

# **Test Report**

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喬越實業股份有限公司 SIL-MORE INDUSTRIAL LTD. 新北市三重區興德路100號16樓

16F, NO. 100, XINGDE RD., SANCHONG DISTRICT, NEW TAIPEI CITY 24158, TAIWAN

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):

DOWSIL ME-4039 ENCAPSULANT CLEAR BASE & CURING AGENT 樣品名稱(Sample Description)

收件日期(Sample Receiving Date) 2020/04/21

測試期間(Testing Period) 2020/04/21 to 2020/04/28

測試結果(Test Results) : 請參閱下一頁 (Please refer to following pages).

Troy Chang / Manager - Tec Signed for and behalf of SĞS TAIWAN LTD. Chemical Laboratory - Taipei



PIN CODE: 97E8D6B4



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#### 測試結果(Test Results)

測試部位(PART NAME)No.1 : 混測透明液體及透明液體(MIXED TRANSPARENT LIQUID AND TRANSPARENT LIQUID)

測試項目 (Test Items)	單位 (Unit)	測試方法 (Method)	MDL	結果 (Result) No.1
鎘 / Cadmium (Cd)	mg/kg	參考IEC 62321-5: 2013,以感應耦合電 漿發射光譜儀檢測. / With reference to IEC 62321-5: 2013 and performed by ICP-0ES.	2	n. d.
鉛 / Lead (Pb)	mg/kg	参考IEC 62321-5: 2013,以感應耦合電 漿發射光譜儀檢測. / With reference to IEC 62321-5: 2013 and performed by ICP-OES.	2	n. d.
汞 / Mercury (Hg)	mg/kg	參考IEC 62321-4:2013+ AMD1:2017,以 感應耦合電漿發射光譜儀檢測. / With reference to IEC 62321-4:2013+ AMD1:2017 and performed by ICP-OES.	2	n. d.
六價鉻 / Hexavalent Chromium Cr(VI)	mg/kg	参考IEC 62321-7-2: 2017,以UV-VIS檢測. / With reference to IEC 62321-7-2: 2017 and performed by UV-VIS.	8	n. d.
多溴聯苯總和 / Sum of PBBs	mg/kg		-	n. d.
一溴聯苯 / Monobromobiphenyl	mg/kg		5	n. d.
二溴聯苯 / Dibromobiphenyl	mg/kg		5	n. d.
三溴聯苯 / Tribromobiphenyl	mg/kg	4 1,170 00001 0 0015	5	n. d.
四溴聯苯 / Tetrabromobiphenyl	mg/kg	参考IEC 62321-6: 2015,以氣相層析/質 一譜儀檢測. / With reference to IEC -62321-6: 2015 and performed by -GC/MS.	5	n. d.
五溴聯苯 / Pentabromobiphenyl	mg/kg		5	n. d.
六溴聯苯 / Hexabromobiphenyl	mg/kg		5	n. d.
七溴聯苯 / Heptabromobiphenyl	mg/kg		5	n. d.
八溴聯苯 / Octabromobiphenyl	mg/kg	_	5	n. d.
九溴聯苯 / Nonabromobiphenyl	mg/kg	<u> </u>	5	n. d.
十溴聯苯 / Decabromobiphenyl	mg/kg		5	n. d.



