



G•APEX

HEAT SHRINK TUBING AND ACCESSORIES

G•APEX

G•APEX

台灣雲林應用材料股份有限公司

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Taiwan Yun Lin Applied Materials Co., Ltd.



企業簡介 Company Profile

For over 20 years, G-APEX has been focused on research and development the new materials and products in the fields of heat shrink, cold shrink tubing, and tapes. To solve the requirement of quality, safety, cost reduction, and services for the market. Providing solutions of electrical insulation and sealing protection applications for different industries.

Production: 50 million meters of monthly production capabilities of heat shrinkable tubing, the strongest product supplying abilities.

Technology: 21 patents and professional R&D team.

Certification: ISO9001、UL、ROHS、REACH、ISO10993、ISO14001、IATF16949, providing a reliable quality guarantee.

Services: Mass storage of products and our service staff in Taiwan, Japan, Thailand, Vietnam, and China, providing the fastest ship out and instant services.

Under our team structure, we're confident to fulfill all your inquiries.

G-APEX 20年來長期致力在熱縮套管、冷縮套管、膠帶領域研究開發新材料及產品，解決市場對品質、安全性、成本降低及服務的需求，提供了不同行業電氣絕緣及密封保護應用解決方案。

生產：熱縮套管月產能5千萬米，提供強大的供貨能力。

技術：21項專利技術及專業的工程研發團隊。

認證：ISO9001、UL、ROHS、REACH、ISO10993、ISO14001、IATF16949提供可靠的品質保證。

服務：台灣、日本、泰國、越南、中國各地提供大量產品庫存倉儲及服務人員，提供最快速的發貨及服務。在整體的團隊架構下，我們很自信可以完成對您的需求所託。



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- G5-3X** 高收縮倍率熱縮套管
High shrink ratio heat shrink tubing
- G5-135** 135°C 阻燃型熱縮套管
135°C Flame retardant heat shrink tubing
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- GA** 耐磨型PE熱縮套管
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- YLPET** PET熱縮套管
PET heat shrink tubing
- DR** 150°C 耐油熱縮套管
150° Diesel resistant elastomeric heat shrinkable tubing

含膠型熱縮套管 ADHESIVE-LINED HEAT SHRINK TUBING

- AIS** 雙壁含膠型熱縮套管
Dual wall heat shrink tubing
- AIS-ES** 車用線束含膠熱縮套管
Adhesive heat shrinkable tubing for automotive
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- AOS** 柔軟型中壁含膠熱縮套管
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- HTK150** 柔軟型PVDF熱縮套管
Flexible PVDF heat shrinkable tubing
- KYNAR** 半硬型PVDF熱縮套管
Semi-rigid PVDF heat shrinkable tubing
- VITON** 氟橡膠熱縮套管
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200°C FEP heat shrinkable tubing
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260°C PTFE heat shrinkable tubing
- PFA** 260°C PFA熱縮套管
260°C PFA heat shrinkable tubing

醫療等級熱縮套管 MEDICAL-GRADE HEAT SHRINKABLE TUBING

- MTA** 醫療級半硬質PVDF熱縮套管
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- MTC** 醫療級柔軟型PVDF熱縮套管
Medical grade flexible PVDF heat shrinkable tubing
- MTE** 醫療級LDPE熱縮套管
Medical grade LDPE heat shrinkable tubing
- MTF** 醫療級高柔軟性熱縮套管
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- DNC** 硅矽橡膠雙層冷縮套管
Dual layer cold shrink silicone rubber sleeve
- ANC** 硅矽橡膠冷縮套管
Cold shrink silicone rubber sleeve
- GNC** 硅矽橡膠冷縮套管
Cold shrink silicone rubber sleeve
- NS7** 硅矽橡膠握把冷縮套管
Cold shrink silicone rubber sleeve for handle
- EEC** EPDM橡膠冷縮封帽
Cold shrink EPDM rubber end cap
- ENC** EPDM 橡膠冷縮套管
Cold shrink EPDM rubber sleeve

編織網管 BRAIDED SLEEVING

- BS5000** 編織熱縮套管
Fabric heat shrinkable tubing
- BS1000** PET 半剛性捲式編織管
PET semi-rigid wrappable split braided sleeving
- BS3000** 汽車線束用捲式編織管
Wrap around braided sleeving for automotive wire assembly
- BSPET** PET 編織擴充管
PET expandable braided sleeving

電線連接用熱縮套管 ELECTRICAL INTERCONNECT HEAT SHRINKABLE TUBING

- GAST-R** 125°C 防水焊錫環熱縮中接管
125°C Solder sleeve wire splices
- GAST-B** 125°C 防水焊錫環熱縮中接管
125°C Solder sleeve wire splices
- GAST-RS** 125°C 防水焊錫環熱縮中接管
125°C Solder sleeve wire splices
- CRIMP** 防水熱縮中接管
Waterproof heat shrinkable crimp splices
- GAST-E** 防水焊錫環熱縮封帽
Solder grip closed end connector splices

