

Test Report

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合展國際興業股份有限公司 HO JHON INTERNATIONAL CO., LTD. 台中市西區台灣大道二段309號16樓之2 16F.-2, NO. 309, SEC. 2, TAIWAN BLVD., WEST DIST., TAICHUNG CITY 403, 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/on behalf of the applicant as):

合展國際興業股份有限公司(HO JHON INTERNATIONAL CO., LTD.) 送樣廠商(Sample Submitted By)

PETLIN LD, LOW DENSITY POLYETHYLENE (LDPE) RESIN 樣品名稱(Sample Description) PETLIN LDPE N125Y, C150Y, C225Y, N103X, N119X, N109X 樣品型號(Style/Item No.)

收件日期(Sample Receiving Date) 2016/08/10

測試期間(Testing Period) 2016/08/10 TO 2016/08/16

測試需求(Test Requested):

(1) 依據客戶指定,檢測鎘、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, DBP, DIBP contents in the submitted sample.)

(2) 依據客戶指定,進行全氟辛酸、全氟辛烷磺酸、鹵素-氟、氯、溴、碘測試. (As specified by client, to test PFOA, PFOS, Halogen-Fluorine, Chlorine, Bromine, Iodine contents in the submitted sample.)

测試結果(Test Results) : 請見下一頁 (Please refer to next pages).



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測試結果(Test Results)

測試部位(PART NAME)No.1 半透明塑膠粒(TRANSLUCENT PLASTIC PELLETS)

測試項目 (Test Items)	單位 (Unit)	測試方法 (Method)	方法偵測 極限值 (MDL)	結果 (Result) No.1
鎬 / Cadmium (Cd)	mg/kg	參考IEC 62321-5 (2013), 以感應耦合 電漿原子發射光譜儀檢測. / With reference to IEC 62321-5 (2013) and performed by ICP-AES.	2	n. d.
鉛 / Lead (Pb)	mg/kg	參考IEC 62321-5 (2013), 以感應耦合電漿原子發射光譜儀檢測. / With reference to IEC 62321-5 (2013) and performed by ICP-AES.	2	n. d.
汞 / Mercury (Hg)	mg/kg	參考IEC 62321-4 (2013), 以感應耦合電漿原子發射光譜儀檢測. / With reference to IEC 62321-4 (2013) and performed by ICP-AES.	2	n. d.
六價鉻 / Hexavalent Chromium Cr(VI)	mg/kg	参考IEC 62321 (2008),以UV-VIS檢測. / With reference to IEC 62321 (2008) and performed by UV-VIS.	2	n. d.
多溴聯苯總和 / Sum of PBBs	mg/kg	*參考IEC 62321-6 (2015),以氣相層析/	1	n. d.
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	質譜儀檢測. / With reference to IEC	5	n. d.
五溴聯苯 / Pentabromobiphenyl	mg/kg	62321-6 (2015) and performed by	5	n. d.
六溴聯苯 / Hexabromobiphenyl	mg/kg	GC/MS.	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.



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測試項目 (Test Items)	單位 (Unit)	測試方法 (Method)	方法偵測 極限値 (MDL)	結果 (Result) No.1
多溴聯苯醚總和 / Sum of PBDEs	mg/kg		1	n. d.
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	& セIDC COOO1 C (OO1E) かたいほレノ	5	n. d.
四溴聯苯醚 / Tetrabromodiphenyl ether	mg/kg	参考IEC 62321-6 (2015), 以氣相層析/ 質譜儀檢測. / With reference to IEC	5	n. d.
五溴聯苯醚 / Pentabromodiphenyl ether	mg/kg	頁音俄微烈. / With reference to the 62321-6 (2015) and performed by	5	n. d.
六溴聯苯醚 / Hexabromodiphenyl ether	mg/kg	GC/MS.	5	n. d.
七溴聯苯醚 / Heptabromodiphenyl ether	mg/kg	GC/MS.	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.
鄰苯二甲酸丁苯甲酯 / BBP (Butyl	mg/kg		50	n. d.
Benzyl phthalate) (CAS No.: 85-68-7)				
鄰苯二甲酸二丁酯 / DBP (Dibutyl	mg/kg		50	n. d.
phthalate) (CAS No.: 84-74-2)		参考IEC 62321-8/CD (2013),以氣相層 析儀/質譜儀檢測./ With reference		
鄰苯二甲酸二異丁酯 / DIBP (Di-	mg/kg		50	n. d.
isobutyl phthalate) (CAS No.: 84-69-		to IEC 62321-8/CD (2013). Analysis		
5)		was performed by GC/MS.		
鄰苯二甲酸二 (2-乙基己基)酯 / DEHP	mg/kg		50	n. d.
(Di- (2-ethylhexyl) phthalate) (CAS	1118/118		00	11. 0.
No.: 117-81-7)				
鹵素 / Halogen				
鹵素 / naiogen 鹵素 (氟) / Halogen-Fluorine (F) (CAS	mg/kg		50	n. d.
No.: 14762-94-8)	mg/ ng		50	11 . u.
		4 lang By 44500 (0005)	ΕO	
鹵素(氯)/ Halogen-Chlorine (C1) (CAS No.: 22537-15-1)	mg/kg	參考BS EN 14582 (2007), 以離子層析	50	n. d.
	/1	儀分析. / With reference to BS EN	F.0	1
鹵素 (溴) / Halogen-Bromine (Br) (CAS	mg/kg	14582 (2007). Analysis was	50	n. d.
No.: 10097-32-2)		performed by IC.		
鹵素 (碘) / Halogen-Iodine (I) (CAS	mg/kg		50	n. d.
No.: 14362-44-8)				