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測試項目 (Test Items)	單位 (Unit)	測試方法 (Method)	MDL	結果 (Result) No.1
多溴聯苯醚總和 / Sum of PBDEs	mg/kg		-	n. d.
一溴聯苯醚 / Monobromodiphenyl ether	mg/kg	]	5	n. d.
二溴聯苯醚 / Dibromodiphenyl ether	mg/kg	]	5	n. d.
三溴聯苯醚 / Tribromodiphenyl ether	mg/kg	]	5	n. d.
四溴聯苯醚 / Tetrabromodiphenyl ether	mg/kg	参考IEC 62321-6: 2015,以氣相層析/質	5	n. d.
五溴聯苯醚 / Pentabromodiphenyl ether	mg/kg	譜儀檢測. / With reference to IEC 62321-6: 2015 and performed by	5	n. d.
六溴聯苯醚 / Hexabromodiphenyl ether	mg/kg	GC/MS.	5	n. d.
七溴聯苯醚 / Heptabromodiphenyl ether	mg/kg	007 Mg.	5	n. d.
八溴聯苯醚 / Octabromodiphenyl ether	mg/kg		5	n. d.
九溴聯苯醚 / Nonabromodiphenyl ether	mg/kg		5	n. d.
十溴聯苯醚 / Decabromodiphenyl ether	mg/kg		5	n. d.
鄰苯二甲酸二 (2-乙基己基)酯 / DEHP (Di- (2-ethylhexyl) phthalate) (CAS No.: 117-81-7)	mg/kg	參考IEC 62321-8: 2017,以氣相層析/質 譜儀檢測. / With reference to IEC 62321-8: 2017. Analysis was performed by GC/MS.	50	n. d.
鄰苯二甲酸丁苯甲酯 / BBP (Butyl Benzyl phthalate) (CAS No.: 85-68-7)	mg/kg		50	n. d.
鄰苯二甲酸二丁酯 / DBP (Dibutyl phthalate) (CAS No.: 84-74-2)	mg/kg		50	n. d.
鄰苯二甲酸二異丁酯 / DIBP (Di-isobutyl phthalate) (CAS No.: 84-69-5)	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.
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.
鄰苯二甲酸二正辛酯 / DNOP (Di-n-octyl phthalate) (CAS No.: 117-84-0)	mg/kg		50	n. d.



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測試項目 (Test Items)	單位 (Unit)	測試方法 (Method)	MDL	結果 (Result) No.1
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 ( $\alpha$ - HBCDD, $\beta$ - HBCDD, $\gamma$ - HBCDD) (CAS No.: 25637-99-4 and 3194-55-6 (134237-51-7, 134237-50-6, 134237-52-8))	mg/kg	参考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.
鹵素 / Halogen				
鹵素(氟)/ Halogen-Fluorine (F) (CAS No.: 14762-94-8)	mg/kg		50	n. d.
鹵素(氯)/ Halogen-Chlorine (C1) (CAS No.: 22537-15-1)	mg/kg	参考BS EN 14582: 2016,以離子層析儀 分析. / With reference to BS EN	50	n. d.
鹵素(溴)/ Halogen-Bromine (Br) (CAS No.: 10097-32-2)	mg/kg	14582: 2016. Analysis was performed by IC.	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	参考CEN/TS 15968: 2010,以液相層析/ 質譜儀檢測. / With reference to CEN/TS 15968: 2010. Analysis was	0.01	n. d.
全氟辛酸 / PFOA (CAS No.: 335-67-1)	mg/kg	performed by LC/MS.	0.01	n. d.
聚氯乙烯 / Polyvinyl chloride (PVC)	**	以紅外光譜分析及焰色法檢測. / Analysis was performed by FTIR and FLAME Test.	_	Negative
銻 / Antimony (Sb)	mg/kg	参考US EPA 3052: 1996,以感應耦合電 漿發射光譜儀檢測. / With reference to US EPA 3052: 1996. Analysis was performed by ICP-OES.	2	n. d.



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測試項目 (Test Items)	單位 (Unit)	測試方法 (Method)	MDL	結果 (Result) No.1
鈹 / Beryllium (Be)	mg/kg	參考US EPA 3052: 1996,以感應耦合電 漿發射光譜儀檢測. / With reference to US EPA 3052: 1996. Analysis was performed by ICP-OES.	2	n. d.
多氯聯苯 / Polychlorinated Biphenyls (PCBs) (CAS No.: 1336-36-3)	mg/kg	參考US EPA 3550C: 2007,以氣相層析/	0. 5	n. d.
多氯奈 / Polychlorinated Naphthalene (PCNs)	mg/kg	質譜儀檢測. / With reference to US EPA 3550C: 2007. Analysis was	5	n. d.
多氯三聯苯 / Polychlorinated Terphenyls (PCTs)	mg/kg	performed by GC/MS.	0. 5	n. d.
短鏈氯化石蠟 / Alkanes, C10-13, chloro (Short Chain Chlorinated Paraffins) (CAS No.: 85535-84-8)	mg/kg	參考US EPA 3550C: 2007,以氣相層析/ 質譜儀檢測. / With reference to US EPA 3550C: 2007. Analysis was performed by GC/MS.	100	n. d.
三丁基錫 / Tributyl Tin (TBT)	mg/kg	参考ISO 17353: 2004,以氣相層析儀/火	0.03	n. d.
三苯基錫 / Triphenyl Tin (TphT)	mg/kg	焰光度偵測器檢測. / With reference to ISO 17353: 2004. Analysis was	0.03	n. d.
二丁基錫 / Dibutyl Tin (DBT)	mg/kg		0.03	n. d.
二辛基錫 / Dioctyl Tin (DOT)	mg/kg	performed by GC/FPD.	0.03	n. d.
氧化雙三丁基錫 / Bis(tributyltin)oxide (TBTO) (CAS No.: 56-35-9)	mg/kg	參考ISO 17353: 2004,以氣相層析儀/火焰光度偵測器檢測;由三丁基錫測試結果計算得之. / With reference to ISO 17353: 2004. Analysis was performed by GC/FPD. Calculated from the result of Tributyl Tin (TBT).	0.03 (▲)	n. d.
磷 / Phosphorus (P)	mg/kg	參考US EPA 3052: 1996,以感應耦合電 漿發射光譜儀檢測. / With reference to US EPA 3052: 1996. Analysis was performed by ICP-OES.	2	n. d.



