

測試報告

Test Report

號碼(No.) : CE/2016/83991

日期(Date) : 2016/08/25

頁數(Page): 1 of 7

台灣化學纖維股份有限公司

FORMOSA CHEMICALS & FIBRE CORPORATION

台北市敦化北路201號

201, TUNG HWA N. ROAD, TAIPEI, 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/on behalf of 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 Description) : ACRYLONITRILE/BUTADIENE/STYRENE COPOLYMERS (丙烯腈/丁二烯/苯乙烯共聚合樹脂)
樣品型號(Style/Item No.) : TAIRILAC AG12A0, AG12A1, AG12A3, AG15A0, AG15A1, AG15A1-H, AG15A2, AG15A3, AG15AM, AG15E0, AG15E1, AG15E3, AG1000, AG10AP, AG15AB, AG15AJ, AG12AJ, AH2003, AF3500, AF3535, AF3560, AF3600, AX4000, AX4100, AX4300, AG22AT, AG23AT, AG24AT, AG26AT, AG27AT, AG10NP, AG10NP-T, AG10NP-H, AE8000, AE8200, ANC100, ANC120
收件日期(Sample Receiving Date) : 2016/08/19
測試期間(Testing Period) : 2016/08/19 TO 2016/08/25

測試需求(Test Requested) :

- (1) 依據客戶指定, 參考EN 71-3: 2013 - 特定元素遷移. / As specified by client, with reference to EN 71-3: 2013 - Migration of certain elements.
- (2) 依據客戶指定, 檢測 PAHs 測項. (As specified by client, to test PAHs.)

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

結論(Conclusion) : (2) 根據客戶所提供的樣品, 18項多環芳香烴測試結果符合德國產品安全委員會(AfPS) GS PAHs第 1 類之限值要求. (Based upon the performed tests on the submitted sample, the test results of PAHs (18 items) comply with the limits of PAHs requirement (Category 1) as set by German Committee on Product Safety (AfPS) GS PAHs.)


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



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測試結果(Test Results)

測試部位(PART NAME)No. 1 : 米色塑膠粒 (BEIGE 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)	限值 (Limit)
				No. 1	
多環芳香烴 / Polycyclic Aromatic Hydrocarbons (PAHs)					
芘 / Acenaphthene (CAS No. : 83-32-9)	mg/kg	參考AfPS GS 2014:01 PAK, 以氣相層析/質譜儀檢測. / With reference to AfPS GS 2014:01 PAK. Analysis was performed by GC/MS.	0.2	n. d.	-
芘烯 / Acenaphthylene (CAS No. : 208-96-8)	mg/kg		0.2	n. d.	-
蔥 / Anthracene (CAS No. : 120-12-7)	mg/kg		0.2	n. d.	-
苯駢蔥 / Benzo[a]anthracene (CAS No. : 56-55-3)	mg/kg		0.2	n. d.	-
苯駢(a)芘 / Benzo[a]pyrene (CAS No. : 50-32-8)	mg/kg		0.2	n. d.	-
苯(b)苯駢芴 / Benzo[b]fluoranthene (CAS No. : 205-99-2)	mg/kg		0.2	n. d.	-
苯駢芘 / Benzo[g, h, i]perylene (CAS No. : 191-24-2)	mg/kg		0.2	n. d.	-
苯(k)苯駢芴 / Benzo[k]fluoranthene (CAS No. : 207-08-9)	mg/kg		0.2	n. d.	-
Chrysene (CAS No. : 218-01-9)	mg/kg		0.2	n. d.	-
二苯駢蔥 / Dibenzo[a, h]anthracene (CAS No. : 53-70-3)	mg/kg		0.2	n. d.	-
苯駢芴 / Fluoranthene (CAS No. : 206-44-0)	mg/kg		0.2	n. d.	-
芴 / Fluorene (CAS No. : 86-73-7)	mg/kg		0.2	n. d.	-
節酮芘 / Indeno[1, 2, 3-c, d] pyrene (CAS No. : 193-39-5)	mg/kg		0.2	n. d.	-
萘 / Naphthalene (CAS No. : 91-20-3)	mg/kg		0.2	n. d.	-
菲 / Phenanthrene (CAS No. : 85-01-8)	mg/kg		0.2	n. d.	-
芘 / Pyrene (CAS No. : 129-00-0)	mg/kg		0.2	n. d.	-
苯(j)苯駢芴 / Benzo[j]fluoranthene (CAS No. : 205-82-3)	mg/kg		0.2	n. d.	-
苯駢(e)芘 / Benzo[e]pyrene (CAS No. : 192-97-2)	mg/kg		0.2	n. d.	-
多環芳香烴18項總和 / Sum of 18 PAHs	mg/kg		-	n. d.	Δ

