

Test Report

號碼(No.): ETR25100305 日期(Date): 15-Jan-2025 頁數(Page): 1 of 10

台灣化學纖維股份有限公司 (FORMOSA CHEMICALS & FIBRE CORPORATION) 台北市內湖區南京東路6段380號 (NO.380, SEC6, NANJING E. RD., NEIHU DIST., TAIPEI, 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)

: 台灣化學纖維股份有限公司 (FORMOSA CHEMICALS & FIBRE CORPORATION)

樣品名稱(Sample Name)

HIGH IMPACT POLYSTYRENE (高耐衝級聚苯乙烯樹脂)

樣品型號(Style/Item No.)

: TAIRIREX MP6500, HP8250, HP825F, HP825H, HP835G, HP9450, HP945S

收件日(Sample Receiving Date)

: 02-Jan-2025

測試期間(Testing Period)

: 02-Jan-2025 to 15-Jan-2025

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 鎬、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).)

(2) 其他測試項目請見下一頁。 (Please refer to next pages for the other item(s).) 請參閱下一頁 (Please refer to following pages.)

測試結果(Test Results)

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

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

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



PIN CODE: 40E77CE5



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測試部位敘述 (Test Part Description)

No.1 : 白色塑膠粒 (WHITE PLASTIC PELLETS)

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	mg/kg	2	n.d.	100
	發射光譜儀分析。(With reference to IEC				
	62321-5: 2013, analysis was performed				
	by ICP-OES.)				
鉛 (Pb) (Lead (Pb))	參考IEC 62321-5: 2013 · 以感應耦合電漿	mg/kg	2	n.d.	1000
	發射光譜儀分析。(With reference to IEC				
	62321-5: 2013, analysis was performed				
	by ICP-OES.)				
汞 (Hg) (Mercury (Hg))	參考IEC 62321-4: 2013+ AMD1: 2017 ·	mg/kg	2	n.d.	1000
	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.)				
六價鉻 Cr(VI) (Hexavalent Chromium	參考IEC 62321-7-2: 2017 · 以紫外光-可見	mg/kg	8	n.d.	1000
Cr(VI))	光分光光度計分析。(With reference to				
	IEC 62321-7-2: 2017, analysis was				
	performed by UV-VIS.)				
一溴聯苯 (Monobromobiphenyl)	参考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.	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 - 譜儀分析。(With reference to IEC 62321- -6: 2015, analysis was performed by -GC/MS.)	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	1	n.d.	1000
鄰苯二甲酸丁苯甲酯 (BBP) (Butyl benzyl		mg/kg	50	n.d.	1000
phthalate (BBP))					
鄰苯二甲酸二丁酯 (DBP) (Dibutyl	參考IEC 62321-8: 2017 · 以氣相層析儀/質	mg/kg	50	n.d.	1000
phthalate (DBP))	譜儀分析。(With reference to IEC 62321-				
鄰苯二甲酸二(2-乙基己基)酯 (DEHP) (Di-	8: 2017, analysis was performed by	mg/kg	50	n.d.	1000
(2-ethylhexyl) phthalate (DEHP))	GC/MS.)				
鄰苯二甲酸二異丁酯 (DIBP) (Diisobutyl		mg/kg	50	n.d.	1000
phthalate (DIBP))					
四溴雙酚-A (TBBP-A)	參考RSTS-E&E-121·以液相層析儀/質譜	mg/kg	10	n.d.	-
(Tetrabromobisphenol A (TBBP-A))	儀分析。(With reference to RSTS-E&E-				
(CAS No.: 79-94-7)	121, analysis was performed by LC/MS.)				
中鏈氯化石蠟(C14-C17) (MCCP)	參考ISO 18219-2: 2021 · 以氣相層析儀/	mg/kg	50	n.d.	-
(Medium Chain Chlorinated	質譜儀分析。(With reference to ISO				
Paraffins(C14-C17) (MCCP)) (CAS No.:	18219-2: 2021, analysis was performed				
85535-85-9)	by GC/MS.)				



