

測試報告

Test Report

號碼(No.) : CE/2016/36881

日期(Date) : 2016/03/31

頁數(Page): 1 of 11

台灣康寧顯示玻璃股份有限公司

CORNING DISPLAY TECHNOLOGIES TAIWAN CO., LTD.

台北市中山區民生東路三段8號8樓

8F., NO. 8, SEC. 3, MINSHENG E. RD., ZHONGSHAN DIST., TAIPEI CITY 10480



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) : 台灣康寧顯示玻璃股份有限公司 (CORNING DISPLAY TECHNOLOGIES TAIWAN CO., LTD.)
樣品名稱(Sample Description) : CORNING GORILLA® GLASS
樣品型號(Style/Item No.) : GORILLA® 5318
收件日期(Sample Receiving Date) : 2016/03/23
測試期間(Testing Period) : 2016/03/23 TO 2016/03/31

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



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 : 透明玻璃 (TRANSPARENT GLASS)

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
鹵素 / Halogen				
鹵素 (氟) / Halogen-Fluorine (F) (CAS No. : 14762-94-8)	mg/kg	參考BS EN 14582 (2007), 以離子層析儀分析. / With reference to BS EN 14582 (2007). Analysis was performed by IC.	50	n. d.
鹵素 (氯) / Halogen-Chlorine (Cl) (CAS No. : 22537-15-1)	mg/kg		50	n. d.
鹵素 (溴) / Halogen-Bromine (Br) (CAS No. : 10097-32-2)	mg/kg		50	n. d.
鹵素 (碘) / Halogen-Iodine (I) (CAS No. : 14362-44-8)	mg/kg		50	n. d.
全氟辛烷磺酸 / Perfluorooctane sulfonates (PFOS-Acid, Metal Salt, Amide)	mg/kg	參考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.	10	n. d.
全氟辛酸 / PFOA (CAS No. : 335-67-1)	mg/kg	參考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.	10	n. d.
鄰苯二甲酸二正辛酯 / DNOP (Di-n-octyl phthalate) (CAS No. : 117-84-0)	mg/kg	參考IEC 62321-8/CD (2013), 以氣相層析儀/質譜儀檢測. / With reference to IEC 62321-8/CD (2013). Analysis was performed by GC/MS.	50	n. d.
鄰苯二甲酸二異壬酯 / DINP (Di-isononyl phthalate) (CAS No. : 28553-12-0; 68515-48-0)	mg/kg		50	n. d.
鄰苯二甲酸二異癸酯 / DIDP (Di-isodecyl phthalate) (CAS No. : 26761-40-0; 68515-49-1)	mg/kg		50	n. d.

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測試項目 (Test Items)	單位 (Unit)	測試方法 (Method)	方法偵測 極限值 (MDL)	結果 (Result)
				No. 1
單丁基錫 / Monobutyl Tin (MBT)	mg/kg	參考ISO 17353 (2004), 以氣相層析儀 / 火焰光度偵測器檢測. / With reference to ISO 17353 (2004). Analysis was performed by GC/FPD.	0.03	n. d.
二丁基錫 / Dibutyl Tin (DBT)	mg/kg		0.03	n. d.
三丁基錫 / Tributyl Tin (TBT)	mg/kg		0.03	n. d.
四丁基錫 / Tetrabutyltin (TeBT)	mg/kg		0.03	n. d.
單辛基錫 / Monoctyltin (MOT)	mg/kg		0.03	n. d.
二辛基錫 / Dioctyl Tin (DOT)	mg/kg		0.03	n. d.
三苯基錫 / Triphenyl Tin (TphT)	mg/kg		0.03	n. d.
二苯基錫 / Diphenyltin (DphT)	mg/kg		0.03	n. d.
單苯基錫 / Monophenyltin (MPhT)	mg/kg		0.03	n. d.
三環己基錫 / Tricyclohexyltin (TCyT)	mg/kg		0.03	n. d.
氧化雙三丁基錫 / Bis(tributyltin)oxide (TBTO)***(CAS No.: 56-35-9)	mg/kg	-	n. d.	
六溴環十二烷及所有主要被辨別出的異構物 / Hexabromocyclododecane (HBCDD) and all major diastereoisomers identified (α -HBCDD, β -HBCDD, γ -HBCDD) (CAS No.: 25637-99-4 and 3194-55-6 (134237-51-7, 134237-50-6, 134237-52-8))	mg/kg	參考IEC 62321 (2008), 以氣相層析 / 質譜儀檢測. / With reference to IEC 62321 (2008). Analysis was performed by GC/MS.	5	n. d.
鈹 / Beryllium (Be)	mg/kg	參考US EPA 3052 (1996), 以感應耦合電漿原子發射光譜儀檢測. / With reference to US EPA 3052 (1996). Analysis was performed by ICP-AES.	2	n. d.
鎳 / Nickel (Ni)	mg/kg		2	n. d.
硒 / Selenium (Se)	mg/kg		2	n. d.
錫 / Tin (Sn)	mg/kg		2	942
銻 / Antimony (Sb)	mg/kg		2	n. d.
砷 / Arsenic (As)	mg/kg		2	n. d.

