

Non-Metallic Systems

PADL Standard Weight Conduit



Technical Characteristics

Conforms to	Low voltage directive UL 1696 File E173968		
Approvals and Standards	 		
Degree of mechanical protection	High flexibility & fatigue life		
Degree of protection	IP40 - Adaptalok IP65 - Adaptalok IP66 - ATS or PC Fittings IP67 - ATS or PC Fittings IP68 - ATS or PC Fittings IP69K ATS or PC Fittings		
UV protection	Very High		
Finish	Black (BL)		
Application	Machine tools, equipment, where UL Recognition is required		
Normal operating temperature range	Application	Min Temp	Max Temp
	Static	- 40°C	+105°C
	Dynamic	- 25°C	+105 °C
For use with - Fitting range	Adaptalok , ATS & PC fittings		

Fire performance	Test Standard	Performance Rating	
	IEC 61386	Pass	Self Extinguishing & Halogen Free
	UL94	V2	



Testing data	Click or See pages 3 & 4
Type of material	Polyamide (Nylon) 6 - Impact Modified - heat stabilised



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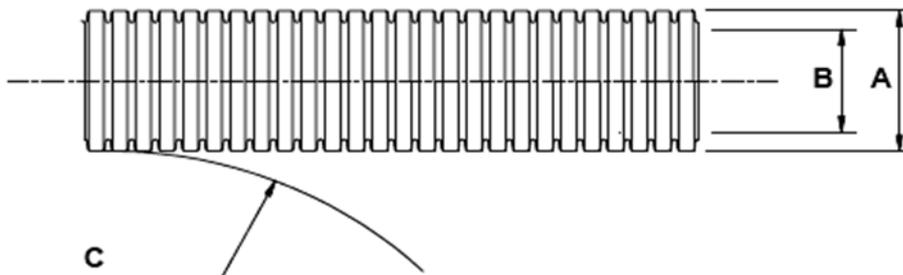
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Technical & Dimensional Data

Part No.	Conduit Size			Dimensions				Average Weight (kg/100m)
	Nominal Conduit Size	NW Conduit Size	Conduit Pitch	(A) Outside Diameter	(B) Inside Diameter	(C) Static Bend Radius	Reel Length	
PADL16	16mm	13	Coarse	15.8mm	12.0mm	30mm	100ft	4.6
PADL21	21mm	17	Coarse	21.2mm	16.2mm	40mm	100ft	7.8
PADL28	28mm	23	Coarse	28.5mm	22.6mm	45mm	100ft	13.0
PADL34	34mm	29	Coarse	34.5mm	29.0mm	55mm	100ft	15.5
PADL42	42mm	36	Coarse	42.5mm	36.5mm	60mm	100ft	19.5
PADL54	54mm	48	Coarse	54.5mm	47.5mm	70mm	100ft	26.0

To order quote part number, colour & reel length, e.g PADL28/BL/100FT



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BS EN 61386 Clarification

	Fitting	Compression	Impact	Min temp	Max temp	bending	electrical	IP solids	IP water	Corrosion	Tensile	Non-flame Propogating	Suspended load
PADL	ATS	1	3	4	4	4	0	6	7	-	1	1	0

Mechanical Properties

Test Type	Methods / Standards	Requirements	Value
Compression Strength	IEC61386		Class 1
Impact Strength @23°C	IEC61386-1	No Cracks. <20% deformation min value	>4.5J
Tensile Strength		Pull off of fitting minimum value	>250N
Static Bend Radius			2x OD
Dynamic Bend Radius		5000 cycles @ -25°C	4X OD

Thermal Properties

Test Type	Methods / Standards	Requirements	Value
Minimum Temp	Dynamic IEC61386	Dynamic 5000 cycles	-25°C
Maximum Short Term Temp			160°C
Minimum Static Temp		Permanent Use (30,000) Hours	-40°C
Maximum Static Temp		Permanent Use (30,000) Hours	105°C