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#### 備註(Note):

- 1. mg/kg = ppm ; 0.1wt% = 1000ppm
- 2. MDL = Method Detection Limit (方法偵測極限值)
- 3. n.d. = Not Detected (未檢出)
- 4. "-" = Not Regulated (無規格值)
- 5. \*\*= Qualitative analysis (No Unit) 定性分析(無單位)
- 6. Negative = Undetectable 陰性(未負測到); Positive = Detectable 陽性(已負測到)
- 7. (▲): MDL是針對元素/測試化合物之評估. / The MDL was evaluated for element / tested substance.

換算公式 (Conversion Formula): AX = A × F

AX	A	F
氧化雙三丁基錫 / Bis(tributyltin)oxide (TBTO)	三丁基錫 / Tributyl Tin (TBT)	1.024

參數換算表 / Parameter Conversion Table: https://twap.sgs.com/sgsrsts/chn/download-REACH\_tw.asp

8. 樣品的測試是基於申請人要求混合測試,報告中的混合測試結果不代表其中個別單一材質的含量. (The samples was/were analyzed on behalf of the applicant as mixing sample in one testing. The above results was/were only given as the informality value.)

#### PFOS参考資訊(Reference Information): 持久性有機污染物 POPs - (EU) 2019/1021

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 $1\mu g/m^2$ 。

(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  $1\mu g/m^2$ .)



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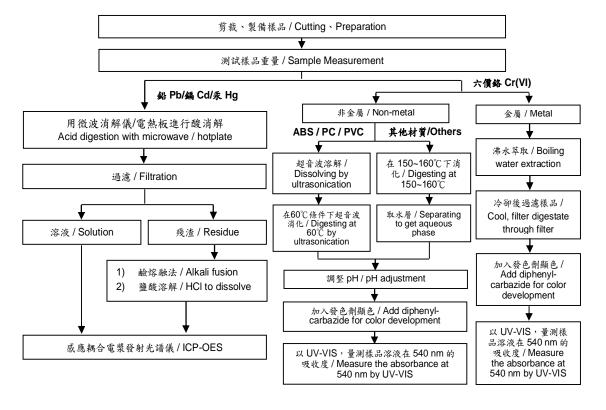
#### 重金屬流程圖 / Analytical flow chart of Heavy Metal

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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)





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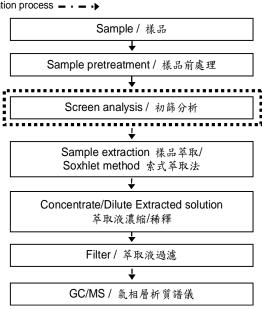
#### 多溴聯苯/多溴聯苯醚分析流程圖 / Analytical flow chart - PBB/PBDE

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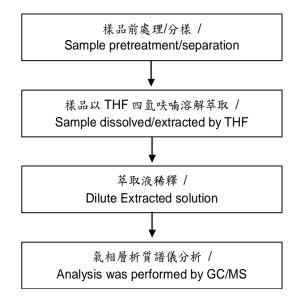
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#### 可塑劑分析流程圖 / Analytical flow chart - Phthalate

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【測試方法/Test method: IEC 62321-8】





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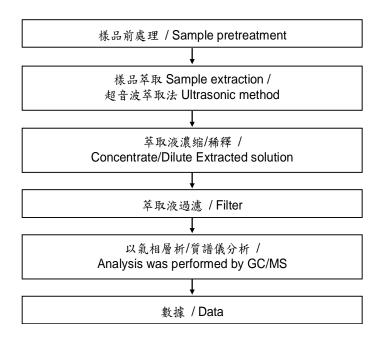
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#### 六溴環十二烷分析流程圖 / Analytical flow chart - HBCDD

