





Heat Shrinkable Tubing

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Overview of applications for Heat Shrink Tubing

When selecting the correct heat shrink tubing size, it is important to bear in mind the 80:20 rule. The heat shrink tubing must shrink by at least 20% and not more than 80% of its complete shrinkage capacity to achieve the right result. In our overview of applications you will find the best heat shrink tube for every cable diameter. The 80:20 rule has of course been taken into account in the table.

Heat Shrinkable Tubing with a shrink ratio of 2:1

HFT-A, TL27, TF21, TF24, VITON®-E, TK20, TK29, TFE-2, TR27, TCN20, SE28

Shrink ratio 2:1 Size mm		Cable/Wire Diameter
1.2/0.6		0.7 mm
		1.1 mm
3.2/1.6	2.4/1.2	1.4 mm
		1.9 mm
	4.8/2.4	2.2 mm
		2.9 mm
6.4/3.2	4.8/2.4	3.8 mm
		4.3 mm
	9.5/4.7	5.7 mm
		5.8 mm
12.7/6.4	9.5/4.7	7.7 mm
		8.6 mm
	19.1/9.5	11.4 mm
		15.2 mm
25.4/12.7	19.1/9.5	17.2 mm
		22.9 mm
		30.5 mm
50.8/25.4	38.1/19.1	34.3 mm
		45.7 mm
	76.2/38.1	61.0 mm
68.6 mm		
101.6/50.8	76.2/38.1	91.4 mm

Heat Shrinkable Tubing with a shrinkage ratio of 3:1

With the optimal shrinkage ratio of 3:1, you can cover a wide range of applications with just a few sizes. This leads to reduced stock expenditure and requires less space. 3:1 heat shrink tubes: TF34, TF31, EPS-300, TCN20 overexpanded, TA32, TA37

Shrink ratio 3:1 Size mm		Cable/Wire Diameter	
1.5/0.5		0.7 mm	
		1.3 mm	
6/2	3/1	1.4 mm	
		2.6 mm	
	18/6	12/4	2.8 mm
			5.2 mm
40/13	24/8	5.6 mm	
		8.4 mm	
	12/4	24/8	10.4 mm
			11.2 mm
24/8	24/8	15.6 mm	
		18.4 mm	
34.6 mm	24/8	20.8 mm	
		34.6 mm	

Conversion from imperial to metric

Inch	1/32"	3/64"	1/16"	5/64"	3/32"	1/8"	3/16"	1/4"	3/8"
mm	0.8	1.2	1.6	2.0	2.4	3.2	4.8	6.4	9.5
Inch	1/2"	5/8"	3/4"	1"	1-1/4"	1-1/2"	2"	3"	4"
mm	12.7	15.9	19.1	25.4	31.8	38.1	50.8	76.2	101.6

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The right Heat Shrink Tube

The 80:20 rule means that a heat shrink tube should shrink by a maximum of 80% and a minimum of 20%.

For example:

A cable with a diameter of 5mm is to be wrapped in heat shrink tubing. In theory both sizes 6/2 and 12/4 would be suitable, since the required diameter of 5mm lies within the shrink range of both tube sizes.

Size 6/2

Maximum shrink (100%)



Shrinkage of 4 mm

Optimum shrinkage max. (80%)



Shrinkage of 0.8 mm

Optimum shrinkage min. (20%)



Shrinkage of 3.2 mm

Size 6/2 has a range of application of between 2.8 mm and 5.2 mm and is therefore suitable for the cable diameter of 5 mm.

Size 12/4

Maximum shrink (100%)



Shrinkage of 8 mm

Optimum shrinkage max. (80%)



Shrinkage of 6.4 mm

Optimum shrinkage min. (20%)



Shrinkage of 1.6 mm

The smallest application diameter of size 12/4 is 5.6 mm. This size is therefore unsuitable for a cable diameter of 5 mm.

Calculator tool for Heat Shrink Tubing

The calculator tool for heat shrink tubing is a selection guide for shrink tubing sizes based on the object to be covered. Fill in your specification and the calculator presents the right tubing size according to the 80:20 rule.

Find more information under www.HellermannTyton.com/heatshrink-calculator!

The calculator tool also checks if the heat shrink tubing you have chosen is suitable for your application. For example you can find the heat shrink tubing with the Product Search on the www.HellermannTyton.com website.



Heat Shrinkable Tubing Overview

TYPE	Packaging Type	Variant	Material	Shrink Ratio	Operating Temperature	Dimension (mm)	Halogen-free	Colour	Page	
TCN20		Thin-Wall	PO-X	2:1	-55 °C to +125 °C	1.2 - 50.8		Black	207	
TCN20 overexpanded			PO-X	3:1	-55 °C to +125 °C	2.4 - 38.0		Black	208	
HFT-A			PO-X	2:1	-55 °C to +135 °C	1.2 - 101.6		Black	209	
TF21			PO-X	2:1	-55 °C to +135 °C	1.2 - 101.6		Black, Blue, Orange, Red, White, Yellow	210	
TF24			PO-X	2:1	-55 °C to +135 °C	1.2 - 101.6	HF ✓	Transparent	213	
TF31			PO-X	3:1	-55 °C to +135 °C	1.5 - 40.0		Black, Blue, Green, Red, White, Yellow	214	
TF34			PO-X	3:1	-55 °C to +135 °C	1.5 - 40.0	HF ✓	Transparent	216	
TR27			PO-X	2:1	-40 °C to +105 °C	3.2 - 50.8	HF ✓	Black	217	
EPS-300			Thin-Wall Hot melt adhesive	PO-X	3:1	-55 °C to +125 °C	3.0 - 40.0		Black	218
EPS-400				PO-X	4:1	-55 °C to +125 °C	4.0 - 32.0		Black	218
TG40		Standard-Wall Hot melt adhesive	PO-X	4:1	-55 °C to +125 °C	6.00 - 18.00		Black, Transparent	219	
SA47			PO-X	4:1	-40 °C to +125 °C	5.75 - 32.00	HF ✓	Black, Transparent	220	
SA47-LA			PO-X	4:1	-40 °C to +125 °C	5.75 - 52.0	HF ✓	Black, Transparent	221	
SA47-HT			PO-X	4:1	-40 °C to +150 °C	7.60 - 32.0		Black	222	
SE28		Standard-Wall	POA	2:1	-75 °C to +150 °C	3.2 - 101.2		Black	223	
TK20		Thin-Wall	PVDF	2:1	-55 °C to +175 °C	1.2 - 50.8		Transparent	224	
Viton®-E		Standard-Wall	FPMX	2:1	-55 °C to +200 °C	3.2 - 50.8		Black	225	

Heat shrinkable tubing 2:1 - Self extinguishing

TCN20

TCN20 is suitable for a wide range of applications like electrical insulations, mechanical protection and cable bundling.

Features and benefits

- Thin wall general purpose polyolefin tubing
- Self extinguishing, UL224 VW-1, CSA
- Fast shrinking
- Low shrink temperature



Heat shrink tubing TCN20.

