

紡織實驗室

Test Report 報告號碼: TXB0777 /2020 /LR 日期: 2020 年 11 月 13 日 頁數: 六 之 一 頁

我們依照客戶的要求, 根據申請者送交的樣品進行測試如下:

樣品敘述 : 一塊不織布-印刷防撥水外層

顏色 : 藍色

成份 : PET

布重 : 40g

申請者 :

收件日期 : 2020 年 11 月 10 日

測試週期 : 2020 年 11 月 10 日至 2020 年 11 月 13 日

測試項目&測試方法 : 依申請者要求, 依據 RoHS (2011/65/EU)&(EU)2015/863 指令的附錄 2, 進行下列測試

測試結果 : 請參照下一頁結果

測試結論: 根據客戶送交之樣品, 經過測試**符合**(2011/65/EU)&(EU)2015/863 指令的附錄 2, 鎘, 鉛, 汞, 六價鉻, 多溴聯苯, 多溴聯苯醚, 可塑劑之限值要求。

台灣檢驗科技股份有限公司

朱培馨

朱培馨
測試專員



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測試結果:

鎘

測試方法:參照國際電工委員會標準 IEC 62321-5:2013. 使用感應耦合電漿原子發射光譜儀分析.

	測試結果 (毫克/公斤)	建議限值 (毫克/公斤)
鎘 (Cd) 結論	未偵測出 通過	100

備註: 報告極限值: 2 毫克/公斤

鉛

測試方法:參照國際電工委員會標準 IEC 62321-5:2013. 使用感應耦合電漿原子發射光譜儀分析.

	測試結果 (毫克/公斤)	建議限值 (毫克/公斤)
鉛 (Pb) 結論	未偵測出 通過	1000

備註: 報告極限值 = 2 毫克/公斤

汞

測試方法:參照國際電工委員會標準 IEC 62321-4:2013. 使用感應耦合電漿原子發射光譜儀分析.

	測試結果 (毫克/公斤)	建議限值 (毫克/公斤)
汞 (Hg) 結論	未偵測出 通過	1000

備註: 報告極限值 = 2 毫克/公斤

六價鉻

測試方法:參照國際電工委員會標準 IEC 62321-7-2:2017. 使用紫外光/可見光分光光譜儀分析.

	測試結果 (毫克/公斤)	建議限值 (毫克/公斤)
六價鉻(VI) 結論	未偵測出 通過	1000

備註: 報告極限值 = 8 毫克/公斤

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測試結果:

多溴聯苯 (PBBs)

測試方法: 參照國際電工委員會標準 IEC 62321-6: 2015. 使用氣相層析/質譜儀分析.

	測試結果 (毫克/公斤)	建議限值 (毫克/公斤)
一溴聯苯	未偵測出	-
二溴聯苯	未偵測出	-
三溴聯苯	未偵測出	-
四溴聯苯	未偵測出	-
五溴聯苯	未偵測出	-
六溴聯苯	未偵測出	-
七溴聯苯	未偵測出	-
八溴聯苯	未偵測出	-
九溴聯苯	未偵測出	-
十溴聯苯	未偵測出	-
總和	未偵測出	1000
結論	通過	

備註: 報告極限值 = 5 毫克/公斤

多溴聯苯醚 (PBDEs)

測試方法: 參照國際電工委員會標準 IEC 62321-6: 2015. 使用氣相層析/質譜儀分析.

	測試結果 (毫克/公斤)	建議限值 (毫克/公斤)
一溴聯苯醚	未偵測出	-
二溴聯苯醚	未偵測出	-
三溴聯苯醚	未偵測出	-
四溴聯苯醚	未偵測出	-
五溴聯苯醚	未偵測出	-
六溴聯苯醚	未偵測出	-
七溴聯苯醚	未偵測出	-
八溴聯苯醚	未偵測出	-
九溴聯苯醚	未偵測出	-
十溴聯苯醚	未偵測出	-
總和	未偵測出	1000
結論	通過	

備註: 報告極限值 = 5 毫克/公斤

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測試結果:

鄰苯二甲酸酯 (Phthalates)

測試方法:參照國際電工委員會標準 IEC 62321-8:2017. 使用氣相層析/質譜儀分析.