高壓絕緣熱縮套管 HIGH VOLTAGE INSULATION HEAT SHRINK TUBING

- HB1** 高壓母排熱縮套管 (耐壓3.6kV)
Busbar insulating heat shrink tubing (Withstand voltage up to 3.6kV)
- HB2** 高壓母排熱縮套管 (耐壓24kV)
Busbar insulating heat shrink tubing (Withstand voltage up to 24kV)
- HB3** 高壓母排熱縮套管 (耐壓36kV)
Busbar insulating heat shrink tubing (Withstand voltage up to 36kV)

熱縮模塑套件 MOULDED SHAPES

- BOOT** 模縮套
Molded parts
- AEC** 電纜防水熱縮封帽
Heat shrinkable cable end cap

光纖用熱縮套管 FIBER OPTICAL HEAT SHRINKABLE TUBING

- ADW** 光纖接續盒專用防水熱縮套管
Heat shrinkable tubing for fiber optic splice closure
- FOSP** 光纖保護套管
Heat shrinkable fiber optic splice protector
- FOSP-K** 高溫光纖保護套管
High-temperature optical fiber protection sleeve

膠帶 TAPE

- WT800** 自融性防水膠帶
Rubber mastic tape
- WT200** 自融性防水膠帶
Rubber mastic tape
- WT300** 自融性絕緣填縫膠膏帶
Self-fusing insulation caulking mastic tape
- HBT** 耐電壓矽膠膠帶 (耐壓15~24kV)
High voltage silicone busbar insulation tape (Withstand voltage up to 15~24kV)

熱縮套管組合包 ASSORTMENT KIT

- K1-101** 熱縮套管組裝盒
Heat shrinkable tubing kit
- K1-102** 熱縮套管組裝盒
Heat shrinkable tubing kit
- K1-201** 熱縮套管組裝盒
Heat shrinkable tubing kit
- K1-301** 熱縮套管組裝盒
Heat shrinkable tubing kit
- K2-101** 熱縮套管組裝盒
Heat shrinkable tubing kit
- K2-102** 熱縮套管組裝盒
Heat shrinkable tubing kit
- K2-103** 熱縮套管組裝盒
Heat shrinkable tubing kit
- K4-101** 熱縮套管組裝盒
Heat shrinkable tubing kit
- K5-101** 熱縮套管組裝盒
Heat shrinkable tubing kit
- K6-101** 熱縮套管組裝盒
Heat shrinkable tubing kit
- K7-101** 熱縮套管組裝盒
Heat shrinkable tubing kit
- K7-201** 熱縮套管組裝盒
Heat shrinkable tubing kit
- B2** 熱縮套管捲式包 (紙盒)
Tube and sleeve - mini box
- R2** 熱縮套管圓形泡殼包裝
Tube and sleeve - blister pack
- GR** 熱縮套管捲式包裝
Heat shrinkable tubing pack - mini spool pack

號碼標識系統 MARKING SYSTEMS

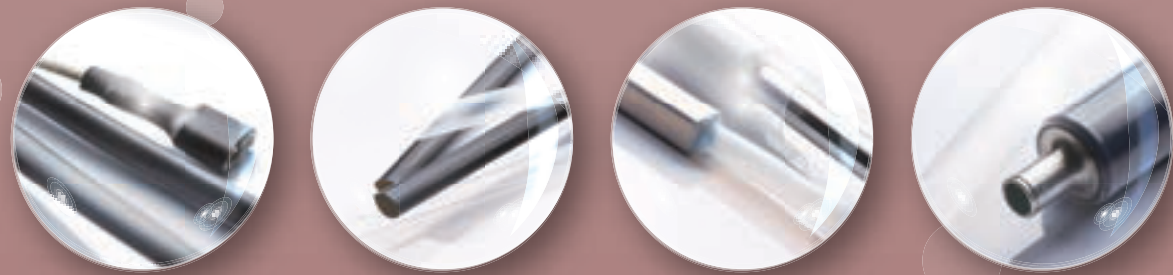
- 135°C TMS** 軌道式號碼標示印字熱縮套管
Heat shrink markers
- 125°C TMS** 軌道式號碼標示印字熱縮套管
Heat shrink markers
- 135°C CTMS** 捲式號碼標示印字熱縮套管
Heat shrink markers
- 125°C CTMS** 捲式號碼標示印字熱縮套管
Heat shrink markers
- MP** 貼紙簿
Pocket pack marker book
- MO** 號碼標誌器
Snap-on wire markers
- MH** PVC熱縮電線標示號碼圈
PVC Heat shrinkable wire marking number ring