MATERIAL	Polyolefin, cross-linked (PO-X)
Shrink Ratio	2:1
Operating Temperature	-55 °C to +125 °C
Min. Shrink Temperature	+100 °C
Longitudinal Change After Shrinkage	+/-5 %
Dielectric Strength	20 kV/mm according to IEC 243
Flammability	self-extinguishing, UL 224 VW-1



Heat Shrinkable Tubing 2:1



PART DESCRIPTION	Supplied Ø D min.	Size (imperial)	Recov. Ø d max.	Wall (WT)
TCN20-1.2/0.6-PO-X-BK	1.2	3/64 "	0.6	0.30
TCN20-1.6/0.8-PO-X-BK	1.6	1/16 "	0.8	0.35
TCN20-2.4/1.2-PO-X-BK	2.4	3/32 "	1.2	0.45
TCN20-3.2/1.6-PO-X-BK	3.2	1/8 "	1.6	0.45
TCN20-4.8/2.4-PO-X-BK	4.8	3/16 "	2.4	0.50
TCN20-6.4/3.2-PO-X-BK	6.4	1/4 "	3.2	0.55
TCN20-9.5/4.8-PO-X-BK	9.5	3/8 "	4.8	0.55
TCN20-12.7/6.4-PO-X-BK	12.7	1/2 "	6.4	0.65
TCN20-19.1/9.5-PO-X-BK	19.1	3/4 "	9.5	0.80
TCN20-25.4/12.7-PO-X-BK	25.4	1 "	12.7	0.90
TCN20-38.1/19.1-PO-X-BK	38.1	1-1/2 "	19.1	1.02
TCN20-50.8/25.4-PO-X-BK	50.8	2 "	25.4	1.15

All dimensions in mm. Subject to technical changes.



Heat shrinkable tubing 3:1 - Self extinguishing

TCN20 overexpanded

Mechanical and electrical protection applications for parts with high diameter variances. This fast shrinking tubing makes it suitable for high volume production.

Features and benefits

- Thin wall overexpanded polyolefin tubing
- Self extinguishing and low shrink temperature
- Highly flame-retardant, UL224 VW-1



Heat shrink tubing TCN20 overexpanded.

MATERIAL	Polyolefin, cross-linked (PO-X)
Shrink Ratio	3:1
Operating Temperature	-55 °C to +125 °C
Min. Shrink Temperature	+100 °C
Longitudinal Change After Shrinkage	+/-5 %
Dielectric Strength	20 kV/mm according to IEC 243
Flammability	self-extinguishing



Heat Shrinkable Tubing 3:1



PART DESCRIPTION	Supplied Ø D min.	Recov. Ø d max.	Wall (WT)
TCN20-2.4/0.8-PO-X-BK	2.4	0.8	0.40
TCN20-3.2/1.2-PO-X-BK	3.2	1.2	0.50
TCN20-4.8/1.6-PO-X-BK	4.8	1.6	0.50
TCN20-6.6/2.4-PO-X-BK	6.6	2.4	0.55
TCN20-9.5/3.2-PO-X-BK	9.5	3.2	0.65
TCN20-12.7/4.8-PO-X-BK	12.7	4.8	0.75
TCN20-19.0/6.4-PO-X-BK	19.0	6.4	0.75
TCN20-25.4/9.5-PO-X-BK	25.40	9.50	0.80
TCN20-38.0/12.7-PO-X-BK	38.0	12.7	0.95

All dimensions in mm. Subject to technical changes.

Heat shrinkable tubing 2:1 - flexible and coloured

HFT-A - self extinguishing

This high performance thin wall tubing is used extensively for electrical and mechanical protection. It is also well proven for sleeve marking to identify wiring circuits.

Features and benefits

- Flexible heat shrink tubing
- Fast shrinking, easy handling, good mechanical strength
- Wide range of colours
- Internal diameters up to 101.6 mm (4 inches)
- UL-224 ,CSA listed and VG approved



HFT-A conforms to major standards (VG) used in all Defence industries.



Standard sizes available in colours black, red, blue, yellow, white and green-yellow.

MATERIAL	Polyolefin, cross-linked (PO-X)
Shrink Ratio	2:1
Operating Temperature	-55 °C to +135 °C
Min. Shrink Temperature	+135 °C
Longitudinal Change After Shrinkage	-5 % max.
Dielectric Strength	20 kV/mm according to IEC 684 P2
Flammability	self-extinguishing, UL 224 VW-1



Heat Shrinkable Tubing 2:1



PART DESCRIPTION	Supplied Ø D min.	Size (imperial)	Recov. Ø d max.	Wall (WT)	Designation as per VG-Norm
HFT-A-1.2/0.6-PO-X-BK	1.2	3/64 "	0.6	0.40	VG 95343 T05 A 001 A
HFT-A-1.6/0.8-PO-X-BK	1.6	1/16 "	0.8	0.40	VG 95343 T05 A 002 A
HFT-A-2.4/1.2-PO-X-BK	2.4	3/32 "	1.2	0.50	VG 95343 T05 A 003 A
HFT-A-3.2/1.6-PO-X-BK	3.2	1/8 "	1.6	0.50	VG 95343 T05 A 004 A
HFT-A-4.8/2.4-PO-X-BK	4.8	3/16 "	2.4	0.50	VG 95343 T05 A 005 A
HFT-A-6.4/3.2-PO-X-BK	6.4	1/4 "	3.2	0.60	VG 95343 T05 A 006 A
HFT-A-9.5/4.8-PO-X-BK	9.5	3/8 "	4.8	0.60	VG 95343 T05 A 007 A
HFT-A-12.7/6.4-PO-X-BK	12.7	1/2 "	6.4	0.60	VG 95343 T05 A 008 A
HFT-A-19.0/9.5-PO-X-BK	19.0	3/4 "	9.5	0.80	VG 95343 T05 A 009 A
HFT-A-25.4/12.7-PO-X-BK	25.4	1 "	12.7	0.90	VG 95343 T05 A 010 A
HFT-A-38.0/19.0-PO-X-BK	38.0	1-1/2 "	19.0	1.00	VG 95343 T05 A 011 A
HFT-A-50.8/25.4-PO-X-BK	50.8	2 "	25.4	1.10	VG 95343 T05 A 012 A
HFT-A-76.0/38.0-PO-X-BK	76.0	3 "	38.0	1.30	VG 95343 T05 A 013 A
HFT-A-101.6/50.8-PO-X-BK	101.6	4 "	50.8	1.40	VG 95343 T05 A 014 A

All dimensions in mm. Subject to technical changes.



Heat shrinkable tubing 2:1 - flexible and coloured

TF21

Due to its versatility TF21 is suitable for a wide range of applications like electrical insulations, mechanical protection and marking.

Features and benefits

- Thin wall, flexible polyolefin tubing
- Fast shrinking and low shrink temperature
- Meets and exceeds lots of industrial standards
- Big variety of different colours and sizes
- Flame retarded and UL224 VW1 listed



TF21 - available in a wide range of colours and sizes.