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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)
5. ***: 該物質是由三丁基錫之測試結果計算得知. 其MDL是針對三丁基錫之評估. (The substance was calculated by the test result of Tributyl Tin. The MDL was evaluated for Tributyl Tin.)
6. 參數換算表 / Parameter Conversion Table :
Please refer to http://twap.sgs.com/sgsrsts/chn/download-REACH_tw.asp

PFOS參考資訊(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 $1\mu\text{g}/\text{m}^2$ 。

(Outlawing PFOS as substances or preparations in concentrations above 0.001% (10ppm), in semi-finished products or articles or parts at a level above 0.1%(1000ppm), in textiles or other coated materials above $1\mu\text{g}/\text{m}^2$.)

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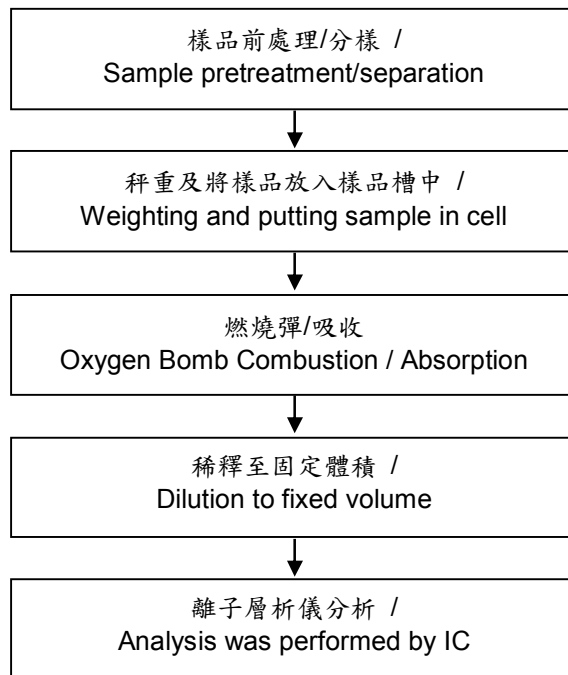
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鹵素分析流程圖 / Analytical flow chart - Halogen

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



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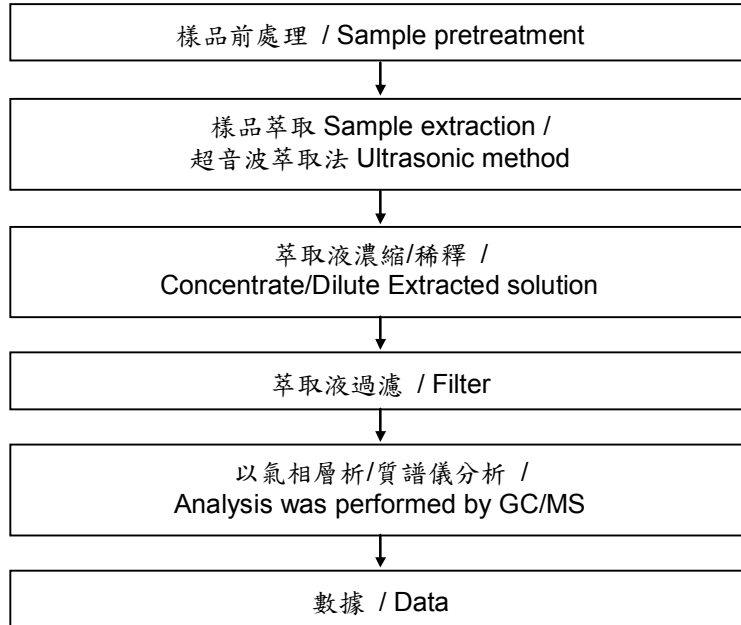
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六溴環十二烷分析流程圖 / Analytical flow chart - HBCDD