工具 TOOL

- GHG** 微型熱風槍
Gas heat gun
- BSC** 熱裁切機
Hot knife device

HIGH TEMPERATURE RESISTANT HEAT SHRINK TUBING

耐高溫熱縮套管



HIGH TEMPERATURE RESISTANT HEAT SHRINK TUBING

HIGH TEMPERATURE RESISTANT HEAT SHRINK TUBING

HTK150

Flexible PVDF
heat shrinkable tubing
柔軟型PVDF熱縮套管



Product Dimensions
產品規格

應用 Applications

HTK150是以柔軟高透明度的聚偏二氟乙烯材質製作而成，具有良好的耐化學腐蝕性、耐高溫及耐候性，常被用來包覆耐高溫電子元件及電線接頭。柔軟及透明性方便應用在電線電纜的標識保護。

HTK150 is made of flexible and highly transparent polyvinylidene fluoride. It has excellent resistance to chemical corrosion, high temperatures and weather, and is often used to cover high temperature resistant electronic components and wire splices. The flexible and transparent characteristics make it convenient to apply to the protection of wire and cable markers.

操作溫度範圍 Operating temperature range

- Continuous operating temperature: -55°C~175°C
- Minimum shrink temperature: 125°C
- Full recovery temperature: Above 150°C
- 連續使用溫度：-55°C~175°C
- 最低收縮溫度：125°C
- 完全收縮溫度：150°C以上

特性 Characteristics

- 收縮率：2:1
- 優異的阻燃性能
- 柔軟、耐磨擦、耐溶劑
- Shrink ratio: 2:1
- Excellent flame retardance
- Flexible, abrasion resistant and solvent resistant

Approvals / Specifications 認證 / 規範

cULus UL224 File no. E255532

Technical Data

Property	Specification Requirement	Test Method	Typical Value
Tensile strength	≥17.3MPa	ASTM D2671	≥26MPa
Elongation at break	≥300%	ASTM D2671	≥300%
Heat shock	No cracking	ASTM D2671 (275°C/4 hrs)	No cracking
Dielectric voltage withstand	AC2500V/60S No breakdown	ASTM D2671	No breakdown
Volume resistivity	≥10 ¹¹ Ω · cm	ASTM D2671	≥10 ¹¹ Ω · cm
Copper corrosion	No corrosion	ASTM D2671	No corrosion
Flammability	VW-1	UL 224	Pass

Standard colors : black and clear
Other colors, special sizes, and cut pieces are available on request.

標準顏色：黑色、透明
其他顏色，其他尺寸，裁切，可依客戶需求另行訂製



HIGH TEMPERATURE RESISTANT HEAT SHRINK TUBING

KYNAR

**Semi-rigid PVDF
heat shrinkable tubing**
半硬型PVDF熱縮套管



Product Dimensions 產品規格

Part Number	Nominal Size 公稱尺寸		As supplied (mm) 收縮前	After recovered (mm) 收縮後		Standard Length (Meter)
產品型號	mm	inch	I.D.(min.) 內徑(最小)	I.D.(max) 內徑(最大)	W.T. 壁厚	標準長度(米)
KYNAR-0012	1.2	3/64	1.2	0.6	0.25±0.05	1.2
KYNAR-0016	1.6	1/16	1.6	0.8	0.25±0.05	1.2
KYNAR-0024	2.4	3/32	2.4	1.2	0.25±0.05	1.2
KYNAR-0032	3.2	1/8	3.2	1.6	0.25±0.05	1.2
KYNAR-0048	4.8	3/16	4.8	2.4	0.25±0.05	1.2
KYNAR-0064	6.4	1/4	6.4	3.2	0.30±0.08	1.2
KYNAR-0095	9.5	3/8	9.5	4.8	0.30±0.08	1.2
KYNAR-0127	12.7	1/2	12.7	6.4	0.30±0.08	1.2
KYNAR-0191	19.1	3/4	19.1	9.5	0.43±0.08	1.2
KYNAR-0254	25.4	1	25.4	12.7	0.48±0.10	1.2
KYNAR-0381	38.1	1 1/2	38.1	19.1	0.51±0.10	1.2

● 應用 Applications

特別適用於需要耐磨損及耐高溫要求的環境。KYNAR是以聚偏二氟乙烯材料製作而成，在摩擦性能方面有特別突出的表現，常被設計用於耐高溫、耐化學的環境以及車用控制導線的包覆。

It is especially suitable for environments that require abrasion and high temperature resistance. KYNAR is made of polyvinylidene fluoride and has particularly outstanding performance on friction properties. It is often designed for high temperature and chemical resistant environments and for the covering of automotive control wires.

