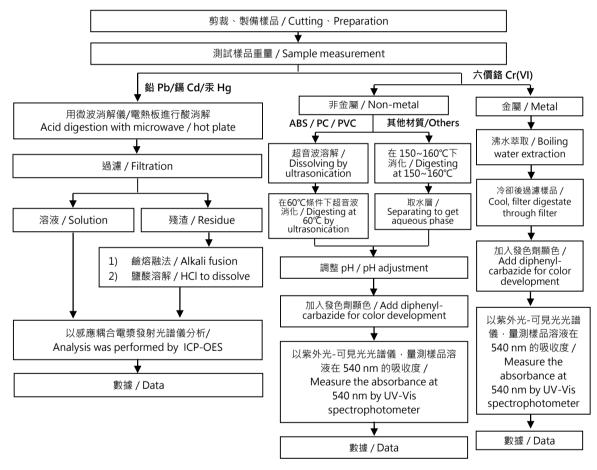
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### 重金屬流程圖 / Analytical flow chart of heavy metal

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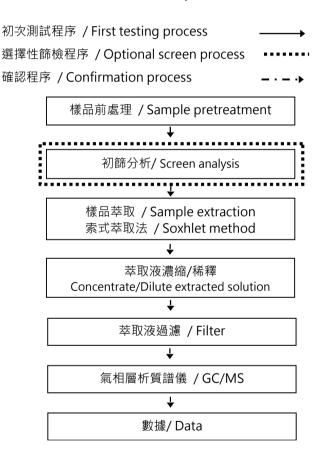
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多溴聯苯/多溴聯苯醚分析流程圖 / Analytical flow chart - PBBs/PBDEs



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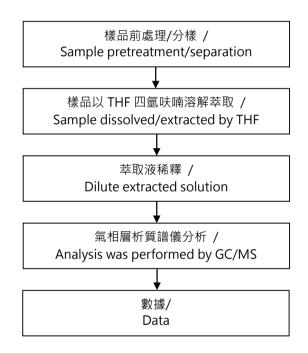
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可塑劑分析流程圖 / Analytical flow chart - Phthalate

【測試方法/Test method: IEC 62321-8】



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### 様品前處理 / Sample pretreatment ↓ 様品萃取 / Sample extraction ↓ 萃取液濃縮/稀釋 / Concentrate/Dilute extracted solution ↓ 萃取液過濾 / Filter ↓ 以氣相層析/質譜儀分析 / Analysis was performed by GC/MS ↓ 数據 / Data

六溴環十二烷分析流程圖 / Analytical flow chart - HBCDD

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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.)



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\*\* 報告結尾 (End of Report) \*\*

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