

Type PAL

Lightweight conduit



Flexible lightweight, PA nylon (PA6) conduit is a flame retardant conduit suitable for a wide range of applications.

Certifications / Standards:

(Refer to tables for certifications details)



Features & benefits:

- Lightweight - fire resistant conduit
- High flexibility & fatigue life
- Self-extinguishing, low smoke toxicity and halogen Free
- Very high UV resistance
- Available in black and grey

Applications:

- Construction - Commercial - Institutional
- OEM Assembly – Automation, Machinery, Panel builders
- Harness makers
- OEM Vehicles – Rail, Automotive, Marine
- Utility – Power & Energy, ICT & Data centre, Water & Waste
- Industry processing – pulp, paper, wood, food
- Infrastructure & Transport

Temperature range:

- Static applications: -40°C to +120°C
- Dynamic applications: -5°C to +120°C

UV Resistance:

- Very high

Material / Materials / Finishes:

- Fire Resistant Polyamide (Nylon) PA 6

Ingress protection:

- IP40 - Adapting & Jumbo Fittings
- IP66 - ATS, Adaptalok, Adaptaseal
- IP67 - ATS, Adaptalok with ALS Seal, Adaptaseal
- IP68 - ATS, Adaptalok with ALS Seal, Adaptaseal

Conforms to:

- CE marked to Low Voltage Directive 2014/35/EU
- RoHS Compliant to 2011/65/EU
- Conforms with end of life vehicle directive (ELV) EU200/53/EC
- BS Kitemark KM-35161
- Deutsche Bahn S4, SR2, ST2

Fire performance:

Test standard	Performance rating
IEC 61386	Pass
LUL	Pass
UL94	HB

Chemical resistance:

- View our chemical resistance guide [here](#).

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Type PA_L Conduit – Part numbers and dimensions

Part No.	Conduit size		Dimensions (mm)			Reel Length (m)
	(NC)	Conduit Pitch	Outside Dia. (A)	Inside Dia. (B)	Bend radi (C)	
PAFL10	10	Fine	10.05	6.20	20	50/100
PAFL13	13	Fine	13.10	9.65	25	50/100
PAFL16	16	Fine	16.05	11.15	35	50/100
PAFL18	18	Fine	18.40	13.95	40	50
PAFL21	21	Fine	21.20	16.65	45	50/100
PACL28	28	Coarse	28.35	22.00	50	50
PACL34	34	Coarse	34.50	27.70	60	50
PACL42	42	Coarse	42.40	34.80	65	25/50
PACL54	54	Coarse	54.30	46.50	75	25

Part number example: To order quote part number & reel length, e.g. PAFL21/BL/50M.

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Mechanical properties

Test type	Standard	Requirement	Status
Crush strength	BS EN 61386-1	<25% crush >90% recovery	>320N (Class 2)
Impact strength @ 23°C	BS EN 61386-1	No cracks <20% deformation min value	>20J (Class 5)
Impact strength @ -25°C	BS EN 61386-1	No cracks <20% deformation min value	>6J (Class 4)
Tensile strength	BS EN 61386-1	Fitting pull off (Type S fitting)	>100N
Dynamic bend radius @ -15 °C	BS EN 61386-23	5000 cycles minimum	4xOD

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Thermal properties

Test type	Standard	Requirement	Value
Minimum temperature	-	Permanent static use	-40°C
Minimum temperature	BS EN 61386-23	Dynamic Use (5000 cycles)	-5°C
Maximum temperature	-	Permanent use	120°C
Maximum temperature	BS EN 61386-23	Dynamic Use (5000 cycles)	150°C

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Flammability

Test type	Standard	Requirement	Result	Value
Oxygen index	ISO 4589-2	% Oxygen to support combustion	22	%
Flammability	UL94	Vertical (V0, V2) or Horizontal (HB)	HB	
Flammability	BS EN 61386-1	1KW burner at 45°	Pass	

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Toxicity

Test type	Standard	Requirement	Result	Value
Halogen free	LUL	<0.5%	Pass	
Phosphorous free	LUL	<0.5%	Pass	
Sulphur free	LUL	<0.5%	Pass	

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Pre-test conditions

Duration	Standard	Temperature	Relative humidity
168 (hrs)	BS EN 61386-1	23°C	50%

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