

測試報告 Test Report

號碼(No.) : CE/2008/10452

日期(Date) : 2008/01/09

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勝昱科技股份有限公司

SUNVIC TECHNOLOGY CO., LTD.

台北縣中和市建康路168號8F

8F., NO. 168, JIANKANG RD., JHONGHE CITY, TAIPEI COUNTY, TAIWAN



以下測試樣品係由客戶送樣，且由客戶聲稱並經客戶確認如下 (The following samples was/were submitted and identified by/on behalf of the client as) :

樣品名稱(Sample Description) : 鋁箔聚酯 (AL/PET TAPE)
收件日期(Sample Receiving Date) : 2008/01/02
測試期間(Testing Period) : 2008/01/02 TO 2008/01/09

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



Chenyu Kung / Operation Manager
Signed for and on behalf of
SGS TAIWAN LTD.
Chemical Laboratory – Taipei

測試報告

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測試結果(Test Results)

測試部位(PART NAME) NO.1 : 銀色箔片 (SILVER COLORED FOIL)

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
鎘 / Cadmium (Cd)	mg/kg	參考BS EN 1122方法B:2001, 用感應耦合電漿原子發射光譜儀檢測鎘含量. / With reference to BS EN 1122:2001, Method B for Cadmium Content. Analysis was performed by ICP-AES.	2	n.d.
鉛 / Lead (Pb)	mg/kg	參考US EPA 3050B方法, 用感應耦合電漿原子發射光譜儀檢測鉛含量. / With reference to US EPA Method 3050B for Lead Content. Analysis was performed by ICP-AES.	2	n.d.
汞 / Mercury (Hg)	mg/kg	參考US EPA 3052方法, 用感應耦合電漿原子發射光譜儀檢測汞含量. / With reference to US EPA Method 3052 for Mercury Content. Analysis was performed by ICP-AES.	2	n.d.
六價鉻 / Hexavalent Chromium Cr(VI)	mg/kg	參考US EPA 3060A方法, 用UV-VIS (US EPA 7196A) 檢測六價鉻含量. / With reference to US EPA Method 3060A & 7196A for Hexavalent Chromium. Analysis was performed by UV/Vis Spectrometry.	2	n.d.
聚氯乙烯 / PVC	%	以紅外線光譜分析法及熱裂解氣相層析質譜儀檢測. / Analysis was performed by FTIR and Pyrolyzer-GC/MS.	1	Negative

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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
多氯奈 / Polychlorinated Naphthalene (PCNs)	mg/kg	參考US EPA 8270D方法, 以氣相層析質譜儀(GC/MS)檢測. / With reference to US EPA 8270D method. Analysis was performed by GC/MS.	5	n.d.
多氯三聯苯 / Polychlorinated Terphenyls (PCTs)	mg/kg	參考US EPA 8270D方法, 以氣相層析質譜儀(GC/MS)檢測. / With reference to US EPA 8270D method. Analysis was performed by GC/MS.	0.5	n.d.
氯化石蠟 / Chlorinated Paraffin (C10~C13) (CAS No.: 010871-26-2)	%	參考US EPA 8270D方法, 以氣相層析質譜儀(GC/MS)檢測. / With reference to US EPA 8270D method. Analysis was performed by GC/MS.	0.01	n.d.
石棉 / Asbestos	---	---	---	---
棕石棉 / Amosite (CAS No.: 012172-73-5)	%	參考NIOSH 9000 / X光繞射定性分析法 (XRD) / As per NIOSH 9000 method. Analysis was performed by XRD.	1	Negative
白石棉 / Chrysotile (CAS No.: 012001-29-5)	%	參考NIOSH 9000 / X光繞射定性分析法 (XRD) / As per NIOSH 9000 method. Analysis was performed by XRD.	1	Negative
青石棉 / Crocidolite (CAS No.: 012001-28-4)	%	參考NIOSH 9000 / X光繞射定性分析法 (XRD) / As per NIOSH 9000 method. Analysis was performed by XRD.	1	Negative
斜方角閃石 / Anthophyllite (CAS No.: 017068-78-9)	%	參考NIOSH 9000 / X光繞射定性分析法 (XRD) / As per NIOSH 9000 method. Analysis was performed by XRD.	1	Negative
透閃石 / Tremolite (CAS No.: 014567-73-8)	%	參考NIOSH 9000 / X光繞射定性分析法 (XRD) / As per NIOSH 9000 method. Analysis was performed by XRD.	1	Negative