● 特性 Characteristics

- 收縮率：2:1
- 優異的阻燃性能
- 耐高溫
- 堅硬、薄壁、絕緣、耐磨擦、耐溶劑
- Shrink ratio: 2:1
- Excellent flame retardance
- High temperature resistance
- Toughness, thin wall, insulation, abrasion and solvent resistance

Approvals / Specifications 認證 / 規範

UL224 File no.E329575

● 操作溫度範圍 Operating temperature range

- Continuous operating temperature: -55°C~175°C
- Minimum shrink temperature: 155°C
- Full recovery temperature: Above 175°C
- 連續使用溫度：-55°C~175°C
- 最低收縮溫度：155°C
- 完全收縮溫度：175°C以上

Technical Data

Property	Specification Requirement	Test Method	Typical Value
Tensile strength	≥24.3MPa	ASTM D2671	≥30MPa
Elongation at break	≥200%	ASTM D2671	≥300%
Heat shock	No cracking	ASTM D2671 (275°C/4 hrs)	No cracking
Low temperature flexibility	No cracking	ASTM D2671 (-55°C/4 hrs)	No cracking
Dielectric voltage withstand	AC2500V/60S No breakdown	ASTM D2671	No breakdown
Volume resistivity	≥10 ¹¹ Ω · cm	ASTM D2671	≥10 ¹³ Ω · cm
Copper corrosion	No corrosion	ASTM D2671	No corrosion
Flammability	VW-1	UL 224	Pass

Standard colors : black and clear
Other colors, special sizes, and cut pieces are available on request.

標準顏色：黑色、透明
其他顏色，其他尺寸，裁切，可依客戶需求另行訂製
● ©

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※KYNAR是Arkema公司的商標

HIGH TEMPERATURE RESISTANT HEAT SHRINK TUBING

VITON

Fluoroelastomer heat shrinkable tubing

氟橡膠熱縮套管



Product Dimensions
產品規格

● 應用 Applications

VITON是由交聯氟橡膠製造而成，可以在高低溫及惡劣的化學環境下提供最佳性能和可靠的保護，而且保持柔軟的彈性狀態，常被使用在化學、航空及汽車行業的線束保護。

VITON is made of cross-linked fluoroelastomer. It provides optimum performance and reliable protection in high and low temperature and harsh chemical environments, while maintaining a flexible elastic state. It is often used for the wire harness protection in chemical, aviation and automotive industries.

● 特性 Characteristics

- 收縮率：2:1
- 優異的阻燃性能
- 優異的化學抵抗性能
- 在高溫與低溫環境中可保持其柔軟性，不會破裂
- Shrink ratio: 2:1
- Excellent flame retardance
- Excellent chemical resistance
- Flexibility at high and low temperatures without cracking

● 操作溫度範圍 Operating temperature range

- Continuous operating temperature: -55°C~200°C
- Minimum shrink temperature: 150°C
- Full recovery temperature: Above 220°C
- 連續使用溫度：-55°C~200°C
- 最低收縮溫度：150°C
- 完全收縮溫度：220°C以上

Part Number	Nominal Size 公稱尺寸		As supplied (mm) 收縮前	After recovered (mm) 收縮後		Standard Length (Meter)
產品型號	mm	inch	I.D.(min.) 內徑(最小)	I.D.(max) 內徑(最大)	W.T. 壁厚	標準長度(米)
VITON0024	2.4	3/32	2.4	1.2	0.50±0.10	200
VITON0032	3.2	1/8	3.2	1.6	0.76±0.13	100
VITON0048	4.8	3/16	4.8	2.4	0.89±0.18	100
VITON0064	6.4	1/4	6.4	3.2	0.89±0.18	50
VITON0095	9.5	3/8	9.5	4.8	0.89±0.18	50
VITON0127	12.7	1/2	12.7	6.4	0.89±0.18	50
VITON0191	19.1	3/4	19.1	9.5	1.07±0.21	30
VITON0254	25.4	1	25.4	12.7	1.25±0.30	30
VITON0381	38.1	1 1/2	38.1	19.0	1.40±0.38	30
VITON0508	50.8	2	50.8	25.4	1.65±0.43	25

Technical Data

Property	Specification Requirement	Test Method	Typical Value
Tensile strength	≥8.2MPa	ASTM D2671	≥10.3MPa
Elongation at break	≥250%	ASTM D2671	≥400%
Elongation at break after aging	≥200%	ASTM D2671	≥300%
Heat shock	No cracking	ASTM D2671 (300°C/4 hrs)	No cracking
Low temperature flexibility	No cracking	ASTM D2671 (-55°C/4 hrs)	No cracking
Dielectric voltage withstand	AC2500V/60S No breakdown	ASTM D2671	No breakdown
Dielectric strength	≥7.9kV/mm	ASTM D2671	≥12kV/mm
Volume resistivity	≥10 ⁹ Ω · cm	ASTM D2671	≥10 ⁹ Ω · cm
Copper corrosion	No corrosion	ASTM D2671 (158°C/168 hrs)	No corrosion
Flammability	Self extinguishing within 15S after fire source removed.	UL 224	Pass
Fluid resistance (23° C/24 hrs)			
Tensile strength	≥8.2MPa	ASTM D2671	≥12MPa
Elongation at break	≥250%	ASTM D2671	≥400%

Standard color : black
Other colors, special sizes, and cut pieces are available on request.

