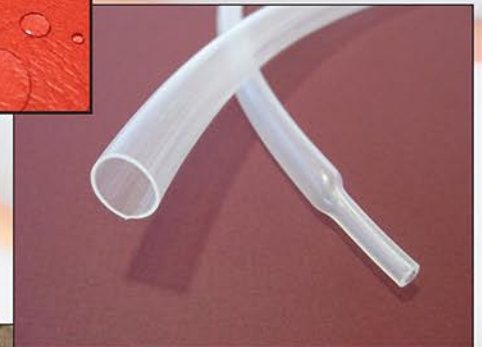
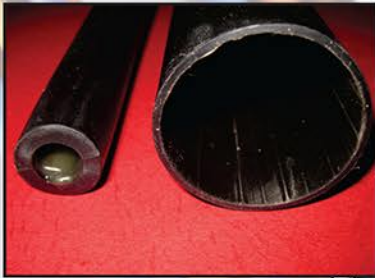
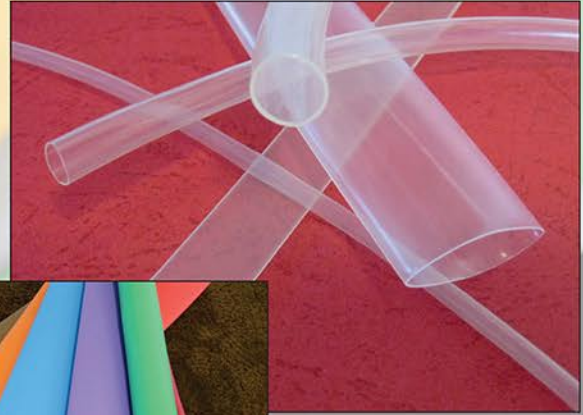
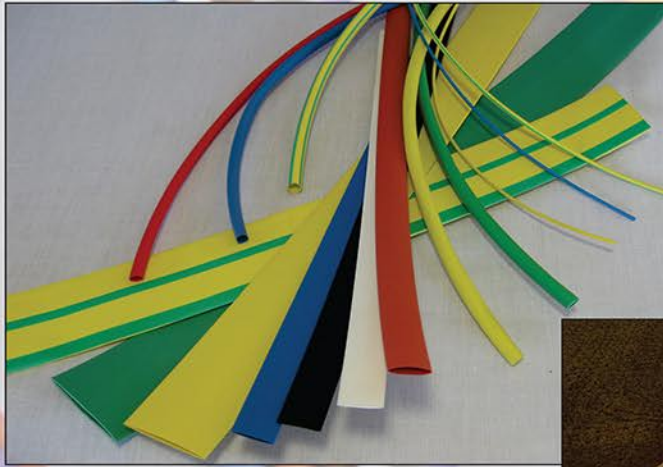
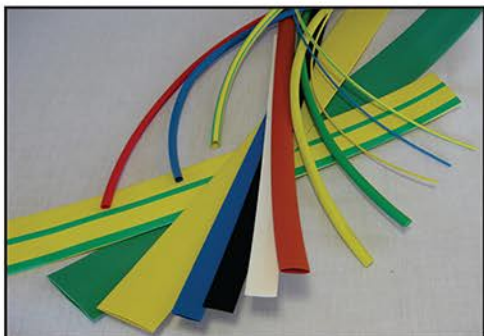


HEATSHRINK



Thin Wall

ATW



Technical Data

Properties	Test Methods	Typical Values
Tensile (MPa)	UL 224	> 10.4
Elongation (%)	UL 224	> 200
Heat Ageing: Tensile (MPa) : Elongation (%)	UL 224 (158°C x 168 hrs)	> 7.3 > 100
Heat Shock	UL 224 (250°C x 4hrs)	No Cracks/Dripping
Low temperature Flexibility	ASTM D 2671 (4 hrs @ - 35°C)	No Cracking
Copper Stability	ASTM D 2671 (158°C x 168 hrs)	Pass
RoHS (ppm)	IEC 62321 (Cd, Pb, Cr ⁶ , Hg)	< 200
Flammability	VW-1	Pass
Dielectric Strength (kV/mm)	ASTM D 2671	> 15
Volume Resistivity	ASTM D 257	
Halogen Test (ppm)	EN 114582 (BF, Ci, FI,I)	< 800



