

Report No. 報告號: 238523293g13 001

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Client 客戶: FORMOSA PLASTICS CORPORATION/台灣塑膠工業股份有限公司
No. 1, Formosa Industrial Complex, Mailiao, Yunlin 638, Taiwan, R.O.C./
台灣 雲林縣麥寮鄉 638 台塑工業園區 1 號

Test item(s) 測試樣品: 1 material(s) of plastic/塑膠, white/白色

Identification/Model No(s): 台塑烯迴轉成型級線性低密度聚乙烯/Taisox LLDPE Rotation Grade Resin /
樣品描述/規格: 3830U, 3840, 3840U

Sample obtaining method: Sending by customer
樣品獲取方式:

Condition at delivery: Test item complete and undamaged.
樣品接收狀態:

Sample receiving date: 2021-12-03
收樣日期:

Testing period: 2021-12-03 – 2022-01-12
測試週期:

Place of testing: TÜV Rheinland Hong Kong Ltd.
測試地點:

Test specification 測試要求:

Test result 測試結果:

Selected parameter(s) requested by the customer with reference to following regulation:
Taiwan "Sanitation Standard for Food Utensils, Containers and Packages" amended on
2013.08.20/ 依據“食品器具容器包裝衛生標準”(102年8月20日修正) -
General & requirements for plastics / 一般及塑膠類規定

- Release of Heavy metals (Lead)/重金屬釋放量 (鉛)	Pass/合格
- Consumption of potassium permanganate/高錳酸鉀消耗量	Pass/合格
- Residues after evaporation/蒸發殘渣	Pass/合格
- Migration of Phthalates/鄰苯二甲酸酯溶出量	Pass/合格
- Total Content of Phthalates/鄰苯二甲酸酯含量	Pass/合格
- Lead and Cadmium/鉛及鎘	Pass/合格

Other information: The test sample is model no. 3840U. All the above models are the same chemical
其他信息: composition/color/manufacturing process according to client's declaration dated on
2021-12-07.

For and on behalf of
TÜV Rheinland Taiwan Ltd.


Arthur Cheng/Project Manager
Name/Position 姓名/職位



2022-01-20
Date 日期

Sample information is provided by customer. Test result is drawn according to the kind and extent of tests performed.
This test report relates to the above mentioned test sample. Without permission of the test center this test report is not permitted to be duplicated in extracts.
This test report does not entitle to carry any safety mark on this or similar products.
"Decision Rule" document announced in our website (<https://www.tuv.com/landingpage/en/qm-gcn/>) describes the statement of conformity and its rule of enforcement for test results are applicable throughout this test report.
樣品信息由客戶提供。測試結果根據所做測試的種類和範圍而得出。本測試報告僅對來樣負責。未經本測試中心許可，測試報告不得部分複製。不能根據此報告
在上述產品或類似產品上使用任何安全標誌。本測試報告中，描述符合性聲明所應用的判定規則發佈在我司官網 <https://www.tuv.com/landingpage/en/qm-gcn/>。

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第2頁共4頁**1. Release of Heavy metals (as Lead) / 重金屬釋出量 (以鉛計)**

Solvent / 溶媒	test duration/temperature 測試時間/溫度
4% Acetic acid / 4% 醋酸	30 min(s) / 95°C

Sample/樣品明細 Material/材質	台塑烯迴轉成型級線性低密度聚乙烯 /Taisox LLDPE Rotation Grade Resin plastic/塑膠 / white/白色	Limit/合格標準
Lab.-No./實驗室編號	TCL211203-15	
Lead, Pb / 鉛	mg/kg	<1
		1

The examined item does meet the requirement/此測試項目符合要求

2. Consumption of potassium permanganate / 高錳酸鉀消耗量

Solvent / 溶媒	test duration/temperature 測試時間/溫度
Water /水	30 min(s) / 95°C

Sample/樣品明細 Material/材質	台塑烯迴轉成型級線性低密度聚乙烯 /Taisox LLDPE Rotation Grade Resin plastic/塑膠 / white/白色	Limit/合格標準
Lab.-No./實驗室編號	TCL211203-15	
KMnO ₄ / 高錳酸鉀	mg/kg	<2
		10

The examined item does meet the requirement/此測試項目符合要求

3. Lead and Cadmium after total digestion / 鉛及鎘含量

Sample/樣品明細 Material/材質	台塑烯迴轉成型級線性低密度聚乙烯 /Taisox LLDPE Rotation Grade Resin plastic/塑膠 / white/白色	Limit/合格標準
Lab.-No./實驗室編號	TCL211203-15	
Lead, Pb / 鉛	mg/kg	<10
		100
Cadmium, Cd / 鎘	mg/kg	<10
		100

The examined item does meet the requirement/此測試項目符合要求

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第3頁共4頁**4. Residues after evaporation / 蒸發殘渣**