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Category III

通過(PASS)

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)	限值 (Limit)
				No. 1	
溶出鋁 / Soluble Aluminum (Al)	mg/kg	參考 EN 71 Part 3:2013, 以感應耦合電漿原子發射光譜儀檢測. / With reference to EN 71 Part 3:2013. Analysis was performed by ICP-AES.	50	n. d.	70000
溶出銻 / Soluble Antimony (Sb)	mg/kg		10	n. d.	560
溶出砷 / Soluble Arsenic (As)	mg/kg		10	n. d.	47
溶出鋇 / Soluble Barium (Ba)	mg/kg		50	n. d.	18750
溶出硼 / Soluble Boron (B)	mg/kg		50	n. d.	15000
溶出鎘 / Soluble Cadmium (Cd)	mg/kg		5	n. d.	17
溶出鉻 / Soluble Chromium (Cr)	mg/kg		5	n. d.	-
溶出鈷 / Soluble Cobalt (Co)	mg/kg		10	n. d.	130
溶出銅 / Soluble Copper (Cu)	mg/kg		50	n. d.	7700
溶出鉛 / Soluble Lead (Pb)	mg/kg		10	n. d.	160
溶出錳 / Soluble Manganese (Mn)	mg/kg		50	n. d.	15000
溶出汞 / Soluble Mercury (Hg)	mg/kg		10	n. d.	94
溶出鎳 / Soluble Nickel (Ni)	mg/kg		10	n. d.	930
溶出硒 / Soluble Selenium (Se)	mg/kg		10	n. d.	460
溶出銻 / Soluble Strontium (Sr)	mg/kg		50	n. d.	56000
溶出錫 / Soluble Tin (Sn)	mg/kg		4.9	n. d.	180000
溶出鋅 / Soluble Zinc (Zn)	mg/kg	50	n. d.	46000	
溶出三價鉻 / Soluble Chromium (III) (Cr (III))	mg/kg	參考 EN 71 Part 3:2013, 以液相層析感應耦合電漿質譜儀檢測. / With reference to EN 71 Part 3:2013. Analysis was performed by LC-ICP-MS.	5	n. d.	460
溶出六價鉻 / Soluble Chromium (VI) (Cr (VI))	mg/kg		0.18	n. d.	0.2

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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)	限值 (Limit)
				No. 1	
甲基錫 / Methyl tin (MeT)	mg/kg	參考 EN 71 Part 3:2013, 以氣相層析 / 質譜儀檢測. / With reference to EN 71 Part 3:2013. Analysis was performed by GC/MS.	0.5	n. d.	-
二丙基錫 / Di-n-propyl tin (DProT)	mg/kg		0.5	n. d.	-
單丁基錫 / Butyl tin (BuT)	mg/kg		0.5	n. d.	-
二丁基錫 / Dibutyl Tin (DBT)	mg/kg		0.5	n. d.	-
三丁基錫 / Tributyl Tin (TBT)	mg/kg		0.5	n. d.	-
單辛基錫 / n-Octyl tin (MOT)	mg/kg		0.5	n. d.	-
四丁基錫 / Tetrabutyltin (TeBT)	mg/kg		0.5	n. d.	-
二苯基錫 / Diphenyltin (DphT)	mg/kg		0.5	n. d.	-
二辛基錫 / Di-n-octyl tin (DOT)	mg/kg		0.5	n. d.	-
三苯基錫 / Triphenyl Tin (TphT)	mg/kg		0.5	n. d.	-
溶出有機錫 / Soluble Organic Tin	mg/kg		-	n. d.	12

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)

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△ 德國產品安全委員會(AfPS) GS PAHs 要求 /
AfPS (German commission for Product Safety): GS PAHs requirements