Dimensions

Product	Inside Diameter (mm)		Layflat size (mm)	Suitable for wire sizes (mm ²)	Wall Thickness (mm)		Length per reel (m)
	Supplied	Recovered			Supplied	Recovered	
ATW1.2	1.2	0.6	2		0.18	0.36	200
ATW1.6	1.6	0.8	2.5		0.18	0.36	200
ATW2.4	2.4	1.2	3.8	0.5	0.18	0.36	200
ATW3.2	3.2	1.6	5	1	0.20	0.40	200
ATW4.8	4.8	2.4	7.5	1.5-2.5	0.23	0.46	100
ATW6.4	6.4	3.2	10	4-6	0.28	0.60	100
ATW9.5	9.5	4.8	15	10-16	0.30	0.60	100
ATW12.7	12.7	6.4	20	25-35	0.33	0.66	100
ATW16	16.0	8	25		0.38	0.76	100
ATW19	19.0	9.5	30	50-95	0.40	0.80	100
ATW25.4	25.4	12.7	40	120-185	0.45	0.90	50
ATW32	32.0	16	50		0.45	0.90	50
ATW38.1	38.1	19	60	240-300	0.50	1.00	50
ATW50.8	50.8	25.4	80	500-630	0.50	1.00	25
ATW76	76.0	38	120		0.65	1.30	25
ATW100	100.0	50.8	160		0.65	1.30	25

Tolerances for recovered wall thickness from 1.6 to 16 mm + - 0.10 mm
19 to 50 mm + - 0.15 mm
50 to 100 mm + - 0.2 mm

Description

ATW is a halogen free, RoHS, flame retardant tubing designed for application in closed and sensitive environments such as trains, ships and in underground mining where the formation of acid gas after fire must be minimised to avoid consequential damage to computers, plc's and electronic control equipment. Being RoHS compliant means the product does not contain restricted substances such as Cadmium (Cd), Lead (Pb), Hexavalent Chrome (Cr⁶) and Mercury (Hg). RoHS is now a requirement in the automotive industry.

Features

- Cross-linked polyolefin
- Shrink Ratio 2 : 1
- Operating temperature - 55 to 125°C
- Excellent flame retardance VW-1
- Colours - Standard colours, green/ yellow stripe and clear
- Minimum shrink temperature 70°C
- 600V
- Black - UV Stable

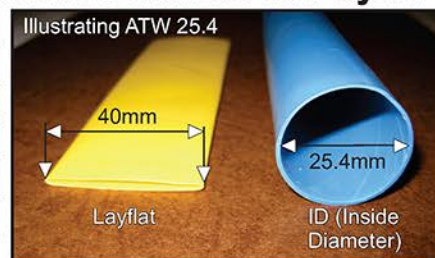
Applications

- Quick recovery at low temperatures makes it ideal for use in electronics and telecommunication applications
- RoHS coupled to flame retardant properties makes this product suitable for use in automotive harnesses
- Ships, trains and underground mining
- Any enclosed areas which contain sensitive electronic equipment and computers

Other colours on request

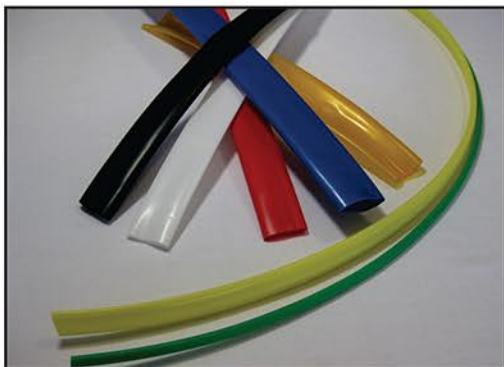


Inside Diameter vs. Layflat



Thin Wall Flexible

ATWF



Technical Data

Properties	Test Methods	Typical Values
Tensile (MPa)	UL 224	> 15
Elongation (%)	UL 224	> 300
Heat Ageing: Tensile (MPa) : Elongation (%)	UL 224 (158°C x 168 hrs)	> 12 > 250
Heat Shock (250°C x 4hrs)	UL 224	Pass
Low temperature Flexibility	ASTM D 2671 (4 hrs @ - 35°C)	No Cracks / Pass
Fluid Resistance * (MPa) (%)	ASTM D 2671 (25°C x 72 hrs)	Tensile > 7.8 Elongation > 150
Dielectric Strength (kV/mm)	ASTM D 2671	> 20
Volume Resistivity (Ω.cm)	ASTM D 257	10 ¹⁴

*Fluid Resistance: Tests conducted using brake fluid and unleaded petrol



Description

ATWF is a non flame retardant flexible heatshrink tubing which has excellent oil resistant. It forms an attractive covering for many automotive, appliance, and consumer-good applications. ATWF is RoHS and Halogen Free.