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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
陽起石 / Actinolite (CAS No.: 013768-00-8)	%	參考NIOSH 9000 / X光繞射定性分析法 (XRD) / As per NIOSH 9000 method. Analysis was performed by XRD.	1	Negative
多溴聯苯總和 / Sum of PBBs			-	n.d.
一溴聯苯 / Monobromobiphenyl			5	n.d.
二溴聯苯 / Dibromobiphenyl			5	n.d.
三溴聯苯 / Tribromobiphenyl			5	n.d.
四溴聯苯 / Tetrabromobiphenyl			5	n.d.
五溴聯苯 / Pentabromobiphenyl			5	n.d.
六溴聯苯 / Hexabromobiphenyl			5	n.d.
七溴聯苯 / Heptabromobiphenyl			5	n.d.
八溴聯苯 / Octabromobiphenyl			5	n.d.
九溴聯苯 / Nonabromobiphenyl			5	n.d.
十溴聯苯 / Decabromobiphenyl			5	n.d.
多溴聯苯醚總和 (一至九溴) / Sum of PBDEs (Mono to Nona) (Note 4)	mg/kg	參考US EPA 3540C方法, 以氣相層析儀/質譜儀檢測多溴聯苯和多溴聯苯醚含量. / With reference to US EPA 3540C for PBB/PBDE Content. Analysis was performed by GC/MS.	-	n.d.
一溴聯苯醚 / Monobromobiphenyl ether			5	n.d.
二溴聯苯醚 / Dibromobiphenyl ether			5	n.d.
三溴聯苯醚 / Tribromobiphenyl ether			5	n.d.
四溴聯苯醚 / Tetrabromobiphenyl ether			5	n.d.
五溴聯苯醚 / Pentabromobiphenyl ether			5	n.d.
六溴聯苯醚 / Hexabromobiphenyl ether			5	n.d.
七溴聯苯醚 / Heptabromobiphenyl ether			5	n.d.
八溴聯苯醚 / Octabromobiphenyl ether			5	n.d.
九溴聯苯醚 / Nonabromobiphenyl ether			5	n.d.
十溴聯苯醚 / Decabromobiphenyl ether			5	n.d.
多溴聯苯醚總和 (一至十溴) / Sum of PBDEs (Mono to Deca)			-	n.d.
有機錫 / Organic-tin compounds	---	---	---	---
三苯基錫 / Triphenyl Tin (TphT) (CAS No.: 000668-34-8)	mg/kg	本測試參考DIN 38407-13方法, 以氣相層析儀/火焰光度偵測器檢測. / With reference to DIN 38407-13. Analysis was performed by GC/FPD.	0.03	n.d.