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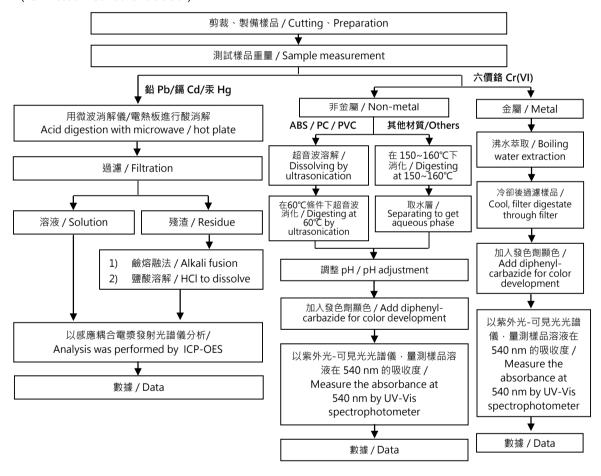
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重金屬流程圖 / Analytical flow chart of heavy metal

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)



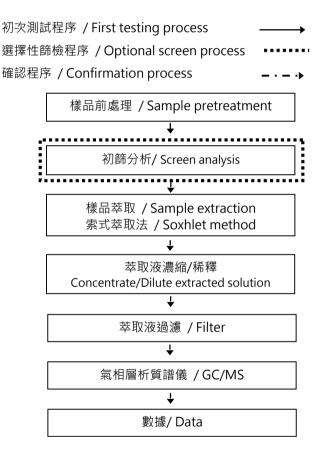


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多溴聯苯/多溴聯苯醚分析流程圖 / Analytical flow chart - PBBs/PBDEs





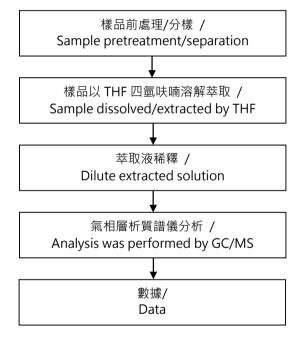
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可塑劑分析流程圖 / Analytical flow chart - Phthalate

【測試方法/Test method: IEC 62321-8】



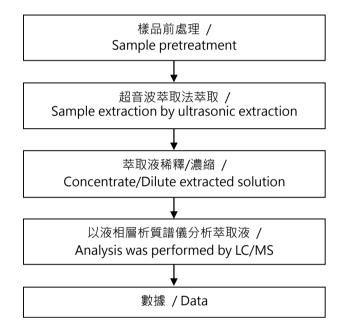


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四溴雙酚-A 分析流程圖 / Analytical flow chart - TBBP-A





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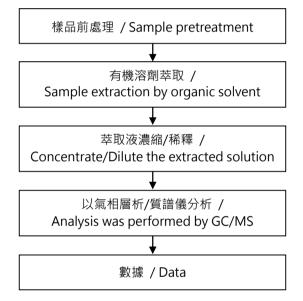
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分析流程圖 / Analytical flow chart

【適用於:多氯聯苯、多氯奈、多氯三聯苯、滅蟻靈、氯化石蠟、DBBT】

*Apply to: PCBs, PCNs, PCTs, Mirex, Chlorinated Paraffins, DBBT





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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.)

ETR25100305



** 報告結尾 (End of Report) **



Reference No. VoC-RoHS: TW/2500091/VoC Page 1 of 1

Issue Date: 2025-01-15

VERIFICATION OF CONFORMITY for SGS RoHS REQUIREMENTS

Product : HIGH IMPACT POLYSTYRENE

Test requested by : FORMOSA CHEMICALS & FIBRE CORPORATION

Name and address of the manufacturer : FORMOSA CHEMICALS & FIBRE CORPORATION

NO.380, SEC6, NANJING E. RD., NEIHU DIST., TAIPEI,

TAIWAN

Name and address of the factory : FORMOSA CHEMICALS & FIBRE CORPORATION

NO.380, SEC6, NANJING E. RD., NEIHU DIST., TAIPEI,

TAIWAN

Trademark : N/A

Model/ Identification : TAIRIREX MP6500, HP8250, HP825F, HP825H, HP835G,

HP9450, HP945S

Conclusion : The assessed sample made available complies with the

limits of Pb, Hg, Cd, Cr (VI), PBBs, PBDEs, DEHP, BBP,

DBP, DIBP as set by SGS RoHS Certification Rules.

Sufficient samples of the product have

been analysed according to the

following scope

Pb, Hg, Cd, Cr (VI), PBBs, PBDEs, DEHP, BBP, DBP, DIBP according to standard IEC 62321-4: 2013+AMD1: 2017, IEC

62321-5: 2013, IEC 62321-6: 2015, IEC 62321-7-2: 2017,

IEC 62321-8: 2017.

As shown in the report : ETR25100305

Date of expiry : 2026-01-15

This Verification of Conformity is based on analysis of the product, component or material and verifying the documentation being in accordance with the provisions of the SGS RoHS Certification Rules on the restriction of the use of certain hazardous substances in electrical and electronic equipment. It does not imply an assessment of the production. No amounts above the limits of these substances have been detected or if so, specific exemptions are applicable. This result relates only to the item(s) tested.

Authorized Signatory

grame Wu

Yvonne WU Project Manager SGS





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