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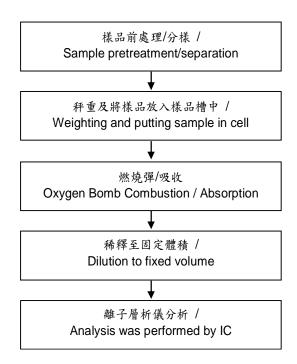
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#### 鹵素分析流程圖 / Analytical flow chart - Halogen

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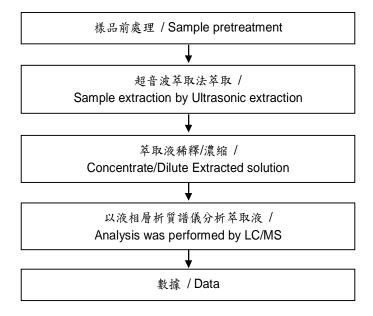
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#### 全氟辛酸/全氟辛烷磺酸分析流程圖 / Analytical flow chart - PFOA/PFOS

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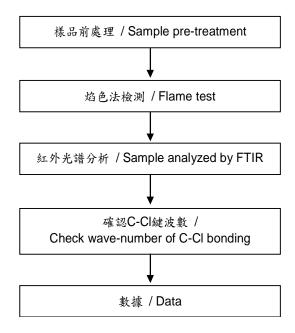


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#### 聚氯乙烯物質判定分析流程圖 / Analysis flow chart - PVC

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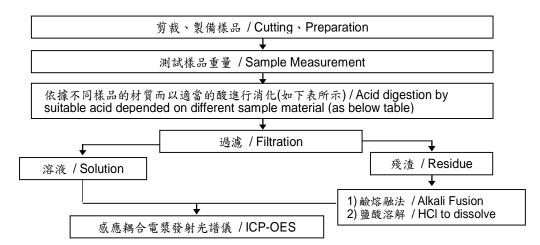
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#### 元素以 ICP-OES 分析的消化流程圖 (Flow Chart of digestion for the elements analysis performed by ICP-OES)

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.



鋼,銅,鋁,焊錫 / Steel, copper, aluminum, solder	王水,硝酸,鹽酸,氫氟酸,雙氧水 /
	Aqua regia, HNO <sub>3</sub> , HCI, HF, H <sub>2</sub> O <sub>2</sub>
玻璃 / Glass	硝酸,氫氟酸 / HNO <sub>3</sub> /HF
金,鉑,鈀,陶瓷 / Gold, platinum, palladium, ceramic	王水 / Aqua regia
銀 / Silver	硝酸 / HNO <sub>3</sub>
塑膠 / Plastic	硫酸,雙氧水,硝酸,鹽酸 / H <sub>2</sub> SO <sub>4</sub> , H <sub>2</sub> O <sub>2</sub> , HNO <sub>3</sub> , 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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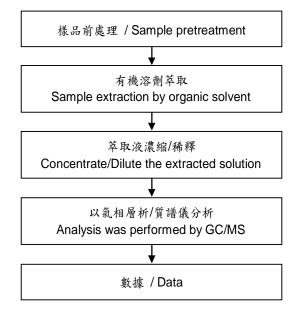
#### 分析流程圖 / Analytical flow chart

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【適用於:多氣聯苯、多氣奈、多氣三聯苯、滅蟻靈、氣化石蠟、DBBT】

\*Apply to: PCBs, PCNs, PCTs, Mirex, Chlorinated Paraffins, DBBT





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

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# 樣品前處理 / Sample pretreatment 有機溶劑萃取 / Sample extraction by organic solvent 四乙基硼化鈉衍生化 / Derived by Sodium tetraethylborate 萃取液濃縮/稀釋 / Concentrate/Dilute Extracted solution 氣相層析/火焰光度計分析 / Analysis was performed by GC/FPD 數據 / Data



# **Test Report**

喬越實業股份有限公司 SIL-MORE INDUSTRIAL LTD. 新北市三重區與德路100號16樓 16F, NO. 100, XINGDE RD., SANCHONG DISTRICT, NEW TAIPEI CITY 24158, TAIWAN

> \* 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) \*\*

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