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				NO.1
三丁基錫 / Tributyl Tin (TBT) (CAS No.: 000688-73-3)	mg/kg	本測試參考DIN 38407-13方法, 以氣相層析儀/火焰光度偵測器檢測. / With reference to DIN 38407-13. Analysis was performed by GC/FPD.	0.03	n.d.
偶氮 (AZO)	---	---	---	---
1): 4-氨基二苯 / 4-AMINODIPHENYL (CAS No.: 000092-67-1)	mg/kg	本測試參考LMBG 82.02-2方法, 以氣相層析質譜儀(GC/MS)檢測. / With reference to LMBG 82.02-2. Analysis was performed by GC/MS.	3	n.d.
2): 聯苯胺 / BENZIDINE (CAS No.: 00092-87-5)	mg/kg	本測試參考LMBG 82.02-2方法, 以氣相層析質譜儀(GC/MS)檢測. / With reference to LMBG 82.02-2. Analysis was performed by GC/MS.	3	n.d.
3): 4-氯鄰甲苯胺 / 4-CHLORO-O-TOLUIDINE (CAS No.: 000095-69-2)	mg/kg	本測試參考LMBG 82.02-2方法, 以氣相層析質譜儀(GC/MS)檢測. / With reference to LMBG 82.02-2. Analysis was performed by GC/MS.	3	n.d.
4): 2-萘胺 / 2-NAPHTHYLAMINE (CAS No.: 000091-59-8)	mg/kg	本測試參考LMBG 82.02-2方法, 以氣相層析質譜儀(GC/MS)檢測. / With reference to LMBG 82.02-2. Analysis was performed by GC/MS.	3	n.d.
5): 鄰氨基二甲基偶氮 / O-AMINOAZOTOLUENE (CAS No.: 000097-56-3)	mg/kg	本測試參考LMBG 82.02-2方法, 以氣相層析質譜儀(GC/MS)檢測. / With reference to LMBG 82.02-2. Analysis was performed by GC/MS.	3	n.d.
6): 對硝基鄰甲苯胺 / 2-AMINO-4-NITROTOLUENE (CAS No.: 000099-55-8)	mg/kg	本測試參考LMBG 82.02-2方法, 以氣相層析質譜儀(GC/MS)檢測. / With reference to LMBG 82.02-2. Analysis was performed by GC/MS.	3	n.d.

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				NO.1
7): 對氯苯胺 / P-CHLOROANILINE (CAS No.: 000106-47-8)	mg/kg	本測試參考LMBG 82.02-2方法，以氣相層析質譜儀(GC/MS)檢測。 / With reference to LMBG 82.02-2. Analysis was performed by GC/MS.	3	n.d.
8): 4-甲氧基-間苯二胺 / 2,4-DIAMINOANISOLE (CAS No.: 000615-05-4)	mg/kg	本測試參考LMBG 82.02-2方法，以氣相層析質譜儀(GC/MS)檢測。 / With reference to LMBG 82.02-2. Analysis was performed by GC/MS.	3	n.d.
9): 4,4'-二氨基二苯甲烷 / 4,4'-DIAMINODIPHENYLMETHANE (CAS No.: 000101-77-9)	mg/kg	本測試參考LMBG 82.02-2方法，以氣相層析質譜儀(GC/MS)檢測。 / With reference to LMBG 82.02-2. Analysis was performed by GC/MS.	3	n.d.
10): 3,3'-二氯聯苯胺 / 3,3'-DICHLOROBENZIDINE (CAS No.: 000091-94-1)	mg/kg	本測試參考LMBG 82.02-2方法，以氣相層析質譜儀(GC/MS)檢測。 / With reference to LMBG 82.02-2. Analysis was performed by GC/MS.	3	n.d.
11): 3,3'-二甲氧基聯苯胺 / 3,3'-DIMETHOXYBENZIDINE (CAS No.: 000119-90-4)	mg/kg	本測試參考LMBG 82.02-2方法，以氣相層析質譜儀(GC/MS)檢測。 / With reference to LMBG 82.02-2. Analysis was performed by GC/MS.	3	n.d.
12): 3,3'-二甲基聯苯胺 / 3,3'-DIMETHYLBENZIDINE (CAS No.: 000119-93-7)	mg/kg	本測試參考LMBG 82.02-2方法，以氣相層析質譜儀(GC/MS)檢測。 / With reference to LMBG 82.02-2. Analysis was performed by GC/MS.	3	n.d.
13): 3,3'-二甲基-4,4'-二氨基二苯甲烷 / 3,3'-DIMETHYL-4,4'-DIAMINODIPHENYLMETHANE (CAS No.: 000838-88-0)	mg/kg	本測試參考LMBG 82.02-2方法，以氣相層析質譜儀(GC/MS)檢測。 / With reference to LMBG 82.02-2. Analysis was performed by GC/MS.	3	n.d.