**Cut lengths available on request.
Please contact us!**

MATERIAL	Polyolefin, cross-linked (PO-X)
Shrink Ratio	2:1
Operating Temperature	-55 °C to +135 °C
Min. Shrink Temperature	+90 °C
Longitudinal Change After Shrinkage	+/- 5 %
Dielectric Strength	37 kV/mm
Flammability	ASTM D876



PART DESCRIPTION	Supplied Ø D min.	Size (imperial)	Recov. Ø d max.	Wall (WT)
TF21-1.2/0.6-PO-X-BU	1.2	3/64 "	0.6	0.41
TF21-1.2/0.6-PO-X-RD	1.2	3/64 "	0.6	0.41
TF21-1.2/0.6-PO-X-WH	1.2	3/64 "	0.6	0.41
TF21-1.2/0.6-PO-X-YE	1.2	3/64 "	0.6	0.41
TF21-1.2/0.6-PO-X-BK	1.2	3/64 "	0.6	0.41
TF21-1.6/0.8-PO-X-BU	1.6	1/16 "	0.8	0.43
TF21-1.6/0.8-PO-X-RD	1.6	1/16 "	0.8	0.43
TF21-1.6/0.8-PO-X-WH	1.6	1/16 "	0.8	0.43
TF21-1.6/0.8-PO-X-YE	1.6	1/16 "	0.8	0.43
TF21-1.6/0.8-PO-X-BK	1.6	1/16 "	0.8	0.43
TF21-2.4/1.2-PO-X-BU	2.4	3/32 "	1.2	0.51
TF21-2.4/1.2-PO-X-RD	2.4	3/32 "	1.2	0.51
TF21-2.4/1.2-PO-X-WH	2.4	3/32 "	1.2	0.51
TF21-2.4/1.2-PO-X-YE	2.4	3/32 "	1.2	0.51
TF21-2.4/1.2-PO-X-BK	2.4	3/32 "	1.2	0.51
TF21-3.2/1.6-PO-X-BU	3.2	1/8 "	1.6	0.51
TF21-3.2/1.6-PO-X-RD	3.2	1/8 "	1.6	0.51
TF21-3.2/1.6-PO-X-WH	3.2	1/8 "	1.6	0.51

All dimensions in mm. Subject to technical changes.

Heat shrinkable tubing 2:1 - flexible and coloured

TF21

PART DESCRIPTION	Supplied Ø D min.	Size (imperial)	Recov. Ø d max.	Wall (WT)
TF21-3.2/1.6-PO-X-YE	3.2	1/8 "	1.6	0.51
TF21-3.2/1.6-PO-X-BK	3.2	1/8 "	1.6	0.51
TF21-4.8/2.4-PO-X-BU	4.8	3/16 "	2.4	0.51
TF21-4.8/2.4-PO-X-RD	4.8	3/16 "	2.4	0.51
TF21-4.8/2.4-PO-X-WH	4.8	3/16 "	2.4	0.51
TF21-4.8/2.4-PO-X-YE	4.8	3/16 "	2.4	0.51
TF21-4.8/2.4-PO-X-OG	4.8	3/16 "	2.4	0.51
TF21-4.8/2.4-PO-X-BK	4.8	3/16 "	2.4	0.51
TF21-6.4/3.2-PO-X-BU	6.4	1/4 "	3.2	0.64
TF21-6.4/3.2-PO-X-RD	6.4	1/4 "	3.2	0.64
TF21-6.4/3.2-PO-X-WH	6.4	1/4 "	3.2	0.64
TF21-6.4/3.2-PO-X-YE	6.4	1/4 "	3.2	0.64
TF21-6.4/3.2-PO-X-BK	6.4	1/4 "	3.2	0.64
TF21-9.5/4.8-PO-X-BU	9.5	3/8 "	4.8	0.64
TF21-9.5/4.8-PO-X-OG	9.5	3/8 "	4.8	0.64
TF21-9.5/4.8-PO-X-RD	9.5	3/8 "	4.8	0.64
TF21-9.5/4.8-PO-X-WH	9.5	3/8 "	4.8	0.64
TF21-9.5/4.8-PO-X-YE	9.5	3/8 "	4.8	0.64
TF21-9.5/4.8-PO-X-BK	9.5	3/8 "	4.8	0.64
TF21-12.7/6.4-PO-X-BU	12.7	1/2 "	6.4	0.64
TF21-12.7/6.4-PO-X-RD	12.7	1/2 "	6.4	0.64
TF21-12.7/6.4-PO-X-WH	12.7	1/2 "	6.4	0.64
TF21-12.7/6.4-PO-X-YE	12.7	1/2 "	6.4	0.64
TF21-12.7/6.4-PO-X-BK	12.7	1/2 "	6.4	0.64
TF21-19.1/9.5-PO-X-OG	19.1	3/4 "	9.5	0.76
TF21-19.1/9.5-PO-X-BK	19.1	3/4 "	9.5	0.76
TF21-19.1/9.5-PO-X-BU	19.1	3/4 "	9.5	0.76
TF21-19.1/9.5-PO-X-RD	19.1	3/4 "	9.5	0.76
TF21-19.1/9.5-PO-X-WH	19.1	3/4 "	9.5	0.76
TF21-19.1/9.5-PO-X-YE	19.1	3/4 "	9.5	0.76
TF21-25.4/12.7-PO-X-BK	25.4	1 "	12.7	0.89
TF21-25.4/12.7-PO-X-BU	25.4	1 "	12.7	0.89
TF21-25.4/12.7-PO-X-RD	25.4	1 "	12.7	0.89
TF21-25.4/12.7-PO-X-WH	25.4	1 "	12.7	0.89
TF21-25.4/12.7-PO-X-YE	25.4	1 "	12.7	0.89
TF21-38.0/19.0-PO-X-BK	38.1	1-1/2 "	19.1	1.02
TF21-38.0/19.0-PO-X-BU	38.1	1-1/2 "	19.1	1.02
TF21-38.0/19.0-PO-X-RD	38.1	1-1/2 "	19.1	1.02
TF21-38.0/19.0-PO-X-WH	38.1	1-1/2 "	19.1	1.02
TF21-38.0/19.0-PO-X-YE	38.1	1-1/2 "	19.1	1.02
TF21-50.8/25.4-PO-X-BK	50.8	2 "	25.4	1.14
TF21-50.8/25.4-PO-X-BU	50.8	2 "	25.4	1.14

All dimensions in mm. Subject to technical changes.





Heat shrinkable tubing 2:1 - flexible and coloured

TF21



Heat Shrinkable Tubing 2:1

PART DESCRIPTION	Supplied Ø D min.	Size (imperial)	Recov. Ø d max.	Wall (WT)
TF21-50.8/25.4-PO-X-RD	50.8	2 "	25.4	1.14
TF21-50.8/25.4-PO-X-WH	50.8	2 "	25.4	1.14
TF21-50.8/25.4-PO-X-YE	50.8	2 "	25.4	1.14
TF21-76.0/38.0-PO-X-BK	76.2	3 "	38.1	1.27
TF21-76.0/38.0-PO-X-BU	76.2	3 "	38.1	1.27
TF21-76.0/38.0-PO-X-RD	76.2	3 "	38.1	1.27
TF21-76.0/38.0-PO-X-WH	76.2	3 "	38.1	1.27
TF21-76.0/38.0-PO-X-YE	76.2	3 "	38.1	1.27
TF21-101.6/50.8-PO-X-BK	101.6	4 "	50.8	1.40
TF21-101.6/50.8-PO-X-BU	101.6	4 "	50.8	1.40
TF21-101.6/50.8-PO-X-RD	101.6	4 "	50.8	1.40
TF21-101.6/50.8-PO-X-WH	101.6	4 "	50.8	1.40
TF21-101.6/50.8-PO-X-YE	101.6	4 "	50.8	1.40

All dimensions in mm. Subject to technical changes.

