

3M™ Heat Shrink Tubing MFP

Modified Polyvinylidene Fluoride

Data Sheet

September 2013

Description	3M™ Heat Shrink Tubing MFP is a cross-linked, thin-walled, heat-shrinkable tubing offering a high degree of mechanical strength and high-temperature resistance. Fabricated from polyvinylidene fluoride, the tubing has outstanding abrasion resistance and cut-through properties in combination with high dielectric strength. It is inherently flame retardant, semi-rigid and highly resistant to most industrial fuels, chemicals and solvents. When heated in excess of 347°F (175°C), MFP tubing rapidly shrinks to a skintight fit.
Agency Approvals & Self Certifications	Meets requirements of: • SAE-AMS-DTL-23053/8 and functional requirements of 23053/18, Class 1* • AMS-3632 • UL Listed, UL File E-39100, VW-1 • CSA LR38227, OFT *Formerly: MIL-I-23053/8 and MIL-DTL-23053/8 MIL-I-23053/18 and MIL-DTL-23053/18
Applications	MFP tubing is typically used for shrink-fit protection and strain relief of wires, solder joints, terminals and connections. Suggested applications include automotive wiring, jackets, fuse coverings and military wire markers. Because the tubing is transparent, it allows see-through inspection and identification, and is ideal for use as a jacketing for components such as resistors and capacitors. The tubing is readily marked by hot-stamp and print-wheel equipment.
Shrink Ratio	MFP tubing has a 2:1 shrink ratio. When freely recovered, the tubing will shrink to 50% of its as-supplied internal diameter. The recovered wall thickness is proportional to the degree of recovery. The operating temperature range is from -55°C (-67°F) to 175°C (347°F), with a shrinking temperature minimum of 175°C (347°F)

3M™ Heat Shrink Tubing MFP

Standard Sizes and Dimensions

Ordering Size (Nominal)	Expanded I.D. (Minimum)		Recovered I.D. (Maximum)		Total Recovered Wall Thickness (Nominal)	
	In.	(mm)	In.	(mm)	In.	(mm)
3/64	.046	(1,17)	.023	(0,58)	.010	(0,25)
1/16	.063	(1,60)	.031	(0,79)	.010	(0,25)
3/32	.093	(2,36)	.046	(1,17)	.010	(0,25)
1/8	.125	(3,18)	.062	(1,57)	.010	(0,25)
3/16	.187	(4,75)	.093	(2,36)	.010	(0,25)
1/4	.250	(6,35)	.125	(3,18)	.012	(0,30)
3/8	.375	(9,53)	.187	(4,75)	.012	(0,30)
1/2	.500	(12,70)	.250	(6,35)	.012	(0,30)
5/8	.625	(15,88)	.313	(7,94)	.014	(0,36)
3/4	.750	(19,05)	.375	(9,53)	.017	(0,43)
1	1.000	(25,40)	.500	(12,70)	.019	(0,48)

Typical Properties

Not for specifications. Values are typical, not to be considered minimum or maximum. Properties measured at room temperature 73°F (23°C) unless otherwise stated.

Physical Property	Typical Value
Tensile Strength	5500 PSI
Ultimate Elongation	350%
Longitudinal Change	+1, -10%
Secant Modulus (2%)	123,000 PSI
Specific Gravity	1.7
Low Temperature Flexibility (outer wall only) 4 hrs @ -55 °C	No cracking
Flammability Self-extinguishing, UL24 VW-1 Test	Pass

Electrical Property (Test Method)	Typical Value US units (metric)
Dielectric Strength	900 V/mil
Volume Resistivity	10 ¹⁴ ohm/cm

Chemical Property (Test Method)	Typical Value
Corrosion Resistance	Non-corrosive
Fuel & Oil Resistance	Excellent
Solvent Absorption	Excellent
Abrasion Resistance	Excellent
Acid & alkalis Resistance	Excellent

3M™ Heat Shrink Tubing MFP

Standard Colors

Clear

Also available in Black. Price, MOQ and Lead Time will vary for these colors. Please contact Local Sales Representative or Customer Service Representative for more information.

Shelf Life & Storage

3M™ Heat Shrink Tubing MFP has a 10-year shelf life from date of manufacture when stored in a humidity controlled storage (10°C/50°F to 27°C/80°F and <75% relative humidity).

Availability

Standard Packaging

Four-foot lengths. Colors available are subject to factory quotation.

Please contact your local distributor; available from 3M.com/oem [Where to Buy] or call 1-800-676-8381.

Important Notice

All statements, technical information, and recommendations related to 3M's products are based on information believed to be reliable, but the accuracy or completeness is not guaranteed. Before using this product, you must evaluate it and determine if it is suitable for your intended application. You assume all risks and liability associated with such use. Any statements related to the product, which are not contained in 3M's current publications, or any contrary statements contained on your purchase order, shall have no force or effect unless expressly agreed upon, in writing, by an authorized officer of 3M.

Warranty; Limited Remedy; Limited Liability

This product will be free from defects in material and manufacture at the time of purchase. 3M MAKES NO OTHER WARRANTIES INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. If this product is defective within the warranty period stated above, your exclusive remedy shall be, at 3M's option, to replace or repair the 3M product or refund the purchase price of the 3M product. Except where prohibited by law, 3M will not be liable for any indirect, special, incidental or consequential loss or damage arising from this 3M product, regardless of the legal theory asserted.

3M is a trademark of 3M Company.



Electrical Markets Division
6801 River Place Blvd.
Austin, TX 78726-9000
800 676.8381
FAX: 800 828.9329
www.3M.com/oem

Please recycle
© 3M 2013 All rights reserved
78-8127-6766-9 Rev F

Данный компонент на территории Российской Федерации

Вы можете приобрести в компании MosChip.

Для оперативного оформления запроса Вам необходимо перейти по данной ссылке:

<http://moschip.ru/get-element>

Вы можете разместить у нас заказ для любого Вашего проекта, будь то серийное производство или разработка единичного прибора.

В нашем ассортименте представлены ведущие мировые производители активных и пассивных электронных компонентов.

Нашей специализацией является поставка электронной компонентной базы двойного назначения, продукции таких производителей как XILINX, Intel (ex.ALTERA), Vicor, Microchip, Texas Instruments, Analog Devices, Mini-Circuits, Amphenol, Glenair.

Сотрудничество с глобальными дистрибьюторами электронных компонентов, предоставляет возможность заказывать и получать с международных складов практически любой перечень компонентов в оптимальные для Вас сроки.

На всех этапах разработки и производства наши партнеры могут получить квалифицированную поддержку опытных инженеров.

Система менеджмента качества компании отвечает требованиям в соответствии с ГОСТ Р ИСО 9001, ГОСТ РВ 0015-002 и ЭС РД 009

Офис по работе с юридическими лицами:

105318, г.Москва, ул.Щербаковская д.3, офис 1107, 1118, ДЦ «Щербаковский»

Телефон: +7 495 668-12-70 (многоканальный)

Факс: +7 495 668-12-70 (доб.304)

E-mail: info@moschip.ru

Skype отдела продаж:

moschip.ru

moschip.ru_4

moschip.ru_6

moschip.ru_9