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				NO.1
14): 2-甲氧基-5-甲基聯苯 / P-CRESIDINE (2-METHOXY-5-METHYLANILINE) (CAS No.: 000120-71-8)	mg/kg	本測試參考LMBG 82.02-2方法，以氣相層析質譜儀(GC/MS)檢測。 / With reference to LMBG 82.02-2. Analysis was performed by GC/MS.	3	n.d.
15): 4,4'-亞甲基雙(氯苯胺) / 4,4'-METHYLENE-BIS-(2-CHLOROANILINE) (CAS No.: 000101-14-4)	mg/kg	本測試參考LMBG 82.02-2方法，以氣相層析質譜儀(GC/MS)檢測。 / With reference to LMBG 82.02-2. Analysis was performed by GC/MS.	3	n.d.
16): 4,4'-氧化雙苯胺 / 4,4'-OXYDIANILINE (CAS No.: 000101-80-4)	mg/kg	本測試參考LMBG 82.02-2方法，以氣相層析質譜儀(GC/MS)檢測。 / With reference to LMBG 82.02-2. Analysis was performed by GC/MS.	3	n.d.
17): 4,4'-硫代雙苯胺 / 4,4'-THIODIANILINE (CAS No.: 000139-65-1)	mg/kg	本測試參考LMBG 82.02-2方法，以氣相層析質譜儀(GC/MS)檢測。 / With reference to LMBG 82.02-2. Analysis was performed by GC/MS.	3	n.d.
18): 鄰甲苯胺 / O-TOLUIDINE (CAS No.: 000095-53-4)	mg/kg	本測試參考LMBG 82.02-2方法，以氣相層析質譜儀(GC/MS)檢測。 / With reference to LMBG 82.02-2. Analysis was performed by GC/MS.	3	n.d.
19): 2,4-二氨基甲苯 / 2,4-TOLUYLENEDIAMINE (CAS No.: 000095-80-7)	mg/kg	本測試參考LMBG 82.02-2方法，以氣相層析質譜儀(GC/MS)檢測。 / With reference to LMBG 82.02-2. Analysis was performed by GC/MS.	3	n.d.
20): 2,4,5-三甲基苯胺 / 2,4,5-TRIMETHYLANILINE (CAS No.: 000137-17-7)	mg/kg	本測試參考LMBG 82.02-2方法，以氣相層析質譜儀(GC/MS)檢測。 / With reference to LMBG 82.02-2. Analysis was performed by GC/MS.	3	n.d.

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				NO.1
21): 鄰位甲氧基苯胺 / O-ANISIDINE (CAS No.: 000090-04-0)	mg/kg	本測試參考LMBG 82.02-2方法， 以氣相層析質譜儀(GC/MS)檢測。 / With reference to LMBG 82.02-2. Analysis was performed by GC/MS.	3	n.d.
22): 對氨基偶氮苯 / P-AMINOAZOBENZENE (CAS No.: 000060-09-3)	mg/kg	本測試參考LMBG 82.02-2方法， 以氣相層析質譜儀(GC/MS)檢測。 / With reference to LMBG 82.02-2. Analysis was performed by GC/MS.	3	n.d.
23): 2,4-二甲基苯胺 / 2,4-XYLIDINE (CAS No.: 000095-68-1)	mg/kg	本測試參考LMBG 82.02-2方法， 以氣相層析質譜儀(GC/MS)檢測。 / With reference to LMBG 82.02-2. Analysis was performed by GC/MS.	3	n.d.
24): 2,6-二甲基苯胺 / 2,6-XYLIDINE (CAS No.: 000087-62-7)	mg/kg	本測試參考LMBG 82.02-2方法， 以氣相層析質譜儀(GC/MS)檢測。 / With reference to LMBG 82.02-2. Analysis was performed by GC/MS.	3	n.d.