	測試結果 (毫克/公斤)	建議限值 (毫克/公斤)
鄰苯二甲酸二(2-乙基己基)酯(DEHP)	未偵測出	1000
鄰苯二甲酸丁酯苯甲酯(BBP)	未偵測出	1000
鄰苯二甲酸二丁酯(DBP)	未偵測出	1000
鄰苯二甲酸二異丁酯(DIBP)	未偵測出	1000
結論	通過	

	測試結果 (毫克/公斤)	建議限值 (毫克/公斤)
鄰苯二甲酸二異癸酯(DIOP)	未偵測出	/
鄰苯二甲酸二異壬酯(DINP)	未偵測出	/
鄰苯二甲酸二正辛酯(DNOP)	未偵測出	/

備註: 報告極限值 = 50 毫克/公斤(個別化合物)



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測試結果:

偶氮

測試方法: 依據歐洲標準 EN 14362-1:2012 - 使用氣相層析質譜儀/高效液相層析儀/
二極體陣列分析

化學品 (胺類)	化學摘要號碼	結果 (毫克/公斤)		限制值 (毫克/公斤)
		1		
		直接還原	脫色萃取	
對-胺基聯苯	92-67-1	未偵測出	未偵測出	30
聯苯胺	92-87-5	未偵測出	未偵測出	30
對-氯-鄰-甲苯胺	95-69-2	未偵測出	未偵測出	30
2-萘胺	91-59-8	未偵測出	未偵測出	30
鄰-胺基偶氮甲苯	97-56-3	未偵測出	未偵測出	30
5-硝基-鄰-甲苯胺	99-55-8	未偵測出	未偵測出	30
4-氯苯胺	106-47-8	未偵測出	未偵測出	30
2,4-二氨基苯甲醚	615-05-4	未偵測出	未偵測出	30
4,4'-二胺基二苯甲烷	101-77-9	未偵測出	未偵測出	30
二氯聯苯胺	91-94-1	未偵測出	未偵測出	30
二甲氧基聯苯胺	119-90-4	未偵測出	未偵測出	30
鄰-二甲基聯苯胺	119-93-7	未偵測出	未偵測出	30
3,3'-二甲基 4,4'-二胺基- 二苯甲烷	838-88-0	未偵測出	未偵測出	30
2-甲氧基-5-甲基苯胺	120-71-8	未偵測出	未偵測出	30
4,4'-亞甲雙(2-氯苯胺)	101-14-4	未偵測出	未偵測出	30
4,4'-二胺基二苯醚	101-80-4	未偵測出	未偵測出	30
4,4'-硫二苯胺	139-65-1	未偵測出	未偵測出	30
鄰-甲苯胺	95-53-4	未偵測出	未偵測出	30
2,4-甲苯二胺	95-80-7	未偵測出	未偵測出	30
2,4,5-三甲苯胺	137-17-7	未偵測出	未偵測出	30
4-胺基偶氮苯	60-09-3	未偵測出	未偵測出	30
鄰-甲氧基苯胺	90-04-0	未偵測出	未偵測出	30
2,6-二甲基苯胺	87-62-7	未偵測出	未偵測出	30
2,4-二甲基苯胺	95-68-1	未偵測出	未偵測出	30
結論		通過	通過	

樣品敘述:

1. 藍底部位

備註: 方法偵測極限值: 5 毫克/公斤 (每一個化合物)

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當對-胺基聯苯(化學摘要號碼 92-67-1), 2-萘胺 (化學摘要號碼 91-59-8)或 2, 4-二氨基苯甲醚(化學摘要號碼 615-05-4)被檢測出時, 如果沒有額外的資料說明(例如著色劑的化學結構等), 被檢測樣品是否使用上述限制偶氮著色劑則無法確認。

當試樣有 PU 材質時, 例如 PU 泡棉、塗層或印花, 無法排除部份苯胺如 4, 4'-二胺基二苯甲烷(簡稱 MDA, 化學摘要號碼 101-77-9)跟 2, 4-甲苯二胺(簡稱 TDA, 化學摘要號碼 95-80-7), 可能源於 PU 釋出而不是限制偶氮著色劑

萬一當顏料印花製程中一定要使 4, 4'-二胺基二苯甲烷(簡稱 MDA, 化學摘要號碼 101-77-9), 那麼 4, 4'-二胺基二苯甲烷就可能不是源於限制偶氮著色劑而是來自於化學固色劑

測試方法 EN 14362-1; 2012 的方法會將對氨基偶氮苯進一步還原為 苯胺跟 1, 4-苯二胺; 如果兩者或是任一的檢測結果是"未偵測出"(濃度小於 5 毫克/公斤), 那麼對氨基偶氮苯 (CAS no: 60-09-3) 的測試結果, 就以"未偵測出"表示 (也就是濃度小於 5 毫克/公斤), 反之, 就要以 EN14362-3: 2012 方法進一步確認對氨基偶氮苯的含量。

以上偶氮的上限值, 已訂於歐盟法規 552/2009 修正版及 1907/2006/EC, 化學物質之註冊、評估、許可和限制(REACH) 附錄 17 中第 43 個物質/混合物

以上測試由 SGS 相關實驗室執行

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