

DUAL WALL TUBING



ACAT-300
ADW-300
ADW-400
ADW-UM3
ADW-UM4
ACCT

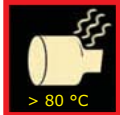
DUAL WALL TUBING SELECTION GUIDE

Part number	Description	Ratio	Temperature	Zero Halogen	RoHS	UL VW1	Flame retardant	Waterproof	Page
ACAT-300	Commercial grade dual wall tubing with hot-melt adhesive	3:1	110°C	No	Yes	No	Yes	Yes	25
ADW-300	Dual wall tubing with hot-melt adhesive, 3:1 shrink ratio	3:1	125°C	No	Yes	No	Yes	Yes	26
ADW-400	Dual wall tubing with hot-melt adhesive, 4:1 shrink ratio	4:1	125°C	No	Yes	No	Yes	Yes	26
ADW-UM3	High performance dual wall tubing with hot-melt adhesive	3:1	135°C	No	Yes	No	Yes	Yes	27
ADW-UM4	High performance dual wall tubing with hot-melt adhesive	4:1	135°C	No	Yes	No	Yes	Yes	27
ACCT	Dual wall tubing designed for crimped sealed connectors	3:1	125°C	No	Yes	No	Yes	Yes	28

DUAL WALL TUBING

ACAT-300

Commercial grade dual wall tubing



Applications

ACAT-300 is manufactured by coextrusion of polyolefin and meltable adhesive. Designed to provide both insulation and sealing for electronic components, wire splices and cables jackets.

Features

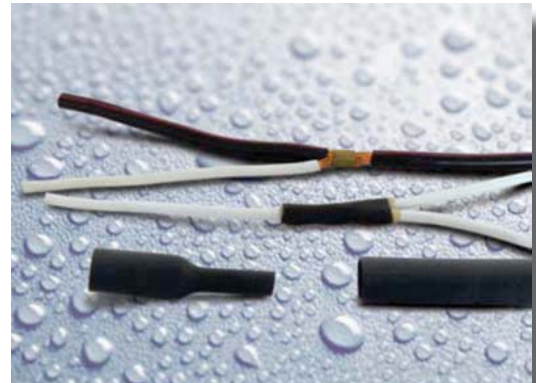
Commercial Grade.
Good electrical insulation and waterproof connection.
RoHs compliant.

Various

Operating temperature:- 45°C to +110°C
Minimum shrink temperature: 80°C
Meet: SAE-AMS-DTL-23053/4, UL 224

Standard color: Black

Only available in 1,22m cut lengths



Technical data

Property	Test Method	Typical Data
Tensile strength	ASTM D 2671	12MPa (Min.)
Tensile strength after aging (136°C/168 hrs.)	ASTM D 2671	Remains 70%
Elongation at break	ASTM D 2671	400% (min)
Elongation at break after aging (158°C/168 hrs.)	ASTM D 2671	>100% (min)
Longitudinal shrinkage	UL 224	0 to -10%
Heat shock	200°C/4 hrs.	No cracking, no dropping
Cold bend (-40°C/1 hr)	ASTM D 2671	No cracking
Voltage withstand (AC 2500V/60 seconds)	ASTM D 2671	No breakdown
Volume resistance	ASTM D 876	10 ¹⁴ Ω.cm (min)
Flammability	SAE-AMS-DTL-23053/4	Self-extingish in 30 sec
Copper corrosion (158°C/168 hrs.)	ASTM D 2671 Method B	Pass
Water absorption	ASTM D 570	<0,5%
Fluid resistance	MIL-DTL-23053/4	Pass

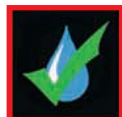
Dimensions

Normal Size (mm)	As Supplied (mm) Min. Inside Diameter	After Recoved (mm)			Standard Length m/piece
		Max. Inside Diameter	Total Wall Thickness (Min.)	Adhesive Thickness	
3/1	3.0	1.0	1.0	0.5	1.22
6/2	6.0	2.0	1.0	0.5	1.22
9/3	9.0	3.0	1.35	0.6	1.22
12/4	12.0	4.0	1.50	0.7	1.22
18/6	19.0	6.0	1.70	0.8	1.22
24/8	24.0	8.0	1.95	1.0	1.22
39/13	40.0	13.0	2.10	1.0	1.22
52/16	52.0	16.0	2.50	1.0	1.22

DUAL WALL TUBING

ADW-300 / 400

Dual wall tubing with adhesive, ratio 3:1 / 4:1



Applications

Manufactured by co-extrusion of polyolefin and hot-melt adhesive. Designed to provide both insulation and sealing for protected articles. Used to protect auto wires, shipping cable, bundle wires and metal tubes against water and moisture.