備註(Note) :

1. mg/kg = ppm
2. n.d. = Not Detected (未檢出)
3. MDL = Method Detection Limit (方法偵測極限值)
4. 根據2005年10月13日歐盟會議公佈2005/717/EC, 修訂2002/95/EC內容, 通過解除高分子材質
中十溴聯苯醚之使用限制。(According to 2005/717/EC DecaBDE is exempt.)
5. "-" = Not Regulated (無規格值)
6. "---" = Not Conducted (未測項目)
7. Negative = 陰性 (< 1.0 %), Positive = 陽性 (> 1.0 %)
8. 若為氯化石蠟中單一化合物, 則偵測極限為5ppm (The MDL is 5ppm for the single compound of CP)

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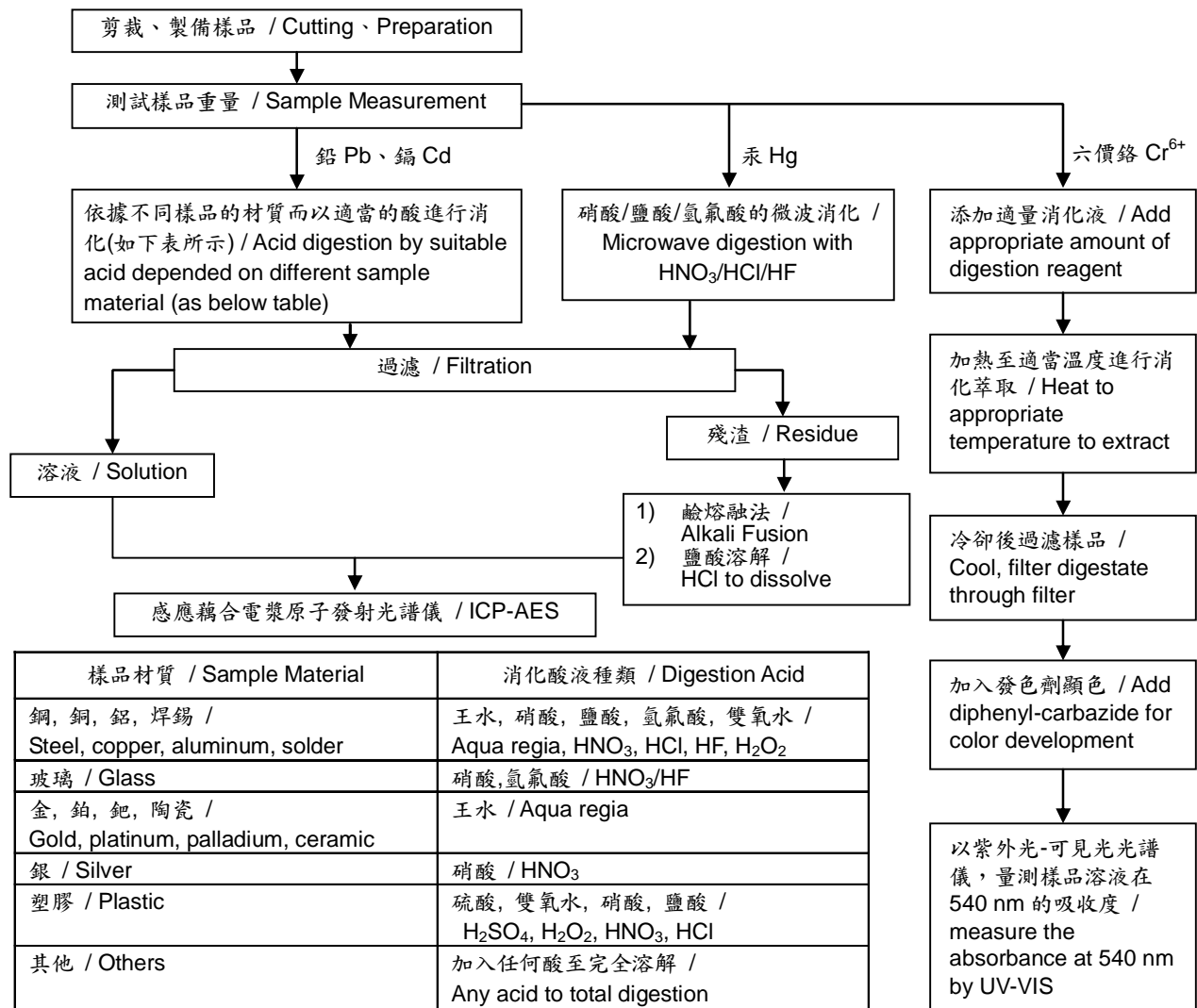
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- 1) 根據以下的流程圖之條件，樣品已完全溶解。(六價鉻測試方法除外) / These samples were dissolved totally by pre-conditioning method according to below flow chart. (Cr⁶⁺ test method excluded)
- 2) 測試人員：張啓興 / Name of the person who made measurement: Troy Chang
- 3) 測試負責人：龔振裕 / Name of the person in charge of measurement: Chenyu Kung