Heat shrinkable tubing 2:1 - flexible and transparent

TF24

Protects wire and cable markers subject to abuse, while permitting inspectability of each item covered. Protects electronic components while permitting their identification and inspection.

Features and benefits

- Transparent, flexible polyolefin tubing
- Protects identification marking perfect
- Halogen free
- Good mechanical and chemical resistance
- VG-approval and additional industrial approvals



TF24 transparent tubing with 2:1 shrink ratio.

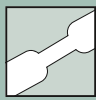
i Cut lengths available on request.
Please contact us!

MATERIAL	Polyolefin, cross-linked (PO-X)
Shrink Ratio	2:1
Operating Temperature	-55 °C to +135 °C
Min. Shrink Temperature	+110 °C
Longitudinal Change After Shrinkage	+/-5 % max.
Dielectric Strength	30 kV/mm
Flammability	not flame retardant



PART DESCRIPTION	Supplied Ø D min.	Size (imperial)	Recov. Ø d max.	Wall (WT)	Designation as per VG-Norm
TF24-1.2/0.6-PO-X-CL	1.2	3/64 "	0.6	0.41	VG 95343 T05 B 001 M
TF24-1.6/0.8-PO-X-CL	1.6	1/16 "	0.8	0.43	VG 95343 T05 B 002 M
TF24-2.4/1.2-PO-X-CL	2.4	3/32 "	1.2	0.51	VG 95343 T05 B 003 M
TF24-3.2/1.6-PO-X-CL	3.2	1/8 "	1.6	0.51	VG 95343 T05 B 004 M
TF24-4.8/2.4-PO-X-CL	4.8	3/16 "	2.4	0.51	VG 95343 T05 B 005 M
TF24-6.4/3.2-PO-X-CL	6.4	1/4 "	3.2	0.64	VG 95343 T05 B 006 M
TF24-9.5/4.8-PO-X-CL	9.5	3/8 "	4.8	0.64	VG 95343 T05 B 007 M
TF24-12.7/6.4-PO-X-CL	12.7	1/2 "	6.4	0.64	VG 95343 T05 B 008 M
TF24-19.1/9.5-PO-X-CL	19.1	3/4 "	9.5	0.76	VG 95343 T05 B 009 M
TF24-25.4/12.7-PO-X-CL	25.4	1 "	12.7	0.89	VG 95343 T05 B 010 M
TF24-38.1/19.1-PO-X-CL	38.1	1-1/2 "	19.1	1.02	VG 95343 T05 B 011 M
TF24-50.8/25.4-PO-X-CL	50.8	2 "	25.4	1.14	VG 95343 T05 B 012 M
TF24-76.2/38.1-PO-X-CL	76.2	3 "	38.1	1.27	VG 95343 T05 B 013 M
TF24-101.6/50.8-PO-X-CL	101.6	4 "	50.8	1.40	VG 95343 T05 B 014 M

All dimensions in mm. Subject to technical changes.



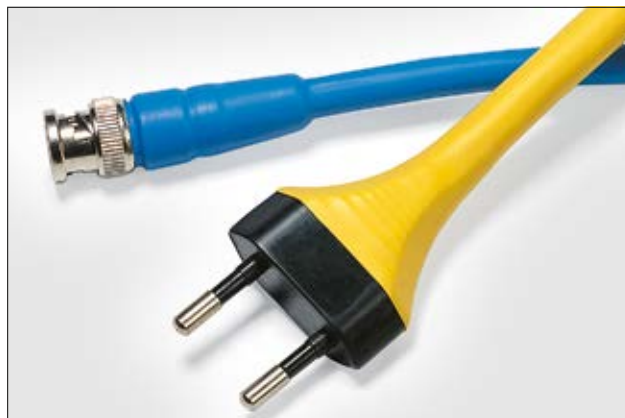
Heat shrinkable tubing 3:1 - flexible and coloured

TF31

If higher fire protection is a requirement heat shrinkable tubing TF31 is a good choice. It is used for protection, insulation and identification wires, cables and light duty harnesses.

Features and benefits

- Thin wall, very flexible polyolefin tubing
- Few sizes cover a wide range of diameters allowing reduced inventory
- Fast shrinking and low shrink temperature
- Flame-retardant, UL224 VW1 listed



TF31 with 3:1 shrink ratio allowing for a wider range of application.



**Cut lengths available on request.
Please contact us!**

MATERIAL	Polyolefin, cross-linked (PO-X)
Shrink Ratio	3:1
Operating Temperature	-55 °C to +135 °C
Min. Shrink Temperature	+90 °C
Longitudinal Change After Shrinkage	+5 %/-15 %
Dielectric Strength	37 kV/mm
Flammability	ASTM D876, UL 224 VW-1, self-extinguishing



Heat Shrinkable Tubing 3:1



PART DESCRIPTION	Supplied Ø D min.	Recov. Ø d max.	Wall (WT)
TF31-1.5/0.5-PO-X-BU	1.5	0.5	0.50
TF31-1.5/0.5-PO-X-GN	1.5	0.5	0.50
TF31-1.5/0.5-PO-X-RD	1.5	0.5	0.50
TF31-1.5/0.5-PO-X-WH	1.5	0.5	0.50
TF31-1.5/0.5-PO-X-YE	1.5	0.5	0.50
TF31-1.5/0.5-PO-X-BK	1.5	0.5	0.50
TF31-3/1-PO-X-BU	3.0	1.0	0.60
TF31-3/1-PO-X-GN	3.0	1.0	0.60
TF31-3/1-PO-X-RD	3.0	1.0	0.60
TF31-3/1-PO-X-WH	3.0	1.0	0.60
TF31-3/1-PO-X-YE	3.0	1.0	0.60
TF31-3/1-PO-X-BK	3.0	1.0	0.60
TF31-6/2-PO-X-BU	6.0	2.0	0.70
TF31-6/2-PO-X-GN	6.0	2.0	0.70
TF31-6/2-PO-X-RD	6.0	2.0	0.70
TF31-6/2-PO-X-WH	6.0	2.0	0.70
TF31-6/2-PO-X-YE	6.0	2.0	0.70
TF31-6/2-PO-X-BK	6.0	2.0	0.70
TF31-9/3-PO-X-BU	9.0	3.0	0.80
TF31-9/3-PO-X-GN	9.0	3.0	0.80
TF31-9/3-PO-X-RD	9.0	3.0	0.80

All dimensions in mm. Subject to technical changes.