標準顏色：黑色
其他顏色，其他尺寸，裁切，可依客戶需求另行訂製

※VITON is a trademark of E. I. Du Pont De Nemours and Company
※VITON是杜邦公司的商標

HIGH TEMPERATURE RESISTANT HEAT SHRINK TUBING



200°C FEP heat shrinkable tubing
200°C FEP熱縮套管

●應 用 Applications

以氟化乙烯丙烯製成的FEP熱縮管，有極佳的耐磨擦、耐化學和耐高溫性能，材料的低摩擦係數及不沾黏特性很適合用於包覆傳動滾輪。FEP材料強度及抗UV特性則常被應用於螢光燈管和UV燈管的包覆。

The FEP heat shrinkable tubing made of fluorinated ethylene propylene has excellent abrasion, chemical and high temperature resistance. Low coefficient of friction and non-stick characteristics of the material make it very suitable for the covering of drive rollers. FEP’s material strength and UV resistance are often applied to the covering of fluorescent tubes and UV tubes.

●操作溫度範圍

Operating temperature range

- Continuous operating temperature: -65°C~200°C
- Minimum shrink temperature: 60°C
- Full recovery temperature: Above 120°C
- Temperatures for product preservation: Below 50°C

- 連續使用溫度：-65°C~200°C
- 最低收縮溫度：60°C
- 完全收縮溫度：120°C以上
- 產品保存溫度：50°C以下

●特 性 Characteristics

- 收縮率：1.25:1
- 優異的阻燃性能
- 優異的耐化學、耐摩擦性能
- 優異的絕緣性能
- 高透明度
- 摩擦係數：0.2~0.3
- Shrink ratio: 1.25:1
- Excellent flame retardance
- Superior chemical and abrasion resistance
- Ideal insulation property
- High transparency
- Coefficient of friction: 0.2~0.3



Product Dimensions
產品規格

Part Number	As supplied 收縮前 (mm)		After recovered 收縮後 (mm)		Standard Length (Meter)
產品型號	I.D. 內徑	W.T. (Nominal Size) 壁厚 (公稱尺寸)	I.D. (max) 內徑 (最大)	W.T. (Nominal Size) 壁厚 (公稱尺寸)	標準長度 (米)
Thick Type 厚型					
FEP0047	4.7±1	0.20	3.8	0.25	1
FEP0055	5.5±1	0.20	4.5	0.25	1
FEP0070	7±1.5	0.20	5.6	0.25	1
FEP0090	9±1.5	0.20	7.5	0.26	1
FEP0115	11.5±1.5	0.25	9.3	0.30	1
FEP0145	14.5±1.5	0.3	11.7	0.37	1
FEP0190	19±2	0.3	15.3	0.37	1
FEP0240	24±2	0.4	19.3	0.5	1
FEP0280	28±2	0.4	22.5	0.5	1
FEP0350	35±2	0.4	28.1	0.5	1
FEP0440	44±2.5	0.4	36.1	0.5	1
FEP0540	54±2.5	0.4	43.3	0.5	1
FEP0660	66±3	0.4	52.9	0.5	1
FEP0780	78±3	0.4	62.5	0.5	1
FEP0900	90±4	0.4	72.1	0.5	1
FEP1030	103±4	0.4	82.5	0.5	1
Thin Type 薄型					
FEPTW0070	7±1.5	0.15	5.6	0.20	1
FEPTW0090	9±1.5	0.15	7.5	0.20	1
FEPTW0115	11.5±1.5	0.2	9.3	0.26	1
FEPTW0145	14.5±1.5	0.2	11.7	0.26	1
FEPTW0165	16.5±1.5	0.2	13.2	0.26	1
FEPTW0190	19±2	0.2	15.3	0.26	1
FEPTW0240	24±2	0.2	19.3	0.26	1
FEPTW0280	28±2	0.2	22.5	0.26	1
FEPTW0350	35±2	0.2	28.1	0.26	1
FEPTW0440	44±2.5	0.2	36.1	0.3	1
FEPTW0540	54±2.5	0.2	43.3	0.3	1
FEPTW0660	66±3	0.3	52.9	0.4	1
FEPTW0780	78±3	0.3	62.5	0.4	1
FEP fluorescent lamp shatterproof sleeves 燈管保護FEP熱縮套管					
Part Number	Lamp Size	As supplied 收縮前 (mm)		After recovered 收縮後 (mm)	
產品型號	燈管尺寸	I.D.(min) 內徑(最小)	W.T 壁厚	I.D.(max) 內徑(最大)	
LFEP0165	T5 (15.5)	16.5	0.2±0.05	13.8	
LFEP0295	T8 (25.5)	29.5	0.2±0.05	24.0	
LFEP0340	T10 (32.5)	34.0	0.2±0.05	30.5	
LFEP0400	T12 (38.0)	40.0	0.2±0.05	36.5	