Features

Good electrical insulation and waterproof connection.

Various

Operating temperature: - 45°C to +125°C
Minimum shrink temperature: 80°C

Approvals: UL 224 125°C VW-1 600V File No.E204071 (except clear)
Meet: SAE-AMS-DTL-23053/4

Standard color: Black
Special colors: Red, blue, white, yellow, clear



Technical data

Property	Test Method	Typical Data
Tensile strength	ASTM D 2671	>10.4 MPa
Tensile strength after aging (158°C/168 hrs.)	ASTM D 2671	Remains 70%
Elongation at break	ASTM D 2671	>300% (min)
Elongation at break after aging (158°C/168 hrs.)	ASTM D 2671	100% (min)
Longitudinal shrinkage	UL 224	0 to -10%
Heat shock	250°C/4 hrs	No cracking, no dropping
Cold bend (-30°C/1 hr.)	ASTM D 2671	No cracking
Voltage withstand (AC 2500V/60 seconds)	ASTM D 2671	No breakdown
Volume resistance	ASTM D 876	>10 ¹⁴ Ω.cm
Flammability	SAE-AMS-DTL-23053/4	Self-extinguish in 30 sec
Copper corrosion (158°C/168 hrs.)	UL 224	Pass
Water absorption	ASTM D 570	<0,5%

Dimensions

Normal Size (mm)	As Supplied (mm) Inside Diameter (Min.)	After Removed (mm)			Standard Length	
		Inside Diameter (Max.)	Total Wall Thickness (Min.)	Adhesive Thickness	m/piece	m/spool
ADW-300 Shrink Ratio 3:1 Adhesive-lined tubing						
3/1	3.0	1.0	1.0	0.5	1.22	150
4.8/1.5	4.8	1.5	1.0	0.5	1.22	100
6/2	6.0	2.0	1.0	0.5	1.22	75
9/3	9.0	3.0	1.40	0.6	1.22	50
12/4	12.0	4.0	1.60	0.7	1.22	25
19/6	19.0	6.0	2.15	0.8	1.22	25
24/8	24.0	8.0	2.40	1.0	1.22	25
30/10	30.0	10.0	2.40	1.0	1.22	25
40/13	40.0	13.0	2.40	1.0	1.22	25
50/19	50.0	19.0	2.40	1.0	1.22	1.22
ADW-400 Shrink Ratio 4:1 Adhesive-lined tubing						
4/1	4.0	1.0	1.00	0.5	1.22	100
6/1.5	6.0	1.5	1.00	0.5	1.22	75
8/2	8.0	2.0	1.00	0.5	1.22	50
12/3	12.0	3.0	1.40	0.6	1.22	25
16/4	16.0	4.0	1.60	0.8	1.22	25
24/6	24.0	6.0	2.15	0.8	1.22	25
32/8	32.0	8.0	2.40	1.0	1.22	25
52/13	52.0	13.0	2.40	1.0	1.22	1.22

• Special spool lengths or cutted pieces available on request.
Special sizes and other special features available on request.

DUAL WALL TUBING

ADW-UM3 / UM4

High performance, flexible dual wall tubing with adhesive



Applications

ADW-UM heat-shrinkable tubing is manufactured by co-extrusion of polyolefin and hot-melt adhesive. Designed to provide both insulation and sealing for protected articles. Typical applications are environment sealing of electrical components such as wire splices and harness in automobile and communication industry.