Heat shrinkable tubing 3:1 - flexible and coloured

TF31

PART DESCRIPTION	Supplied Ø D min.	Recov. Ø d max.	Wall (WT)
TF31-9/3-PO-X-WH	9.0	3.0	0.80
TF31-9/3-PO-X-YE	9.0	3.0	0.80
TF31-9/3-PO-X-BK	9.0	3.0	0.80
TF31-12/4-PO-X-BU	12.0	4.0	0.85
TF31-12/4-PO-X-GN	12.0	4.0	0.85
TF31-12/4-PO-X-RD	12.0	4.0	0.85
TF31-12/4-PO-X-WH	12.0	4.0	0.85
TF31-12/4-PO-X-YE	12.0	4.0	0.85
TF31-12/4-PO-X-BK	12.0	4.0	0.85
TF31-18/6-PO-X-BU	18.0	6.0	1.00
TF31-18/6-PO-X-GN	18.0	6.0	1.00
TF31-18/6-PO-X-RD	18.0	6.0	1.00
TF31-18/6-PO-X-WH	18.0	6.0	1.00
TF31-18/6-PO-X-YE	18.0	6.0	1.00
TF31-18/6-PO-X-BK	18.0	6.0	1.00
TF31-24/8-PO-X-BU	24.0	8.0	1.20
TF31-24/8-PO-X-GN	24.0	8.0	1.20
TF31-24/8-PO-X-RD	24.0	8.0	1.20
TF31-24/8-PO-X-WH	24.0	8.0	1.20
TF31-24/8-PO-X-YE	24.0	8.0	1.20
TF31-24/8-PO-X-BK	24.0	8.0	1.20
TF31-40/13-PO-X-BU	40.0	13.0	1.25
TF31-40/13-PO-X-GN	40.0	13.0	1.25
TF31-40/13-PO-X-RD	40.0	13.0	1.25
TF31-40/13-PO-X-WH	40.0	13.0	1.25
TF31-40/13-PO-X-YE	40.0	13.0	1.25
TF31-40/13-PO-X-BK	40.0	13.0	1.25

All dimensions in mm. Subject to technical changes.



Heat shrinkable tubing 3:1 - flexible and transparent

TF34

Protects wire and cable markers subject to abuse, while permitting inspectability of each item covered. Protects electronic components while permitting their identification and inspection.

Features and benefits

- Transparent, flexible polyolefin tubing
- Protects identification marking perfect
- Few sizes cover a wide range of diameters allowing reduced inventory
- Halogen free



TF34 transparent tubing with 3:1 shrink ratio allowing for a wider range of application.



**Cut lengths available on request.
Please contact us!**

MATERIAL	Polyolefin, cross-linked (PO-X)
Shrink Ratio	3:1
Operating Temperature	-55 °C to +135 °C
Min. Shrink Temperature	+110 °C
Longitudinal Change After Shrinkage	-5 % max.
Dielectric Strength	46 kV/mm
Flammability	not flame retardant



Heat Shrinkable Tubing 3:1

PART DESCRIPTION	Supplied Ø D min.	Recov. Ø d max.	Wall (WT)
TF34-1.5/0.5-PO-X-CL	1.5	0.5	0.50
TF34-3/1-PO-X-CL	3.0	1.0	0.50
TF34-6/2-PO-X-CL	6.0	2.0	0.70
TF34-9/3-PO-X-CL	9.0	3.0	0.80
TF34-12/4-PO-X-CL	12.0	4.0	0.85
TF34-18/6-PO-X-CL	18.0	6.0	1.00
TF34-24/8-PO-X-CL	24.0	8.0	1.20
TF34-40/13-PO-X-CL	40.0	13.0	1.25

All dimensions in mm. Subject to technical changes.

Heat shrinkable tubing 2:1 - Flame retardant

TR27

TR27 is used in applications where toxic emissions evolved in a fire must be minimised, e.g. for heavily populated buildings or safety sensitive areas like tunnels, hospitals, schools, theatres, mass transit vehicles and computer centres.

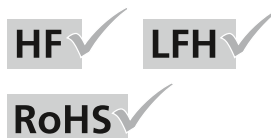
Features and benefits

- Thin wall, flexible polyolefin tubing
- Optional available with adhesive or as thick wall version (SR27)
- Halogen free and excellent flame-retardant properties
- Meets various industrial standards



TR27 is ideal for safety sensitive areas.

MATERIAL	Polyolefin, cross-linked (PO-X)
Shrink Ratio	2:1
Operating Temperature	-40 °C to +105 °C
Min. Shrink Temperature	+115 °C
Longitudinal Change After Shrinkage	+5 %/-10 % max.
Dielectric Strength	15 kV/mm according to IEC 684 P2
Flammability	Limited Fire Hazard, halogen free, low generation of toxic gases and corrosive acid, low smoke generation



Heat Shrinkable Tubing 2:1

PART DESCRIPTION	Supplied Ø D min.	Size (imperial)	Recov. Ø d max.	Wall (WT)
TR27-3.2/1.6-PO-X-BK	3.2	1/8 "	1.6	0.51
TR27-4.8/2.4-PO-X-BK	4.8	3/16 "	2.4	0.51
TR27-6.4/3.2-PO-X-BK	6.4	1/4 "	3.2	0.64
TR27-9.5/4.8-PO-X-BK	9.5	3/8 "	4.8	0.64
TR27-12.7/6.4-PO-X-BK	12.7	1/2 "	6.4	0.64
TR27-19.1/9.5-PO-X-BK	19.1	3/4 "	9.5	0.76
TR27-25.4/12.7-PO-X-BK	25.4	1 "	12.7	0.51
TR27-38.1/19.1-PO-X-BK	38.1	1-1/2 "	19.1	1.02
TR27-50.8/25.4-PO-X-BK	50.8	2 "	25.4	1.14

All dimensions in mm. Subject to technical changes.



Heat shrinkable tubing adhesive lined

EPS-300 - 3:1 shrink ratio

EPS-400 - 4:1 shrink ratio

Heatshrinkable tubing EPS seals and protects a wide variety of electrical applications like back end connector sealing, connector-to-cable transitions and splices.

Features and benefits

- Flexible, thin wall polyolefin heat shrink tubing
- With coextruded hot melt adhesive inner wall
- Protects against moisture
- Provides an environmental sealing of complex parts



EPS300 and EPS400 offer high shrink ratios and protection against humidity.



**Cut lengths available on request.
Please contact us!**



Heat Shrinkable Tubing 3:1 with adhesive



Heat Shrinkable Tubing 4:1 with adhesive



MATERIAL	Polyolefin, cross-linked (PO-X)
Operating Temperature	-55 °C to +125 °C
Min. Shrink Temperature	+120 °C
Longitudinal Change After Shrinkage	-10 % max.
Softening Point Adhesive	+90 °C
Dielectric Strength	15 kV/mm according to IEC 684 P2
Flammability	ASTM D2671 (outer layer only)



PART DESCRIPTION	Supplied Ø D min.	Recov. Ø d max.	Wall (WT)	Shrink Ratio
EPS-300-3/1-PO-X-BK	3.0	1.0	1.00	3:1
EPS-300-6/2-PO-X-BK	6.0	2.0	1.00	3:1
EPS-300-9/3-PO-X-BK	9.0	3.0	1.40	3:1
EPS-300-12/4-PO-X-BK	12.0	4.0	1.80	3:1
EPS-300-19/6-PO-X-BK	19.0	6.0	2.20	3:1
EPS-300-24/8-PO-X-BK	24.0	8.0	2.50	3:1
EPS-300-40/13-PO-X-BK	40.0	13.0	2.50	3:1

All dimensions in mm. Subject to technical changes.