Technical Data

Property	Specification Requirement	Test Method	Typical Value
Longitudinal change	-5%~5%	ASTM D2671	Pass
Tensile strength	≥13.8MPa	ASTM D2671	≥20MPa
Elongation at break	≥150%	ASTM D2671	≥250%
Dielectric voltage withstand	AC2500V/60S No breakdown	ASTM D2671	No breakdown
Volume resistivity	≥10 ¹⁵ Ω · cm	ASTM D2671	≥10 ¹⁶ Ω · cm
Copper corrosion	No corrosion	ASTM D2671 (158°C/168 hrs)	No corrosion
Flammability	VW-1	UL 224	Pass

Standard color : clear
Special sizes and cut pieces are available on request.

標準顏色：透明
其他尺寸，裁切，可依客戶需求另行訂製
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HIGH TEMPERATURE RESISTANT HEAT SHRINK TUBING

PTFE

260°C PTFE heat shrinkable tubing
260°C PTFE熱縮套管



Product Dimensions
產品規格

● 應用 Applications

PTFE熱縮管是以聚四氟乙烯材料製成，在塑料類具有最低的摩擦係數和極佳的耐腐蝕性能，在耐高低溫能力上有非常好的表現，PTFE優異的電氣、物理、化學性能可以應用在各種嚴格環境領域。

PTFE heat shrinkable tubing is made of polytetrafluoroethylene, which has the lowest friction coefficient and excellent corrosion resistance in plastics, and performs very well in high and low temperature resistance. The excellent electrical, physical and chemical properties of PTFE can be applied to a variety of strict environmental fields.

● 操作溫度範圍 Operating temperature range

- Continuous operating temperature: -65°C~260°C
- Full recovery temperature: Above 300°C
- 連續使用溫度：-65°C~260°C
- 完全收縮溫度：300°C以上

● 特性 Characteristics

- 收縮率：1.6:1 或 4:1
- 優異的阻燃性能
- 優異的化學抵抗性能
- 優異的絕緣性能
- 優異的抗摩擦性能
- 摩擦係數：0.1
- Shrink ratio: 1.6:1 or 4:1
- Excellent flame retardance
- Superior chemical resistance
- Ideal insulation property
- Excellent abrasion resistance
- Coefficient of friction: 0.1

Part Number	As supplied 收縮前 (mm)	After recovered 收縮後 (mm)		Standard Length (Meter)
產品型號	I.D. (min) 內徑 (最小)	I.D. (max) 內徑 (最大)	W.T. (min) 壁厚 (最小)	標準長度 (米)
1.6:1 Shrink ratio 收縮率 (Thick Type厚型)				
PTFE0023	2.36	1.60	0.30	1.22
PTFE0030	3.05	2.00	0.30	1.22
PTFE0038	3.81	2.40	0.30	1.22
PTFE0048	4.85	3.00	0.30	1.22
PTFE0061	6.10	3.60	0.38	1.22
PTFE0076	7.67	4.60	0.38	1.22
PTFE0094	9.40	5.60	0.38	1.22
PTFE0109	10.92	7.00	0.38	1.22
PTFE0119	11.94	8.70	0.38	1.22
1.6:1 Shrink ratio 收縮率 (Thin Type薄型)				
PTFETW0005	0.5	0.38	0.10	200
PTFETW0010	1.0	0.70	0.10	200
PTFETW0015	1.5	0.90	0.10	200
PTFETW0020	2.0	1.30	0.10	200
PTFETW0025	2.5	1.60	0.10	100
PTFETW0030	3.0	1.90	0.13	100
PTFETW0040	4.0	2.45	0.15	100
PTFETW0050	5.0	3.00	0.15	100
PTFETW0065	6.5	4.20	0.15	100
PTFETW0075	7.5	4.60	0.15	100
PTFETW0090	9.0	5.60	0.18	100
PTFETW0110	11.0	6.90	0.18	100
PTFETW0120	12.0	7.50	0.18	100
PTFETW0140	14.0	8.50	0.18	100
PTFETW0160	16.0	10.50	0.18	100
4:1 Shrink ratio 收縮率				
Part Number	As supplied 收縮前 (mm)	After recovered 收縮後 (mm)		Standard Length (Meter)
產品型號	I.D. (min) 內徑 (最小)	I.D. (max) 內徑 (最大)	W.T. (min) 壁厚 (最小)	標準長度 (米)
PTFE4X0020	2.0	0.50	0.20	200
PTFE4X0025	2.5	0.60	0.20	200
PTFE4X0035	3.5	0.80	0.25	100
PTFE4X0045	4.5	1.10	0.25	100
PTFE4X0060	6.0	1.50	0.25	1.22
PTFE4X0080	8.0	2.20	0.25	1.22
PTFE4X0095	9.5	2.40	0.25	1.22

