

Katon[®]



**KATON[®] 氟橡膠 / 矽膠
包覆式 O-ring**

KATON® 包覆式系列

FKM/Silicone

KATON® 氟橡膠 / 矽膠包覆式 O-ring 由矽膠或是氟橡膠至於內部，外部由較薄的 PFA 或是 FEP 包覆而成，具有橡膠的彈性和密封性與鐵氟龍的耐化學性，FEP 與 PFA 的摩擦系數非常小而且具有有量的抗氣體滲透性；這些性能可用於耐高壓及惡劣的環境中：



KATON® 氟橡膠 / 矽膠包覆式 O-ring 基本特性包括：

- 幾乎適用於所有耐化學性的介質。
- 密封性能優良，使用壽命長。
- 符合環境衛生 FDA 要求。
- 低摩擦係數、耐磨性。
- 優良的耐腐蝕性能。
- 良好的抗壓性能。
- 溫度適用範圍廣。



外層材質：FEP 或 PFA 管

外層材質	FEP管特性	PFA管特性
密度	2.14 ~ 2.17	2.12 ~ 2.17
拉伸強度/Mpa	≥250	≥18.0
應變拉力	≥20%	≥20%
工作溫度	-60°C ~ +210°C	-60°C ~ +260°C

特性	包覆式矽膠	包覆式氟膠
顏色	紅	黑
內芯	具有更低的肖氏硬度和更大的彈性	更高的耐化學性和抗壓縮永久變形性
壓力範圍	1500psi	1500psi
工作溫度	-20°C ~ +220°C	-5°C ~ +220°C
動態密封	否	否
靜態密封	是	是

* 文件描述為產品特性而非規範。

管身吸收測試(absorption) , 168小時

	測試溫度	FEP膨脹率	PFA膨脹率
苯胺	185°C	0.3%~0.4%	0.3%~0.4%
苯乙酮	201°C	0.6%~0.8%	0.6%~0.8%
苯甲醛	179°C	0.5%~0.6%	0.5%~0.6%
溴	22°C	N.D	0.50%
氯	120°C	0.5%~0.6%	0.5%~0.6%
氯磺酸	150°C	0.7%~0.8%	0.7%~0.8%
50%鉻酸	120°C	N.D	N.D
二甲基亞砷	190°C	0.1%~0.2%	0.1%~0.2%
25%氯化鐵	100°C	N.D	N.D
氟利昂113	47°C	N.D	1.20%
37%鹽酸	120°C	N.D	N.D
異辛烷	99°C	0.7%~0.8%	0.7%~0.8%
硝基苯	210°C	0.7%~0.9%	0.7%~0.8%
全氯乙烯	121°C	2~2.2%	2~2.2%
磷酸	100°C	N.D	N.D
甲苯	110°C	0.7%~0.9%	0.7%~0.8%
磷酸三正丁酯	200°C	1.8%~2%	1.8%~2%
氯化鋅	100°C	N.D	N.D

"物質安全資料表 (MSDS)可以透過發送電子郵件或聯絡業務代表索取。在使用我們的產品之前，請務必查詢適當的物質安全資料表。Maxmold Specialty Polymers 或任何其分公司，皆未提供任何明示或默示保證，包括適銷性或適用性，且對於與此產品有關的資訊或其用途，概不負責。Maxmold 產品可能建議使用之部分應用項目，皆受適用法律與法規或國家或國際標準管理或約束，且部分 Maxmold 建議之情況，包括食物 / 飼料應用、水處理、醫療、製藥和個人照護。僅有屬於 Maxmold 生物材料系列之產品，可以視為可植入醫療器材的候選項目。最終，單獨使用者必須判斷任何資訊或產品之適合性、遵循適用法律、使用方式的任何預期用途，以及是否侵害任何專利。本資訊與產品僅限由具備技能之人員在自行承擔風險下決定使用，且與本產品結合任何其他物質或任何其他製程使用無關。此非依據任何專利或其他專利權之授權。



測試報告 Test Report

報告編號(No.): HTF23300623

報告日期(DATE): 2023/03/23

頁數(PAGE): 1 of 3

科頓聚合物股份有限公司 (MAXMOLD POLYMER CO., LTD.)

新竹市香山區中華路四段434巷18號 (NO.18, LN.434, SEC.4, ZHONGHUA RD., XIANGSHAN DIST., HSINCHU 30094, 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) :

送樣廠商(Sample Submitted By)	:	科頓聚合物股份有限公司 (MAXMOLD POLYMER CO., LTD.)
樣品名稱(Sample Description)	:	KATON ENCAPSULED O-RING (科頓 包覆式密封圈)
樣品型號(Style/Item No.)	:	KATON ENCAPSULED O-RING
樣品材質(Sample Material)	:	PFA 包覆式 (PFA ENCAPSULED)
生產或供應廠商(Manufacturer/Vendor)	:	科頓聚合物股份有限公司 (MAXMOLD POLYMER CO., LTD.)
原產國(Country Of Origin)	:	台灣 (TAIWAN)

收件日(Sample Receiving Date)	:	2023/03/14
測試期間(Testing Period)	:	2023/03/14 to 2023/03/23

測試需求 (Test Requested)

- (1) 客戶指定依據美國聯邦法規之藥物暨食品管理 (FDA) 21 CFR 177.1210 (使用條件A) 進行測試。測試項目請參閱測試結果表格。(As specified by client, the sample(s) was/were tested according to U.S. Food and Drug Administration (FDA) 21 CFR 177.1210 (Condition of use A). Please refer to the result table(s) for the testing item(s).)
- (2) 客戶指定依據美國聯邦法規之藥物暨食品管理 (FDA) 21 CFR 177.1210 (使用條件D) 進行測試。測試項目請參閱測試結果表格。(As specified by client, the sample(s) was/were tested according to U.S. Food and Drug Administration (FDA) 21 CFR 177.1210 (Condition of use D). Please refer to the result table(s) for the testing item(s).)