PART DESCRIPTION	Supplied Ø D min.	Recov. Ø d max.	Wall (WT)	Shrink Ratio
EPS-400-4/1-PO-X-BK	4.0	1.0	1.00	4:1
EPS-400-8/2-PO-X-BK	8.0	2.0	1.00	4:1
EPS-400-12/3-PO-X-BK	12.0	3.0	1.40	4:1
EPS-400-16/4-PO-X-BK	16.0	4.0	1.80	4:1
EPS-400-24/6-PO-X-BK	24.0	6.0	2.20	4:1
EPS-400-32/8-PO-X-BK	32.0	8.0	2.50	4:1

All dimensions in mm. Subject to technical changes.



Heat shrinkable tubing 4:1 - 1.2 m lengths

TG40 - thin wall adhesive lined

TG40 is designed to insulate, seal and protect wire bundles, connectors, terminals and in-line splices in automotive wire harnesses and electronic assemblies.

Features and benefits

- Semi-rigid, thin wall polyolefin adhesive lined heat shrink tubing
- Good sealing properties and chemical resistance
- Flame-retardant (self-extinguishing)
- Provides an environmental sealing
- Resistant against acids, alkalis, oils and fuels



Heatshrinkable tubing TG40 in black and clear available.



Cut lengths available on request. Please contact us!



Heat Shrinkable Tubing 4:1 with adhesive

MATERIAL	Polyolefin, cross-linked (PO-X)
Shrink Ratio	4:1
Operating Temperature	-55 °C to +125 °C
Min. Shrink Temperature	+110 °C
Longitudinal Change After Shrinkage	+/-10 % max
Dielectric Strength	12 kV/mm
Flammability	self-extinguishing (except for transparent)



PART DESCRIPTION	Supplied Ø D min.	Recov. Ø d max.	Wall (WT)	Length (L)
TG40 6/1.27-PO-X-BK	6.00	1.27	1.30	1.2 m
TG40 6/1.27-PO-X-CL	6.00	1.27	1.30	1.2 m
TG40 8/1.65-PO-X-BK	8.00	1.65	1.52	1.2 m
TG40 8/1.65-PO-X-CL	8.00	1.65	1.52	1.2 m
TG40 12/2.41-PO-X-BK	12.00	2.41	1.91	1.2 m
TG40 12/2.41-PO-X-CL	12.00	2.41	1.91	1.2 m
TG40 18/4.45-PO-X-BK	18.00	4.45	2.41	1.2 m
TG40 18/4.45-PO-X-CL	18.00	4.45	2.41	1.2 m

All dimensions in mm. Subject to technical changes.



Heat shrinkable tubing 4:1 - 1.2 m lengths

SA47 - standard wall adhesive lined

SA47 is a semi-rigid halogen free polyolefin tubing with a thick inner liner of hot melt adhesive. It has excellent tensile strength and strain relief. The adhesive liner provides excellent moisture protection. Ideal for electrical connections and splices in automobiles. Tubing is transparent and hot melt adhesive is black.

Features and benefits

- Flexible, standard wall polyolefin heat shrink tubing
- Excellent tensile strength and strain relief
- Provides excellent moisture protection
- Tubing is clear and hot melt adhesive black
- Provides an environmental sealing of complex parts
- Halogen free

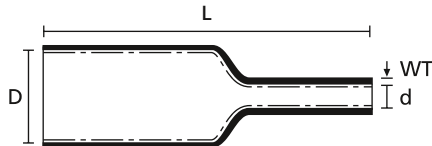


Heat shrink tubing SA47 for splice application.



SA47 has been developed with our Automotive partners to eliminate the risk of corrosion around cable splices and terminations.

MATERIAL	Polyolefin, cross-linked (PO-X)
Shrink Ratio	4:1
Operating Temperature	-40 °C to +125 °C
Min. Shrink Temperature	+130 °C
Melting Point	starting from +110 °C
Longitudinal Change After Shrinkage	-10 % max.
Dielectric Strength	>20 kV/mm



Heat Shrinkable Tubing 4:1 with adhesive



Cut lengths available on request. Please contact us!

PART DESCRIPTION	Supplied Ø D min.	Recov. Ø d max.	Wall (WT)	Length (L)
SA47 5.75/1.25-PO-X-BK/CL	5.75	1.25	1.15	1.2 m
SA47 7.5/1.65-PO-X-BK/CL	7.5	1.65	1.40	1.2 m
SA47 11.0/2.4-PO-X-BK/CL	11.0	2.4	1.80	1.2 m
SA47 18.3/4.35-PO-X-BK/CL	18.30	4.35	2.20	1.2 m
SA47 24/6-PO-X-BK/CL	24.00	6.00	2.54	1.2 m
SA47 32/8-PO-X-BK/CL	32.00	8.00	2.54	1.2 m

All dimensions in mm. Subject to technical changes.



Heat shrinkable tubing 4:1 - 1.2 m lengths

SA47-LA - standard wall adhesive lined

SA47-LA is a semi-rigid halogen free polyolefin tubing with an inner liner of hot melt adhesive. It has excellent tensile strength and strain relief. The adhesive liner provides excellent moisture protection. Ideal for electrical connections and splices in automobiles. Tubing is transparent and hot melt adhesive is black.

SA47-LA is specially designed with less adhesive for cable connections.

Features and benefits

- Flexible, standard wall polyolefin heat shrink tubing
- Excellent tensile strength and strain relief
- Provides excellent moisture protection
- Tubing is clear and hot melt adhesive black
- Provides an environmental sealing of complex parts
- Halogen free

i SA47 has been developed with our Automotive partners to eliminate the risk of corrosion around cable splices and terminations.

i Cut lengths available on request. Please contact us!

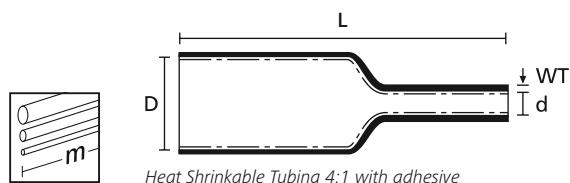


Heat shrink tubing SA47-LA for cable connection.

MATERIAL	Polyolefin, cross-linked (PO-X)
Shrink Ratio	4:1
Operating Temperature	-40 °C to +125 °C
Min. Shrink Temperature	+130 °C
Melting Point	starting from +110 °C
Longitudinal Change After Shrinkage	-10 % max.
Dielectric Strength	>20 kV/mm

HF ✓

RoHS ✓



i Colour orange available on request.

PART DESCRIPTION	Supplied Ø D min.	Recov. Ø d max.	Wall (WT)	Length (L)
SA47-LA 5.75/1.25-PO-X-BK/CL	5.75	1.25	1.15	1.2 m
SA47-LA 7.5/1.65-PO-X-BK/CL	7.5	1.65	1.40	1.2 m
SA47-LA 11.0/2.4-PO-X-BK/CL	11.0	2.4	1.80	1.2 m
SA47-LA 18.3/4.35-PO-X-BK/CL	18.3	4.35	2.20	1.2 m
SA47-LA 24/6-PO-X-BK/CL	24.0	6.0	2.54	1.2 m
SA47-LA 32/8-PO-X-BK/CL	32.0	8.0	2.54	1.2 m
SA47-LA 52/13-PO-X-BK/CL	52.0	13.0	3.00	1.2 m

All dimensions in mm. Subject to technical changes.