項目 (Parameter)	第1類(Category 1)	第2類(Category 2)		第3類(Category 3)	
	意圖放入嘴內的材料或玩具會與皮膚有所接觸(超過30秒)。(Material indented to be put in the mouth or toys with intended skin contact (longer than 30 s).)	不屬於第1類的材料並可預見與皮膚接觸逾30秒(長期或經常與皮膚接觸)。(Materials not falling under category 1 with foreseeable contact to skin for longer than 30 seconds (long-term skin or frequent contact).)		可預見與皮膚接觸短於30秒(短期與皮膚接觸), 以及不屬於第1類或第2類的材料。(Materials not falling under category 1 or 2 with foreseeable contact to skin for less than 30 seconds (short-term skin contact).)	
		列於2009/48/EC之玩具 (Toy under 2009/48/EC)	列於德國產品安全法之其他產品 (Other products under ProdSG)	列於2009/48/EC之玩具 (Toy under 2009/48/EC)	列於德國產品安全法之其他產品 (Other products under ProdSG)
Naphthalene	< 1	< 2		< 10	
Acenaphthylene	< 1 Sum	< 5 Sum	< 10 Sum	< 20 Sum	< 50 Sum
Acenaphthene					
Fluorene					
Phenanthrene					
Anthracene					
Fluoranthene					
Pyrene					
Benzo[a]anthracene	< 0.2	< 0.2	< 0.5	< 0.5	< 1
Chrysene	< 0.2	< 0.2	< 0.5	< 0.5	< 1
Benzo[b]fluoranthene	< 0.2	< 0.2	< 0.5	< 0.5	< 1
Benzo[j]fluoranthene	< 0.2	< 0.2	< 0.5	< 0.5	< 1
Benzo[k]fluoranthene	< 0.2	< 0.2	< 0.5	< 0.5	< 1
Benzo[a]pyrene	< 0.2	< 0.2	< 0.5	< 0.5	< 1
Benzo[e]pyrene	< 0.2	< 0.2	< 0.5	< 0.5	< 1
Indeno[1, 2, 3-c, d] pyrene	< 0.2	< 0.2	< 0.5	< 0.5	< 1
Dibenzo[a, h]anthracene	< 0.2	< 0.2	< 0.5	< 0.5	< 1
Benzo[g, h, i]perylene	< 0.2	< 0.2	< 0.5	< 0.5	< 1
18項PAH總濃度 (Sum of 18 PAH)	< 1	< 5	< 10	< 20	< 50

單位(Unit) : mg/kg

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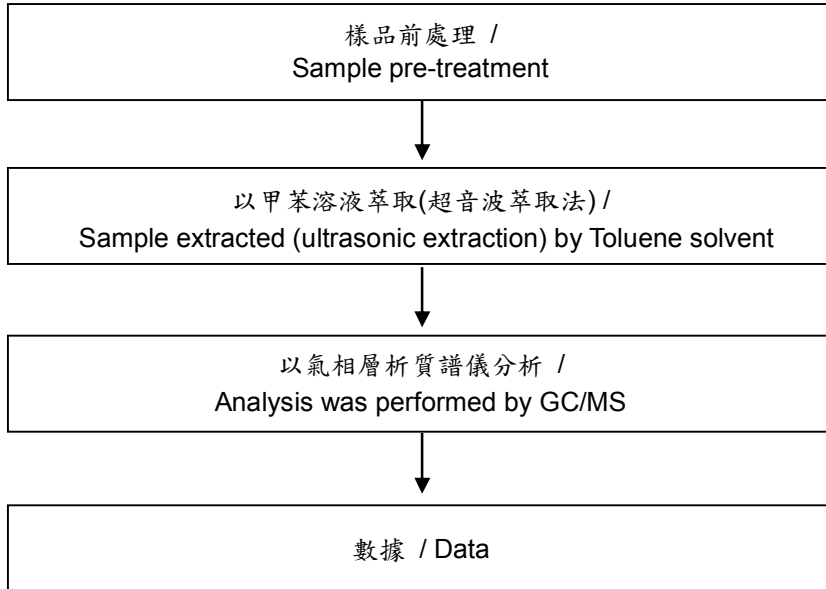
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多環芳香烴分析流程圖 /

Analytical flow chart - PAHs (Polycyclic Aromatic Hydrocarbons)

- 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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* 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) **