Features

- Shrink Ratio 2 : 1
- Operating temperature - 35 to 125°C
- High chemical resistance
- Good abrasion resistance
- Colours - Standard colours
- Minimum shrink temperature 115°C

Applications

- Insulation and colour coding of busbars and lugs.
- insulation and strain relief of electronic connections and terminations
- cable bundling
- mechanical protection and aesthetic covering for consumer goods

Dimensions

Product	Inside Diameter (mm)		Wall Thickness (mm)	
	Supplied	Recovered	Supplied	Recovered
ATWF2.4	2.4	1.2	0.25	0.50
ATWF3.2	3.2	1.6	0.25	0.50
ATWF4.8	4.8	2.4	0.25	0.50
ATWF6.4	6.4	3.2	0.25	0.60
ATWF9.5	9.5	4.8	0.35	0.60
ATWF12.7	12.7	6.4	0.35	0.60
ATWF16	16	8	0.40	0.75
ATWF19	19	9.5	0.40	0.75
ATWF25.4	25.4	12.7	0.50	0.90
ATWF32	32	16	0.50	1.10
ATWF38.1	38.1	19.1	0.60	1.20
ATWF50.8	50.8	25.4	0.70	1.50

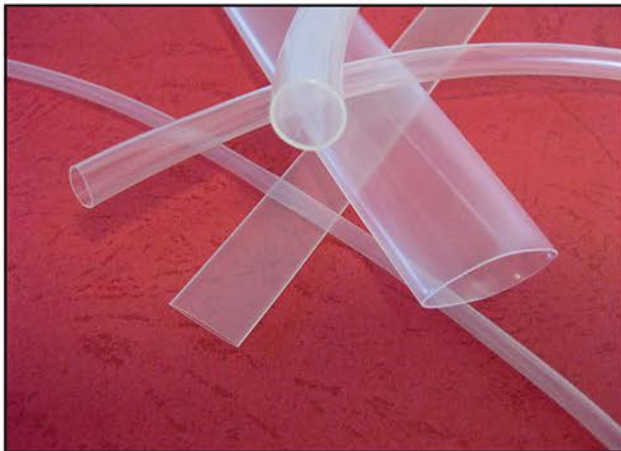
Eccentricity < 30% as per UL 224

Tolerances on size id's and wall thickness allow 15% on above values



Thin Wall Clear

ATWC



Technical Data

Properties	Test Methods	Typical Values
Tensile (MPa)	UL 224	> 15
Elongation (%)	UL 224	> 300
Heat Ageing : Tensile (MPa) : Elongation (%)	UL 224 (158°C x 168hrs)	> 12 > 250
Heat Shock (250°C x 4hrs)	UL 224	Pass
Low temperature Flexibility	ASTM D 2671 (4 hrs @ - 35°C)	No Cracks / Pass
Fluid Resistance * (MPa)	ASTM D 2671	Tensile > 10
Dielectric Strength (kV/mm)	ASTM D 2671	> 20
Volume Resistivity (Ω.cm)	ASTM D 257	10 ¹⁴

*Fluid Resistance: Tests conducted using brake fluid and unleaded petrol

Dimensions

Product	Inside Diameter (mm)		Wall Thickness (mm)	
	Supplied	Recovered	Supplied	Recovered
ATWC1.2	1.2	0.6	0.18	0.36
ATWC1.6	1.6	0.8	0.18	0.36
ATWC2.4	2.4	1.2	0.18	0.36
ATWC3.2	3.2	1.6	0.20	0.40
ATWC4.8	4.8	2.4	0.23	0.46
ATWC6.4	6.4	3.2	0.28	0.60
ATWC9.5	9.5	4.8	0.30	0.60
ATWC12.7	12.7	6.4	0.33	0.66
ATWC16	16	8.0	0.38	0.76
ATWC19	19	9.5	0.40	0.80
ATWC25.4	25.4	12.7	0.45	0.90
ATWC32	32	16	0.45	0.90
ATWC38.1	38.1	19.1	0.50	1.0
ATWC50.8	50.8	25.4	0.50	1.0
ATWC76	76	38	0.65	1.30

Tolerances for recovered wall thickness from 1.6 to 16 mm + - 0.10 mm
19 to 50 mm + - 0.15 mm
50 to 100 mm + - 0.2 mm

Description

ATWC is a non flame retardant clear tubing which has excellent oil resistant and clarity. ATWC is RoHS and halogen free.

Features

- Shrink Ratio 2 : 1
- Operating temperature - 55 to 125°C
- High chemical resistance
- Good abrasion resistance
- Excellent oil resistance
- Minimum shrink temperature 115°C

Applications

- Oil barrier in paper cable joints
- Abrasion and oil resistant covering for heatshrink and write and wrap labels
- Clear retainer for shock absorbers on safety harnesses
- Strain relief for electrical and electronic connections where visibility of connection is required