Heat shrinkable tubing 4:1 - 1.2 m lengths

SA47-HT - standard wall adhesive lined

SA47-HT is a semi-rigid flame retardant polyolefin tubing with a thick inner liner of hot melt adhesive. The tubing has excellent tensile strength and strain relief. The adhesive liner provides excellent moisture protection. Ideal for electrical connections and splices in automobiles. Suitable for high temperature applications up to 150 °C. Tubing is black and hot melt adhesive is black.

Features and benefits

- Flexible, standard wall polyolefin heat shrink tubing
- Excellent tensile strength and strain relief
- Provides excellent moisture protection
- Tubing and hot melt adhesive is black
- Provides an environmental sealing of complex parts
- For high temperature applications up to 150 °C
- Flame retardant



Heat shrink tubing SA47-HT for 150 °C application.



SA47 has been developed with our Automotive partners to eliminate the risk of corrosion around cable splices and terminations.



Cut lengths available on request. Please contact us!



SA47-HT provides optimum protection against moisture in high temperature applications.



Heat Shrinkable Tubing 4:1 with adhesive

MATERIAL	Polyolefin, cross-linked (PO-X)
Shrink Ratio	4:1
Operating Temperature	-40 °C to +150 °C
Min. Shrink Temperature	+130 °C
Melting Point	starting from +120 °C
Longitudinal Change After Shrinkage	-10 % max.
Dielectric Strength	>20 kV/mm
Flammability	self-extinguishing



PART DESCRIPTION	Supplied Ø D min.	Recov. Ø d max.	Wall (WT)	Length (L)
SA47-HT 7.6/1.7-PO-X-BK	7.60	1.70	1.52	1.2 m
SA47-HT 9.0/2.3-PO-X-BK	9.00	2.30	1.52	1.2 m
SA47-HT 11.6/2.5-PO-X-BK	11.60	2.50	2.29	1.2 m
SA47-HT 17.8/4.4-PO-X-BK	17.80	4.40	2.54	1.2 m
SA47-HT 24/6-PO-X-BK	24.00	6.00	2.54	1.2 m
SA47-HT 32/8-PO-X-BK	32.0	8.0	2.54	1.2 m

All dimensions in mm. Subject to technical changes.



Heat shrinkable tubing 2:1 - Elastomer

SE28

SE28 is used for long-term protection of cables and wire harnesses in military equipment, motor sports and aviation.

Features and benefits

- Flexible, high performance elastomeric heat shrink tubing
- Used in aerospace, defence, railway and automotive applications
- Resistant to diesel fuel, aviation and hydraulic fluids
- Provides a reliable protection against abrasion and mechanical damage
- Very suitable for protecting cables and wire harnesses
- For high temperature applications up to 150°C



SE28 tubing.



SE28 is mainly used in high performance applications.



Heat Shrinkable Tubing 2:1

MATERIAL	Elastomer, cross-linked (POA)
Shrink Ratio	2:1
Operating Temperature	-75 °C to +150 °C
Min. Shrink Temperature	+180 °C
Longitudinal Change After Shrinkage	-10 % max.
Dielectric Strength	22 kV/mm
Flammability	self-extinguishing



PART DESCRIPTION	Supplied Ø D min.	Recov. Ø d max.	Wall (WT)	Designation as per VG-Norm
SE28 3.2/1.6-POA-BK	3.2	1.6	0.80	VG 95343 T05 D 001 A
SE28 4.8/2.4-POA-BK	4.8	2.4	0.90	VG 95343 T05 D 002 A
SE28 6.4/3.2-POA-BK	6.4	3.2	1.00	VG 95343 T05 D 003 A
SE28 9.5/4.8-POA-BK	9.5	4.8	1.10	VG 95343 T05 D 004 A
SE28 12.7/6.4-POA-BK	12.7	6.4	1.30	VG 95343 T05 D 005 A
SE28 19.0/9.5-POA-BK	19.0	9.5	1.50	VG 95343 T05 D 006 A
SE28 25.4/12.7-POA-BK	25.4	12.7	1.90	VG 95343 T05 D 007 A
SE28 38.0/19.0-POA-BK	38.0	19.0	2.50	VG 95343 T05 D 008 A
SE28 51.0/25.4-POA-BK	51.0	25.4	3.10	VG 95343 T05 D 009 A
SE28 76.0/38.0-POA-BK	76.0	38.0	3.30	VG 95343 T05 D 010 A
SE28 101.2/51.0-POA-BK	101.2	51.0	3.50	VG 95343 T05 D 011 A

All dimensions in mm. Subject to technical changes.



Heat shrinkable tubing 2:1 - PVDF

TK20

Typical applications of this translucent tubing are where high-temperature performance is required. Also very suitable for applications that ask for visual inspection of covered components, or if low friction surface is needed. TK20 is also used as oil stop for energy cables.

This thin walled, translucent heat shrink tubing is often used for chemical applications.

Features and benefits

- Semi-rigid heat shrinkable tubing made of PVDF
- Thin wall and tough
- For higher temperature applications
- Very good mechanical strength, abrasion resistance and chemical resistance
- Meets various industrial standards
- Self extinguishing, UL 224 VW1 listed



TK20 is often used for chemical applications.

MATERIAL	Polyvinylidene Fluoride (PVDF)
Shrink Ratio	2:1
Operating Temperature	-55 °C to +175 °C
Min. Shrink Temperature	+170 °C
Longitudinal Change After Shrinkage	+/-10 % max
Dielectric Strength	43 kV/mm
Flammability	UL 224 VW-1



Heat Shrinkable Tubing 2:1



PART DESCRIPTION	Supplied Ø D min.	Size (imperial)	Recov. Ø d max.	Wall (WT)	Length (L)	Designation as per VG-Norm
TK20-1.2/0.6-PVDF-CL	1.2	3/64 "	0.6	0.25	1.2 m	VG 95343 T05 F 001 M
TK20-1.6/0.8-PVDF-CL	1.6	1/16 "	0.8	0.25	1.2 m	VG 95343 T05 F 002 M
TK20-2.4/1.2-PVDF-CL	2.4	3/32 "	1.2	0.25	1.2 m	VG 95343 T05 F 003 M
TK20-3.2/1.6-PVDF-CL	3.2	1/8 "	1.6	0.25	1.2 m	VG 95343 T05 F 004 M
TK20-4.8/2.4-PVDF-CL	4.8	3/16 "	2.4	0.25	1.2 m	VG 95343 T05 F 005 M
TK20-6.4/3.2-PVDF-CL	6.4	1/4 "	3.2	0.30	1.2 m	VG 95343 T05 F 006 M
TK20-9.5/4.8-PVDF-CL	9.5	3/8 "	4.8	0.30	1.2 m	VG 95343 T05 F 007 M
TK20-12.7/6.4-PVDF-CL	12.7	1/2 "	6.4	0.30	1.2 m	VG 95343 T05 F 008 M
TK20-19.1/9.5-PVDF-CL	19.1	3/4 "	9.5	0.43	1.2 m	VG 95343 T05 F 009 M
TK20-25.4/12.7-PVDF-CL	25.4	1 "	12.7	0.48	1.2 m	VG 95343 T05 F 010 M
TK20-38.1/19.1-PVDF-CL	38.1	1-1/2 "	19.1	0.51	1.2 m	-
TK20-50.8/25.4-PVDF-CL	50.8	2 "	25.4	0.51	1.2 m	-

All dimensions in mm. Subject to technical changes.