測試結果 (Test Results) : 請見下一頁。(Please refer to next page(s).)

Singh Hsiao
Singh Hsiao / Asst. Manager
Signed for and on behalf of
SGS TAIWAN LTD.
Chemical Laboratory - Taipei



This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com.tw/Terms-and-Conditions> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com.tw/Terms-and-Conditions>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Anyholder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of client's instruction, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced, except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.

SGS Taiwan Ltd. 台灣檢驗科技股份有限公司

新北市五股區新北產業園區五權七路 25 號 t+886 (02)2299 3939 f+886 (02)2299 3237
No. 25, Wu Chyuan 7th Road, New Taipei Industrial Park, Wu Ku District, New Taipei City, Taiwan

Member of the SGS Group



測試報告 Test Report

報告編號(No.): HTF23300623

報告日期(DATE): 2023/03/23

頁數(PAGE): 2 of 3

科頓聚合物股份有限公司 (MAXMOLD POLYMER CO., LTD.)

新竹市香山區中華路四段434巷18號 (NO.18, LN.434, SEC.4, ZHONGHUA RD., XIANGSHAN DIST., HSINCHU 30094, TAIWAN)

測試部位敘述(Test Part Description)

No.1 : 密封圈 (O-RING)

測試結果(Test Results)

(1)

通過(PASS)

測試項目 (Test Item(s))	測試方法 (Method)	單位 (Unit)	RL	結果 (Result)	限值 (Limit)
				No.1	
氯仿可萃取物 (水, 250°F, 2小時) / Net chloroform-soluble extractives (D.I. Water, 250°F, 2 h)	參考美國FDA 21 CFR 177.1210. / With reference to US FDA 21 CFR 177.1210.	ppm	5	n.d.	50
氯仿可萃取物 (正庚烷, 150°F, 2小時) / Net chloroform-soluble extractives (n-Heptane, 150°F, 2 h)	參考美國FDA 21 CFR 177.1210. / With reference to US FDA 21 CFR 177.1210.	ppm	5	n.d.	50

(2)

通過(PASS)

測試項目 (Test Item(s))	測試方法 (Method)	單位 (Unit)	RL	結果 (Result)	限值 (Limit)
				No.1	
氯仿可萃取物 (8% 乙醇, 150°F, 2小時) / Net chloroform-soluble extractives (8% Alcohol, 150°F, 2 h)	參考美國FDA 21 CFR 177.1210. / With reference to US FDA 21 CFR 177.1210.	ppm	5	n.d.	50

備註(Note) :

1. mg/kg = ppm ; 0.1% = 1000 ppm
2. RL = Reporting Limit (報告極限值)
3. n.d. = Not Detected (未檢出) = Less than (小於) RL
4. 本報告不得分離或擷錄使用。(The report is invalid if it is partly reproduced or used.)
5. 本實驗室之報告符合性聲明依ILAC-G8:09/2019簡單允收之二分法判定規則(w=0, AL=TL)做為測試結果符合性聲明判定之判定依據。(The decision rule of the statements of conformity is following the ILAC G8:09/2019 by using the simple acceptance decision rule.)

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com.tw/Terms-and-Conditions> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com.tw/Terms-and-Conditions>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Anyholder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of client's instruction, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced, except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.

SGS Taiwan Ltd. 台灣檢驗科技股份有限公司

新北市五股區新北產業園區五權七路 25 號 t+886 (02)2299 3939 f+886 (02)2299 3237

No. 25, Wu Chyuan 7th Road, New Taipei Industrial Park, Wu Ku District, New Taipei City, Taiwan

Member of the SGS Group

SGS

測試報告 Test Report

報告編號(No.): HTF23300623

報告日期(DATE): 2023/03/23

頁數(PAGE): 3 of 3

科頓聚合物股份有限公司 (MAXMOLD POLYMER CO., LTD.)

新竹市香山區中華路四段434巷18號 (NO.18, LN.434, SEC.4, ZHONGHUA RD., XIANGSHAN DIST., HSINCHU 30094, 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.)

HTF23300623



** 報告結尾 (End of Report) **

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com.tw/Terms-and-Conditions> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com.tw/Terms-and-Conditions>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Anyholder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of client's instruction, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced, except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.

SGS Taiwan Ltd. 台灣檢驗科技股份有限公司

新北市五股區新北產業園區五權七路 25 號 t+886 (02)2299 3939 f+886 (02)2299 3237

No. 25, Wu Chyuan 7th Road, New Taipei Industrial Park, Wu Ku District, New Taipei City, Taiwan

Member of the SGS Group