Chemical Resistance Chart

Key:	Green	Yellow	Red	Black
Suitable :	● Astm No.1	● Diesel oil	● Methyl Bromide	● Sulphur Dioxide (Gas)
Limited Suitability :	● Astm No.2	● Diethylamine	● MEK	● Sulphuric Acid (10%)
Unsuitable :	● Astm No.3	● Ethanol	● Nitric Acid (10%)	● Sulphuric Acid (70%)
Not Tested :	● Acetic Acid (10%)	● Ether	● Nitric Acid (70%)	● Toluene
	● Acetone	● Ethylamine	● Oxalic Acid	● Transformer Oil
	● Aluminium Chloride	● Ethylene Glycol	● Ozone (Gas)	● 1,1,1-Trichloroethane
	● Aniline	● Ethyl Ethanoate	● Paraffin oil	● Trichloroethylene
	● Benzaldehyde	● Freon 32	● Petrol	● Turpentine
	● Benzene	● Hydrochloric Acid (10%)	● Phenol	● Vegetable Oil
	● Carbon tetrachloride	● Hydrochloric Acid (36%)	● Sea Water	● Vinyl Acetate
	● Chlorine water	● Hydrogen Peroxide (35%)	● Silver Nitrate	● Water
	● Chloroform	● Hydrogen Peroxide (87%)	● Skydrol	● White Spirit
	● Citric Acid	● Lactic Acid	● Sodium Chloride	● Zinc Chloride
	● Copper Sulphate	● Lubricating oil	● Sodium Hydroxide (10%)	
	● Cresol	● Methanol	● Sodium Hydroxide (60%)	

The information above is given as a guide only and is based on published technical data and experience. The chemical resistance of the above products is dependant on factors such as chemical exposure, concentration of the chemical and temperature. The above chemicals are valid for a temperature of 23°C. Use of the above table is at the users own discretion and risk. Those using it must satisfy themselves that their application presents no health and safety risks. The end user should assess compatibility with their application and contact Thomas & Betts for further information.

ADHERENCE TO THE CURRENT WIRING REGULATIONS BS7671 OR NEC WIRING REGULATIONS (FOR USA) IS STRONGLY ADVISED.

MINIMUM BEND RADIUS FOR FLEXING IS DEPENDANT UPON MINIMUM TEMPERATURE, BENDING FREQUENCY AND CHEMICAL ENVIRONMENT.

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UL File Number YDRQ2.E173968

Cat. No.	Max Working Temp (°C)	Indoor Use	Outdoor Use	FT-4
Mechanical Protection Tubing				
PADL Series	105	X	N/A	N/A

Cat. No.	Indoor Dry Locations	Liquid-Tight Locations
Fitting		
Adaptalok Series - Straight, 45 Degree, and 90 Degree With Metric Plastic Thread, Straight, and 90 Degree with NPT Plastic Thread	X	N/A
Adaptalok ATS Series - Straight, 45 Degree, and 90 Degree with Metric Brass Thread, Straight 45 Degree, and 90 Degree with Metric Plastic Thread, Straight, 45 Degree, and 90 Degree with NPT Brass Thread, Straight, 45 Degree, and 90 Degree with NPT Plastic Thread	X	X
Adaptalok PC Series - Straight, 45 Degree, and 90 Degree with Metric Plastic Thread	X	X

Fitting Performance

Test Type	Method / Standard	Requirement	Result
Flame	UL 1696 1 st Edition	-	Pass
Fitting Pullout	UL 1696 1 st Edition	156N for 1 min	Pass
Fitting Liquid-Tightness	UL 1696 1 st Edition	30 mins	Pass

Pre Test Conditions

Duration	Standard	Temperature	Relative Humidity
168 (Hours)	CSA C22.2 NO 227.3-05/UL1696	23 (°C)	50 (%)

Flammability

Test Type	Method / Standard	Requirement	Result	Unit
Flammability	UL94	Vertical (V0) or Horizontal (HB)	V2	HB-V0
Flammability	IEC 61386-1	1Kw Burner @ 45° Vertical burn	Pass	Pass/Fail

Toxicity

Test Type	Method / Standard	Requirement	Result	Unit
Halogen Free		<0.5%	Pass<0.1 %	Pass/Fail
Phosphorous Free		<0.5%	Pass<0.1 %	Pass/Fail
Sulphur Free		<0.5%	Pass<0.1 %	Pass/Fail