- 測試人員：翁賜彬 / Technician: Roman Wong
- 測試負責人：張啟興 / Supervisor: Troy Chang



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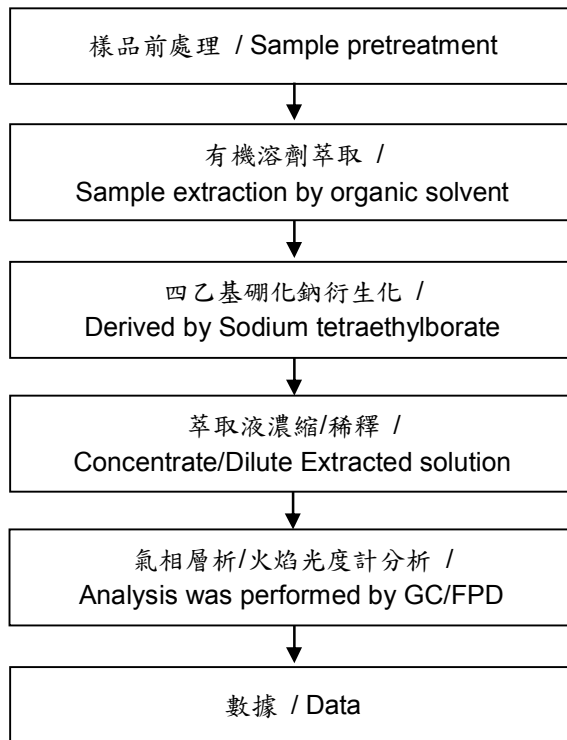
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有機錫分析流程圖 / Analytical flow chart - Organic-Tin

- 測試人員：林建宇 / Technician: Roy Lin
- 測試負責人：張啟興 / Supervisor: Troy Chang



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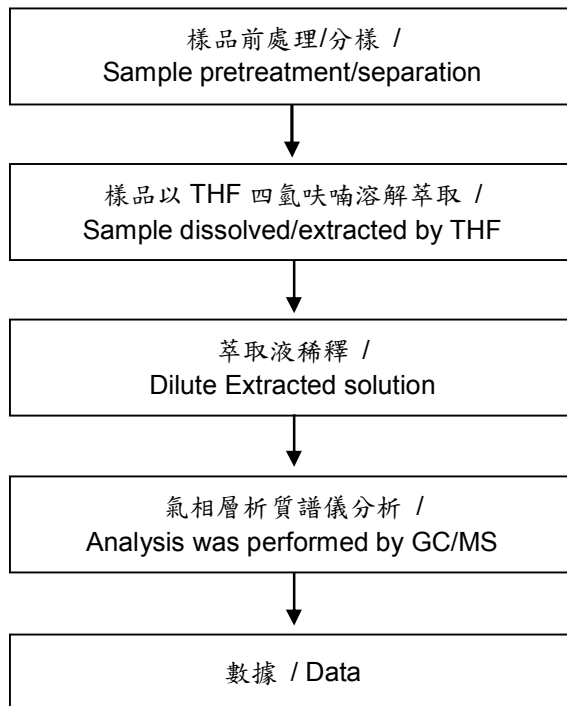
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可塑劑分析流程圖 / Analytical flow chart - Phthalate

- 測試人員：徐毓明 / Technician: Andy Shu
- 測試負責人：張啟興 / Supervisor nt: Troy Chang

【測試方法/Test method: IEC 62321-8】



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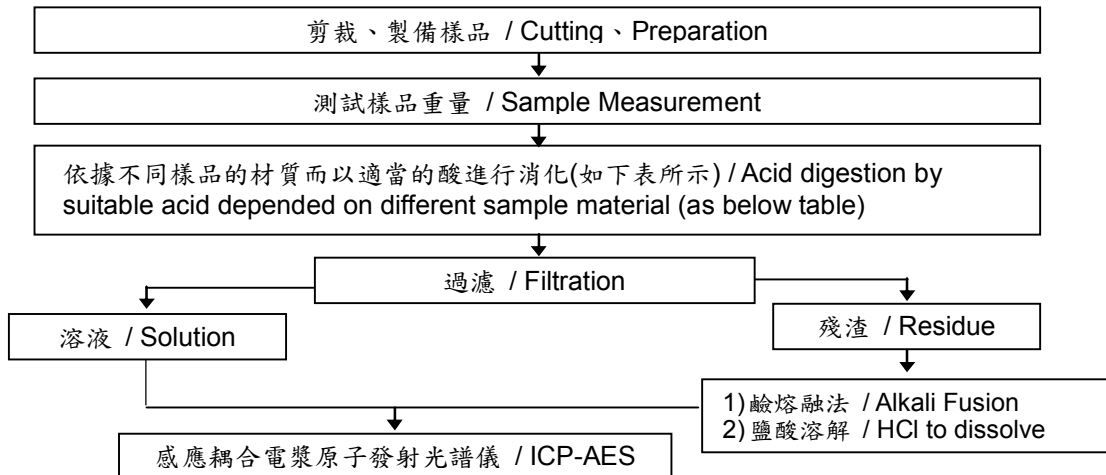
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根據以下的流程圖之條件，樣品已完全溶解。 / These samples were dissolved totally by pre-conditioning method according to below flow chart.