Technical Data

Property	Specification Requirement	Test Method	Typical Value
Tensile strength	≥17.3MPa	ASTM D2671	≥22MPa
Elongation at break	≥200%	ASTM D2671	≥300%
Heat shock	No cracking	ASTM D2671 (260°C/4 hrs)	No cracking
Low temperature flexibility	No cracking	ASTM D2671 (-65°C/4 hrs)	No cracking
Volume resistivity	≥10 ¹⁵ Ω · cm	ASTM D2671	≥10 ¹⁵ Ω · cm
Dielectric strength	≥34kV/mm	ASTM D2671	34kV/mm
Copper corrosion	No corrosion	ASTM D2671 (158°C/168 hrs)	No corrosion
Flammability	VW-1	UL 224	Pass

Standard color : clear (Special sizes and cut pieces are available on request.)
標準顏色：透明（其他尺寸，裁切，可依客戶需求另行訂製）

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HIGH TEMPERATURE RESISTANT HEAT SHRINK TUBING

PFA

260°C PFA heat shrinkable tubing
260°C PFA熱縮套管



Product Dimensions
產品規格

應用 Applications

PFA熱縮管是以可溶性聚四氟乙烯材料製成。相同FEP產品的低摩擦係數、耐化學及不沾黏性，但比FEP具有更高的耐熱性能，可在260°C的溫度下連續使用，PFA幾乎對所有的化學物質具有耐腐蝕性，適合使用在高溫環境下的防沾黏和耐化學應用。

PFA heat shrinkable tubing is made of soluble polytetrafluoroethylene. It has the same low coefficient of friction, chemical resistance and non-stick properties as FEP products, but a higher heat resistance than FEP, allowing it to be used continuously at 260°C. PFA is almost corrosion resistant to all chemical substances and is suitable for anti-stick and chemical resistant applications in high temperature environments.

操作溫度範圍 Operating temperature range

- Continuous operating temperature: -65°C~260°C
- Full recovery temperature: Above 260°C
- 連續使用溫度：-65°C~260°C
- 完全收縮溫度：260°C以上

特性 Characteristics

- 收縮率：1.25:1
- 優異的阻燃性能
- 優異的抗化學、抗摩擦性能
- 優異的絕緣性能
- 高透明度
- 摩擦係數：0.1~0.2
- Shrink ratio: 1.25:1
- Excellent flame retardance
- Superior chemical and abrasion resistance
- Ideal insulation property
- High transparency
- Coefficient of friction: 0.1~0.2

Part Number	As supplied 收縮前 (mm)		After recovered 收縮後 (mm)		Standard Length (Meter)
產品型號	I.D. 內徑	W.T. (Nominal Size) 壁厚 (公稱尺寸)	I.D. (max) 內徑 (最大)	W.T. (Nominal Size) 壁厚 (公稱尺寸)	標準長度 (米)
Thick Type 厚型					
PFA0070	7±1.5	0.15	5.7	0.17	1
PFA0090	9±1.5	0.15	7.5	0.17	1
PFA0115	11.5±1.5	0.27	9.3	0.32	1
PFA0145	14.5±1.5	0.27	11.7	0.32	1
PFA0165	16.5±1.5	0.27	13.2	0.32	1
PFA0190	19±2	0.27	15.3	0.32	1
PFA0240	24±2	0.35	19.3	0.40	1
PFA0280	28±2	0.35	22.5	0.40	1
PFA0350	35±2	0.35	28.1	0.40	1
PFA0440	44±2.5	0.35	36.1	0.40	1
PFA0540	54±2.5	0.35	43.3	0.40	1
PFA0660	66±3	0.35	52.9	0.40	1
PFA0780	78±3	0.37	62.5	0.40	1
PFA0900	90±4	0.37	72.1	0.40	1
PFA1030	103±4	0.37	82.5	0.40	1
Thin Type 薄型					
PFATW0115	11.5±1.5	0.17	9.3	0.20	1
PFATW0145	14.5±1.5	0.17	11.7	0.20	1
PFATW0165	16.5±1.5	0.17	13.2	0.20	1
PFATW0190	19±2	0.17	15.3	0.20	1
PFATW0240	24±2	0.17	19.3	0.20	1
PFATW0280	28±2	0.17	22.5	0.20	1
PFATW0350	35±2	0.17	28.1	0.20	1
PFATW0440	44±2.5	0.17	36.1	0.20	1
PFATW0540	54±2.5	0.17	43.3	0.20	1
PFATW0660	66±3	0.27	52.9	0.30	1
PFATW0780	78±3	0.27	62.5	0.30	1