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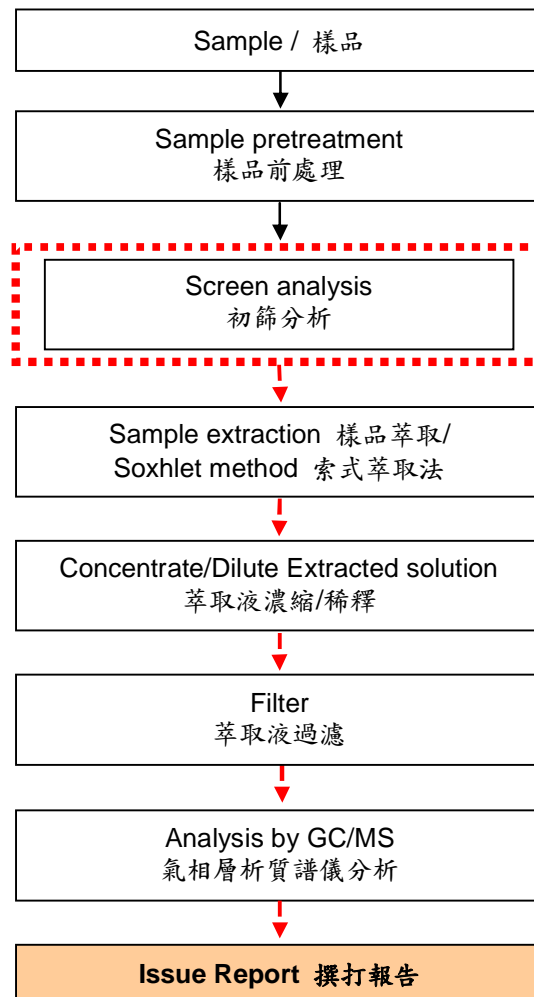


多溴聯苯/多溴聯苯醚分析流程圖 / PBB/PBDE analytical FLOW CHART

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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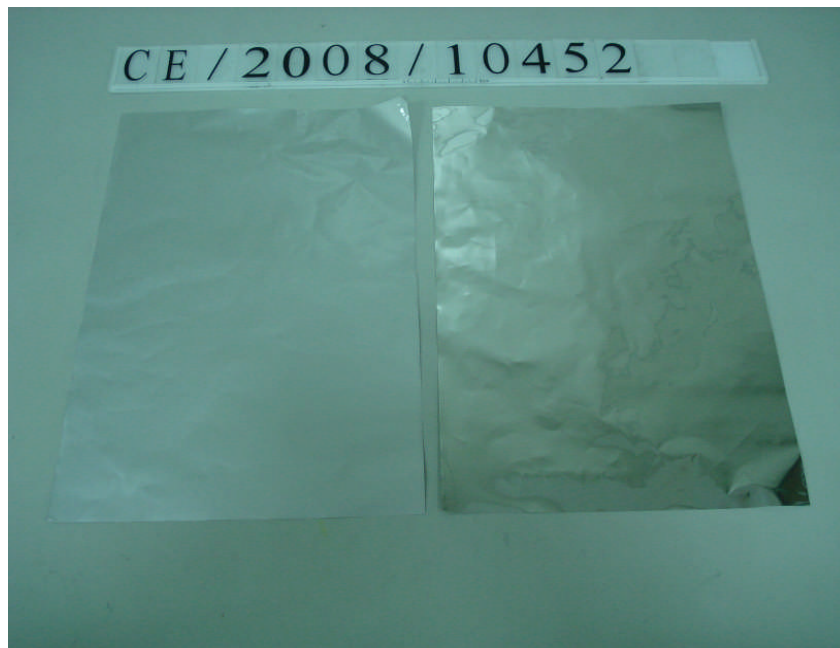
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