- 測試人員：楊登偉 / Technician: Climbgreat Yang
- 測試負責人：張啟興 / Supervisor: Troy Chang

元素以 ICP-AES 分析的消化流程圖 (Flow Chart of digestion for the elements analysis performed by ICP-AES)



鋼,銅,鋁,焊錫 / Steel, copper, aluminum, solder	王水,硝酸,鹽酸,氫氟酸,雙氧水 / Aqua regia, HNO ₃ , HCl, HF, H ₂ O ₂
玻璃 / Glass	硝酸,氫氟酸 / HNO ₃ /HF
金,鉑,鈀,陶瓷 / Gold, platinum, palladium, ceramic	王水 / Aqua regia
銀 / Silver	硝酸 / HNO ₃
塑膠 / Plastic	硫酸,雙氧水,硝酸,鹽酸 / H ₂ SO ₄ , H ₂ O ₂ , HNO ₃ , HCl
其他 / Others	加入適當的試劑至完全溶解 / Added appropriate reagent to total digestion

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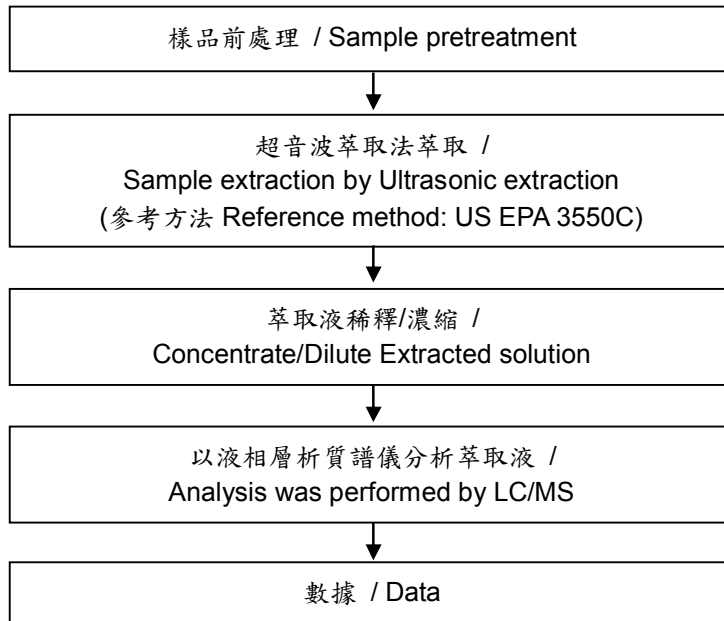
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全氟辛酸/全氟辛烷磺酸分析流程圖 / Analytical flow chart - PFOA/PFOS

- 測試人員：翁賜彬 / Technician: Roman Wong
- 測試負責人：張啟興 / Supervisor: Troy Chang



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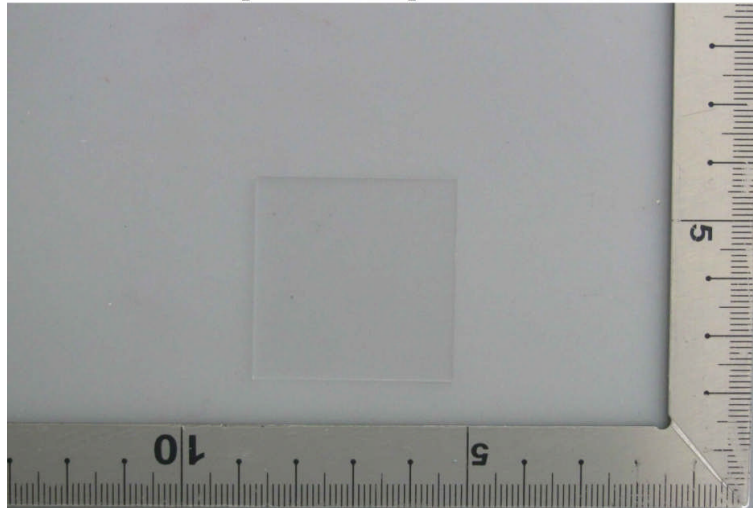
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* 照片中如有箭頭標示，則表示為實際檢測之樣品/部位。 *
(The tested sample / part is marked by an arrow if it's shown on the photo.)

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** 報告結尾 (End of Report) **