Solvent / 溶媒	test duration/temperature 測試時間/溫度
Water / 水	30 min(s) / 95°C
4% Acetic acid / 4% 醋酸	30 min(s) / 95°C
n-Heptane / 正庚烷	1 hr(s) / 25°C
20% Alcohol / 20% 酒精	30 min(s) / 60°C

Sample/樣品明細 Material/材質	台塑烯迴轉成型級線性低密度聚乙烯 /Taisox LLDPE Rotation Grade Resin plastic/塑膠 / white/白色	Limit/合格標準
Lab.-No./實驗室編號	TCL211203-15	
Water / 水 mg/kg	<5	30
4% Acetic acid / 4% 醋酸 mg/kg	11	30
n-Heptane / 正庚烷 mg/kg	<5	30
20% Alcohol / 20% 酒精 mg/kg	<5	30

The examined item does meet the requirement/此測試項目符合要求

5. Total Content of Phthalates / 鄰苯二甲酸酯含量

Sample/樣品明細 Material/材質	台塑烯迴轉成型級線性低密度聚乙烯 /Taisox LLDPE Rotation Grade Resin plastic/塑膠 / white/白色	Limit/合格標準
Lab.-No./實驗室編號	TCL211203-15	
鄰苯二甲酸二(2-乙基己基)酯 (di-(2-ethylhexyl) phthalate, DEHP) %	<0.005	0.1
鄰苯二甲酸二丁酯 (di-n-butyl phthalate, DBP) %	<0.005	0.1
鄰苯二甲酸丁苯甲酯 (Butylbenzyl phthalate, BBP) %	<0.005	0.1
鄰苯二甲酸二異癸酯 (Diisodecyl phthalate, DIDP) %	<0.005	0.1
鄰苯二甲酸二異壬酯 (Diisononyl phthalate, DINP) %	<0.005	0.1
鄰苯二甲酸二甲酯 (Dimethyl phthalate, DMP) %	<0.005	0.1
鄰苯二甲酸二正辛酯 (Di-n-octyl phthalate, DNOP) %	<0.005	0.1
鄰苯二甲酸二乙酯 (Diethyl phthalate, DEP) %	<0.005	0.1
Total %	<0.005	0.1

The examined item does meet the requirement/此測試項目符合要求

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第4頁共4頁**6. Migration of Phthalates / 鄰苯二甲酸酯溶出量**

Solvent / 溶媒	test duration/temperature 測試時間/溫度
n-Heptane / 正庚烷	1 hr(s) / 25°C

Sample/樣品明細 Material/材質	台塑烯迴轉成型級線性低密度聚乙烯 /Taisox LLDPE Rotation Grade Resin plastic/塑膠 / white/白色	Limit/合格標準
Lab.-No./實驗室編號	TCL211203-15	
鄰苯二甲酸二(2-乙基己基)酯 (di-(2-ethylhexyl) phthalate, DEHP)	mg/kg <1.5	1.5
鄰苯二甲酸二丁酯 (di-n-butyl phthalate, DBP)	mg/kg <0.3	0.3
鄰苯二甲酸丁苯甲酯 (Butylbenzyl phthalate, BBP)	mg/kg <5	30
鄰苯二甲酸二異癸酯 (Diisodecyl phthalate, DIDP)	mg/kg <5	9
鄰苯二甲酸二異壬酯 (Diisononyl phthalate, DINP)	mg/kg <5	9
己二酸二辛酯 (Di-2-ethylhexyl Adipate, DEHA)	mg/kg <5	18

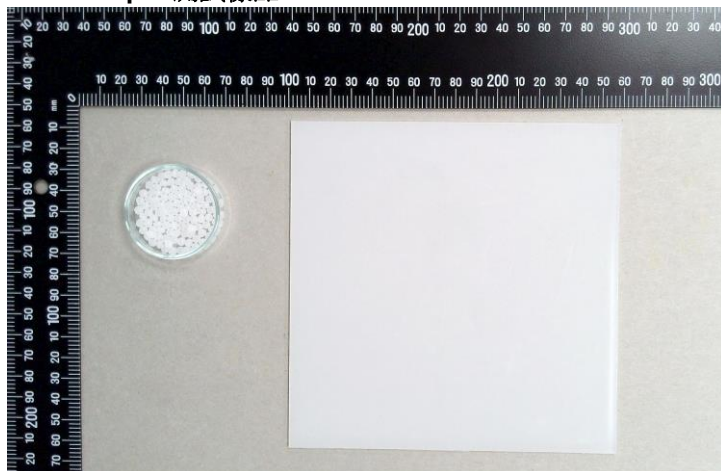
The examined item does meet the requirement/此測試項目符合要求

Remark/備註

- 0.1% =1000 ppm; mg/kg = ppm

Test Methods/測試方法

Method of Test for Food Utensils, Containers and Packages

Test Sample/測試樣品

--- End of Test-Report / 此報告結束---