Technical Data

Property	Specification Requirement	Test Method	Typical Value
Longitudinal change	-8%~8%	ASTM D2671	Pass
Tensile strength	≥17.3MPa	ASTM D2671	≥25MPa
Elongation at break	≥150%	ASTM D2671	≥300%
Dielectric voltage withstand	AC2500V/60S No breakdown	ASTM D2671	No breakdown
Volume resistivity	≥10 ¹⁵ Ω · cm	ASTM D2671	≥10 ¹⁶ Ω · cm
Copper Corrosion	No corrosion	ASTM D2671 (158°C/168 hrs)	No corrosion
Flammability	VW-1	UL 224	Pass

Standard color : clear
Special sizes and cut pieces are available on request.

標準顏色：透明
其他尺寸，裁切，可依客戶需求另行訂製
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Cross Reference Number For G-APEX Heat Shrinkable Tubing

	Raychem	SUMITUBE	DSG-Canusa	LG	3M	Alpha
G1	CGPE-105	C	CPX 51	GSHS-1605		
G5	VERSAFIT V2	F32. F2Z	CPX 876	GSHS-1625	CP-221	FIT221V
G5-CB	VERSAFIT V4	F34. F4Z	DERAY ITW	GSHS-1625T		
GA		A				
G5-135	RNF-100	A2. B2	CPX-100	GSHS-1635F	FP-301	FIT221
G5-YG	DCPT 2:1	B2(YG)	CPX 201	GSHS-1635F-YG	GYS	FIT260
G5135-3X	RNF-3000	B2(3X)	CPX 300	GSHS-3635	SFTW-203	FIT321V
AIS	ATUM. DWP-125	W3B2. W3F2	CPA 300	GSHS-3635W	EPS-300	FIT321
AIS-ES	ES-2000	SA2F	SPLICEMELT125	GSHS-4635WS	EPS-4000	FIT421
ACS200	RBK-ILS125					
ATM	MWTM. SST-M	SCD. SCM2	CFM	PMWT	MDT. IMCSN	
ASM-6X	HRHT	SCH	CFHR			FIT621
ANF		IRRAX SCM2			IMCS	
ASM	WCSM.SST		CFW/RHW	PHWT	ITCSN	FIT700
ABS		W3D		GSHS-1625BS		
DR	DR-25	R120	DERAY V25	DRET	PSTH	FIT601
HTK150	RT-375	K2	KYF190	GSHS-1650F	MFP	
KYNAR	RW-175. KYNAR	K	KY175	GSHS-1675	KYNAR	FIT350
VITON	VITON. RW200	FE3. KH200	VT220		VTN200	FIT650
FEP	FEP	FEP			FEP	FIT400
PTFE	TFE	TFE	CTFE250		TFE	FIT500
MTA	MT1000					
MT2/MTE	MT2000					
MTC	MT3000					
MTF	MT-5000/MT5500					
TMS	TMS-SCE					FIT-PRINT
CTMS	TTMS					
HB1	LVIT			LG-BBLV		
HB2	BPTM	SBI300	CBTM	LG-BBHV	BBI	
HB3	BBIT	SBI350	CBTH	LG-BBHT	BBI	
AEC	SSC. ESC		CCAP		ICEC. SKE	FITCAP
AECM	ES CAPS	SA3 CAP	SPLICEMELT CAP 125			
BOOT	Molded parts					BOOTS

Cross Reference Number For G-APEX Heat Shrinkable Tubing

[illegible]

METRIC/INCH CONVERSION CHART

Inches英吋	mm公釐	Inches英吋	mm公釐
1/64	0.40	1/2	12.70
1/32	0.79	33/64	13.10
3/64	1.19	17/32	13.49
1/16	1.59	35/64	13.89
5/64	1.98	9/16	14.29
3/32	2.38	37/64	14.68
7/64	2.78	19/32	15.08
1/8	3.18	39/64	15.48
9/64	3.57	5/8	15.88
5/32	3.97	41/64	16.27
11/64	4.37	21/32	16.67
3/16	4.76	11/16	17.46
13/64	5.16	23/32	18.26
7/32	5.56	3/4	19.05
15/64	5.95	25/32	19.84
1/4	6.35	13/16	20.64
17/64	6.75	7/8	22.23
9/32	7.14	29/32	23.02
19/64	7.54	15/16	23.81
5/16	7.94	61/64	24.21
21/64	8.33	31/32	24.61
11/32	8.73	63/64	25.00
23/64	9.13	1	25.40
3/8	9.53	1-1/4	32.00
25/64	9.92	1-1/2	38.10
13/32	10.32	1-3/4	44.50
27/64	10.72	2	50.80
7/16	11.11	2-1/2	63.50
29/64	11.51	3	76.20
15/32	11.91	3-1/2	88.90
31/64	12.30	4	101.60

Notes