Heat shrinkable tubing 2:1 - Fluoroelastomer

Viton®-E

Viton®-E is used for reliable protection against aggressive chemicals in high temperature environments like engine compartments and turbines. It is also used when protective tubings are required to remain flexible at low temperatures.

Features and benefits

- High temperature resistant fluoroelastomeric heat shrink tubing
- Very good electrical, chemical and mechanical features
- Resistant to many fuels, oils and lubricants
- Flexible even at very low temperatures



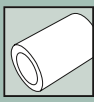
Viton®-E for flexibility and protection against aggressive chemicals.

MATERIAL	Fluoropolymer cross-linked (FPMX)
Shrink Ratio	2:1
Operating Temperature	-55 °C to +200 °C
Min. Shrink Temperature	+170 °C
Longitudinal Change After Shrinkage	-10 % max.
Dielectric Strength	8 kV/mm
Flammability	VG 95343
Insulation Class	C (VDE 0530)



PART DESCRIPTION	Supplied Ø D min.	Recov. Ø d max.	Wall (WT)	Designation as per VG-Norm
VITON®-E-3.2/1.6-FPMX-BK	3.2	1.6	0.70	VG 95343 T05 E 001 A
VITON®-E-4.8/2.4-FPMX-BK	4.8	2.4	0.80	VG 95343 T05 E 002 A
VITON®-E-6.4/3.2-FPMX-BK	6.4	3.2	0.90	VG 95343 T05 E 003 A
VITON®-E-9.5/4.8-FPMX-BK	9.5	4.8	1.00	VG 95343 T05 E 004 A
VITON®-E-12.7/6.4-FPMX-BK	12.7	6.4	1.20	VG 95343 T05 E 005 A
VITON®-E-19.0/9.5-FPMX-BK	19.0	9.5	1.40	VG 95343 T05 E 006 A
VITON®-E-25.4/12.7-FPMX-BK	25.4	12.7	1.80	VG 95343 T05 E 007 A
VITON®-E-38.0/19.0-FPMX-BK	38.0	19.0	2.40	VG 95343 T05 E 008 A
VITON®-E-50.8/25.4-FPMX-BK	50.8	25.4	2.80	VG 95343 T05 E 009 A

All dimensions in mm. Subject to technical changes.



Insulation

Non Shrinkable Tubing

Chloroprene tubing and grommets

Helsyn H

The chloroprene tubings are ideally suited to rigorous environments such as automotive, aerospace, mass transit and defence markets.

As the material is highly elastic, it's original size can be expanded 500% on application and 200% in continuous use.

To save time and effort when fitting the tubing, try the HellermannTyton NA three prong tools and the Hellerine lubricant, which are specially designed for use with HellermannTyton chloroprene tubing.

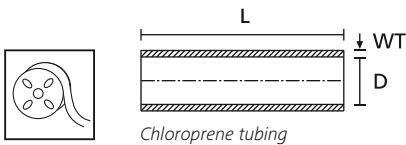
Features and benefits

- Highly elastic, easy to fit chloroprene tubing
- Withstands up to 120 °C intermittent temperature
- Covers many cable diameters with one size
- Available in cut lengths



H rubber tubing is highly flexible and easy to apply.

MATERIAL	Chloroprene Rubber (CR)
Operating Temperature	-65 °C to +95 °C, intermittent +120 °C
Flammability	UL 94 HB
Elongation at break	min. 500%



PART DESCRIPTION	Supplied Ø D min.	Wall (WT)	Bundle Ø max.
H12BKX100M-CR-BK	1.2	0.80	2.0
H15BKX100M-CR-BK	1.5	0.80	3.0
H25BKX100M-CR-BK	2.5	0.80	4.0
H30BKX100M-CR-BK	3.0	0.80	6.0
H40BKX100M-CR-BK	4.0	1.00	8.0
H50BKX100M-CR-BK	5.0	1.05	9.0
H75BKX25M-CR-BK	7.5	1.25	13.0

All dimensions in mm. Subject to technical changes.



PART DESCRIPTION	Supplied Ø D min.	Wall (WT)	Bundle Ø max.	Length (L)
H12X20BK-CR-BK	1.2	0.80	2.0	20.0
H15X20BK-CR-BK	1.5	0.80	3.0	20.0
H25X25BK-CR-BK	2.5	0.80	4.0	25.0
H30X25BK-CR-BK	3.0	0.80	6.0	25.0
H40X30BK-CR-BK	4.0	1.00	8.0	30.0
H50X25BK-CR-BK	5.0	1.05	9.0	25.0
H75X30BK-CR-BK	7.5	1.25	13.0	30.0

All dimensions in mm. Subject to technical changes.

Chloroprene tubing and grommets

Helsyn TH - thin wall



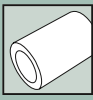
PART DESCRIPTION	Supplied Ø D min.	Wall (WT)	Bundle Ø max.
TH100BKX25M-CR-BK	10.0	1.00	20.0
TH120BKX25M-CR-BK	12.0	1.00	23.0
TH140BKX20M-CR-BK	14.0	1.10	25.0
TH170BKX20M-CR-BK	17.0	1.20	28.0

All dimensions in mm. Subject to technical changes.



PART DESCRIPTION	Supplied Ø D min.	Wall (WT)	Bundle Ø max.	Length (L)
TH100X35BK-CR-BK	10.0	1.00	20.0	35.0
TH120X50BK-CR-BK	12.0	1.00	23.0	50.0
TH140X50BK-CR-BK	14.0	1.10	25.0	50.0
TH170X50BK-CR-BK	17.0	1.20	28.0	50.0

All dimensions in mm. Subject to technical changes.



Installation aid for tubing and grommets

Hellerine

Hellerine lubricant for tubing and grommets installations.

Features and benefits

- Effective aid for affixing elastomer sleeves
- Universally employable
- Evaporates after installation
- Consists of 99% vegetable oils
- Discoloration-free
- Offered in 250 ml bottle or in cans of 5 l or 20 l



Hellerine lubricant in 250 ml plastic bottle.

PART DESCRIPTION	Description
HELLERINE 0.25 LITER-CL	Hellerine assembly aid, 0.25 liter
HELLERINE 5 LITER-CL	Hellerine assembly aid, 5 liter
HELLERINE 20 LITER-CL	Hellerine assembly aid, 20 liter

All dimensions in mm. Subject to technical changes.

Plastics know-how that enlightens

Replacing complex metal parts with thermoplastics is our speciality. Tailored to your needs, we design and manufacture components that are lighter, don't corrode, can combine several functions in a single piece and fully comply with end-of-life vehicle recycling requirements.

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