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測試項目 (Test Items)	單位 (Unit)	測試方法 (Method)	方法偵測 極限値 (MDL)	結果 (Result) No.1
全氟辛烷磺酸 / Perfluorooctane sulfonates (PFOS-Acid, Metal Salt, Amide)	mg/kg	参考US EPA 3550C (2007), 以液相層析/質譜儀檢測. / With reference to US EPA 3550C (2007). Analysis was performed by LC/MS.		n. d.
全氟辛酸 / PFOA (CAS No.: 335-67-1)	mg/kg	参考US EPA 3550C (2007), 以液相層析/質譜儀檢測. / With reference to US EPA 3550C (2007). Analysis was performed by LC/MS.		n. d.

備註(Note):

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

PFOS参考資訊(Reference Information): 持久性有機污染物 POPs - (EU) 757/2010

PFOS濃度在物質或製備中不得超過0.001%(10ppm),在半成品、成品或零部件中不得超過0.1%(1000ppm),在紡織品 或塗層材料中不得超過1µg/m²。

(Outlawing PFOS as substances or preparations in concentrations above 0.001% (10ppm), in semifinished products or articles or parts at a level above 0.1%(1000ppm), in textiles or other coated materials above 1µg/m².)



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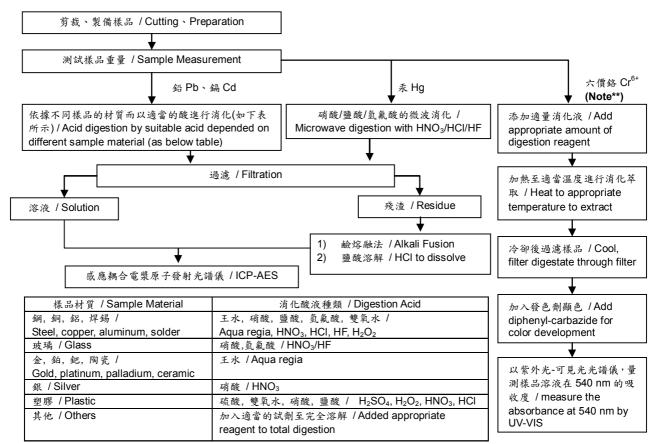
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重金屬流程圖 / Analytical flow chart of Heavy Metal (IEC 62321)

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)

- 測試人員:王志瑋 / Technician: JR Wang
- 測試負責人:張啟興 / Supervisor: Troy Chang



Note** (For IEC 62321)

- (1) 針對非金屬材料加入鹼性消化液,加熱至 90~95℃ 萃取. / For non-metallic material, add alkaline digestion reagent and heat to 90~95℃
- (2) 針對金屬材料加入純水,加熱至沸騰萃取. / For metallic material, add pure water and heat to boiling.



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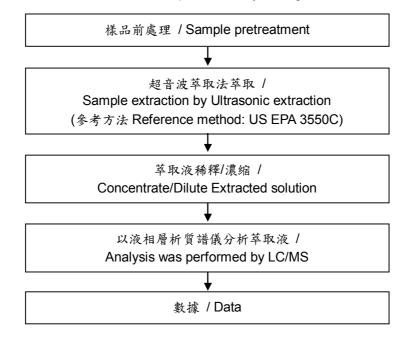
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全氟辛酸/全氟辛烷磺酸分析流程圖 / Analytical flow chart - PFOA/PFOS

測試人員:涂雅苓 / Technician: Yaling Tu

測試負責人:張啟興 / Supervisor: Troy Chang





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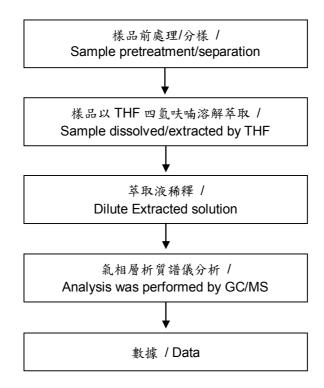
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可塑劑分析流程圖 / Analytical flow chart - Phthalate

測試人員:徐毓明 / Technician: Andy Shu

測試負責人:張啟興 / Supervisor: Troy Chang

【測試方法/Test method: IEC 62321-8】





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

測試人員: 陳恩臻 / Technician: Rita Chen 測試負責人:張啟興 / Supervisor: Troy Chang

樣品前處理/分樣 / Sample pretreatment/separation 秤重及將樣品放入樣品槽中/ Weighting and putting sample in cell 燃燒彈/吸收 Oxygen Bomb Combustion / Absorption 稀釋至固定體積 / Dilution to fixed volume 離子層析儀分析 / Analysis was performed by IC



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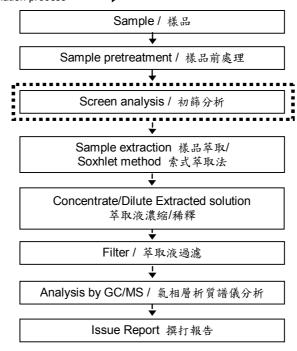
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多溴聯苯/多溴聯苯醚分析流程圖 / Analytical flow chart - PBB/PBDE

測試人員:涂雅苓 / Technician: Yaling Tu

測試負責人:張啟興 / Supervisor: Troy Chang

初次測試程序 / First testing process _ 選擇性篩檢程序 / Optional screen process ■■■■ 確認程序 / Confirmation process _ . _ . ▶





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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) **