Features

Operating temperature: - 55°C to +135°C
Minimum shrink temperature: 100°C
Resistant against diesel and lubricating oil

Approvals: UL 224 125°C VW-1 600V File No.E204071
Meet: SAE-AMS-DTL-23053/4

Standard color: Black



Technical data

Property	Test Method	Typical Data
Tensile strength	ASTM D 2671	10.4 MPa
Tensile strength after aging (158°C/168 hrs.)	ASTM D 2671	Remains 70%
Elongation at break	ASTM D 2671	300% (min)
Elongation at break after aging (158°C/168 hrs.)	ASTM D 2671	150% (min)
Longitudinal shrinkage	UL 224	0 to -10%
Heat shock	225°C/4 hrs	No cracking, no dropping
Cold bend (-30°C/1 hr.)	ASTM D 2671	No cracking
Voltage withstand (AC 2500V/60 seconds)	ASTM D 2671	No breakdown
Volume resistance	ASTM D 876	>10 ¹⁴ Ω.cm
Flammability	SAE-AMS-DTL-23053/4	Self-extingish in 30 sec
Copper corrosion (158°C/168 hrs.)	UL 224	Pass
Water absorption	ASTM D 570	<0,5%
Adhesive to aluminium	ASTM D 2671	60N/25mm
Fluid resistance	Tensile strength: 7Mpa (min.) Elongation:300% (Min.)	24hrs. at 23°C In diesel and lubricating oil

Dimensions

Normal Size (mm)	As Supplied (mm)	After Recoved (mm)			Standard Length		
		Inside Diameter (Min.)	Inside Diameter (Max.)	Total Wall Thickness (Min.)	Adhesive Thickness	m/piece	m/spool
ADW-UM3 Shrink Ratio 3:1 Adhesive-lined tubing							
3/1	3.0	1.0	1.0	0.5	1.22	150	
4.8/1.5	4.8	1.5	1.0	0.5	1.22	100	
6/2	6.0	2.0	1.0	0.5	1.22	75	
9/3	9.0	3.0	1.40	0.6	1.22	50	
12/4	12.0	4.0	1.60	0.7	1.22	25	
19/6	19.0	6.0	2.15	0.8	1.22	25	
24/8	24.0	8.0	2.40	1.0	1.22	25	
30/10	30.0	10.0	2.40	1.0	1.22	25	
40/13	40.0	13.0	2.40	1.0	1.22	25	
50/19	50.0	19.0	2.40	1.0	1.22	-	
ADW-UM4 Shrink Ratio 4:1 Adhesive-lined tubing							
4/1	4.0	1.0	1.00	0.5	1.22	100	
6/1.5	6.0	1.5	1.00	0.5	1.22	75	
8/2	8.0	2.0	1.00	0.5	1.22	50	
12/3	12.0	3.0	1.40	0.6	1.22	25	
16/4	16.0	4.0	1.60	0.8	1.22	25	
24/6	24.0	6.0	2.15	0.8	1.22	25	
32/8	32.0	8.0	2.40	1.0	1.22	25	
52/13	52.0	13.0	2.40	1.0	1.22	-	



DUAL WALL TUBING

ACCT Crimped connector tubing



Applications

ACCT heat-shrinkable tubing is manufactured by co-extrusion of super high strength polymeric materials and hot-melt adhesive. Designed to provide both insulation and sealing for wire connector.

Features

Shrink ratio: 3:1

Operating temperature: -55°C +125°C
Minimum shrink temperature: +110°C

Standard color: Red, Blue, Yellow

*See page 53 for complete connector assembly ACSC.



Technical data

Property	Test Method	Typical Data
Tensile strength	ASTM D 2671	28MPa (min)
Elongation at break	ASTM D 2671	500% (min)
Longitudinal shrinkage	UL224	0 to - 10 %
Heat Shock	250°C/4hrs.	No cracking, flowing of out wall
Heat resistance	165°C/168hrs.	No cracking, flowing of out wall
Cold bend (-40°C/1hr.)	ASTM D 2671	no cracking
Voltage withstand (AC 2500V/ 60 sec.)	ASTM D 2671	No breakdown
Volume resistance	ASTM D 876	10 ¹⁴ Ω cm (min)
Corrosion (158°C, 168 hrs.)	UL224	Pass
Water absorption	ASTM D 570	<0.5%
Fluid resistance (23°C/24 hrs)	ASTM D 2671	Good to excellent
Specific gravity		0.96
Dielectric strength	ASTM D 2671	32KV/mm

Dimensions

Part No.	Color	As Supplied (mm)	After Recovery (mm)				
		Inside Diameter (min.)	Inside Diameter (max.)	Total Wall Thickness	Adhesive Thickness (nom.)	Cut Length (mm)	Standard Length (m/spool)
ACCT-1	Red	4.3	1.4	1.30	0.56	38	100
ACCT-2	Blue	5.0	1.8	1.52	0.76	38	100
ACCT-3	Yellow	6.5	2.2	1.91	1.02	42	100