



Conduit
Medium Flexibility – Medium Fatigue

Construction
Polyolefin Covered Galvanised Steel



Metallic Systems TYPE LFH-SP

Applications Rail
Food Industry
Public Buildings

Fittings
IP68 n/a
IP66 n/a
IP65 Type SP Fittings – Type M and C90
IP54 Type SP Fittings – Type A, B, C, E & F

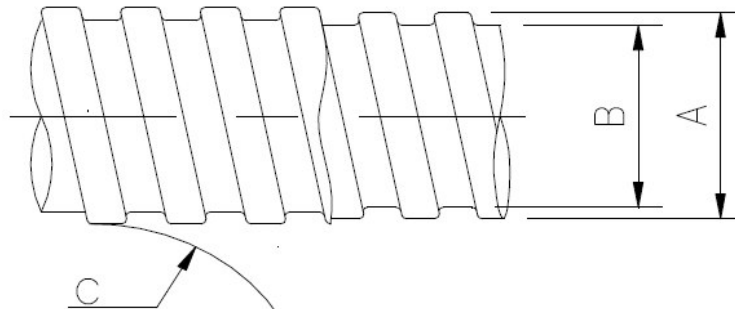
Characteristics High UV Resistance
Enhance Low Fire Hazard
Halogen Free
Self Extinguishing
High Mechanical Strength

Approvals
IEC61386
CE LVD
London Underground
NF

Material Polyolefin Covered Galvanised Steel



Part No.	Conduit Size			Dimensions				
	NC	NW	Pitch	(B) Inside Diameter	(A) Outside Diameter	Reel Length	(C) Min Bend Radius	Colour
LFH-SP12	12	-	-	10.3	14.0	25, 50	30	BL
LFH-SP16	16	-	-	13.0	17.0	10, 25, 50	35	BL
LFH-SP20	20	-	-	16.9	21.5	10, 25, 50	45	BL
LFH-SP25	25	-	-	21.4	26.0	10, 25, 50	55	BL
LFP-SP32	32	-	-	28.1	34.0	10, 25	60	BL
LFH-SP40	40	-	-	37.7	44.5	10, 25	80	BL
LFH-SP50	50	-	-	48.4	55.0	10, 25	90	BL
LFH-SP63	63	-	-	57.5	64.5	20	115	BL
LFH-SP75	75	-	-	70	79.0	10	150	BL





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Mechanical Properties

Test Type	Method/Standards	Requirements	Value
Crush Strength @ 23 °C	IEC61386-1	<25% crush >90% recovery	>1250N
Crush Strength @ 23 °C	AFX norm C1989	10% Crush, instantaneous result	2200
Impact Strength @ 23 °C		No Cracks <20% Deformation	>20 J
Impact Strength @ -25 °C	IEC61386-1	No Cracks. <20% deformation	>6 J
Tensile Strength @ 23 °C	IEC61386-1	With M-Type fitting	>1000N
Tensile Strength @ 23 °C	AFX norm T1987	Ultimate Pull-out of M-type fitting	1450N
Static Bend Radius @ 23 °C	AFX norm S1985	-	45mm
Dynamic Bend radius @ -5 °C	IEC61386-2-3	5000 cycles minimum	50mm

Thermal Properties

Test Type	Method/Standards	Requirements	Value
Minimum Temperature	-	Permanent use	-5 °C
Maximum Temperature	-	Permanent use	90 °C
Dynamic Bend Radius @ -5 °C	IEC61386-2-3	5000 cycles @ 50mm	Pass

Flammability, Smoke and Toxicity (FST) Performance

Test Type	Method/Standard	Requirement	Result	Unit
Halogen Free	LUL	<0.5%	Yes <0.1%	Yes/No
Phosphorous Free	LUL	<0.5%	Yes 0.2%	Yes/No
Sulphur Free	LUL	<0.5%	Yes 0.3%	Yes/No
Oxygen Index	ISO 4589	% Oxygen to support combustion	39	%
Glow Wire rating	IEC 60695-2-11	No ignition, extinguish with 2 s	850	°C
Flammability	UL94	Vertical (V0, V2) or Horizontal (HB)	V0	-
Flammability	IEC61386-1	1kW burner @ 45 °	Pass	Pass/Fail
FTI	ISO 4589-3		300	°C
I Classification	NFF16-101	Oxygen Index and Glow wire	I3	-
F Classification	NFF16-101/102	Smoke density & toxicity	F1	-
Smoke Density	ATS1000	In flaming mode <100 @ 4 mins	44	Pass
	ATS1000	In Non-flaming mode <100 @ 4mins	55	Pass
Smoke Density	BS6853	A ₀ <0.02	0.0175	A ₀
Smoke Density	ASTM E-662	Flamng mode Ds max	48	-
Toxicity	NES713 Issue 3	Smoke Toxicity ≤5.0 or ≤10.0	1.6	Pass

Pre test Conditions

Duration	Standard	Temperature	Relative Humidity
168 (Hours)	IEC61386	23 (°C)	50 (%)



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Chemical Properties

Suitable

Limited Suitability

Astm No.1	UNSUITABLE	Methanol	
Astm No.2		Methyl Bromide	UNSUITABLE
Astm No.3		MEK	UNSUITABLE
Acetic Acid (10%)		Nitric Acid (10%)	
Acetone	UNSUITABLE	Nitric Acid (70%)	UNSUITABLE
Aluminium Chloride		Oxalic Acid	
Aniline		Ozone (Gas)	
Benzaldehyde	UNSUITABLE	Paraffin oil	
Benzene	UNSUITABLE	Petrol	UNSUITABLE
Carbon tetrachloride	UNSUITABLE	Phenol	UNSUITABLE
Chlorine water		Sea Water	
Chloroform	UNSUITABLE	Silver Nitrate	
Citric Acid		Skydrol	UNSUITABLE
Copper Sulphate		Sodium Chloride	
Cresol	UNSUITABLE	Sodium Hydroxide (10%)	
Diesel oil		Sodium Hydroxide (60%)	
Diethylamine		Sulphur Dioxide (Gas)	
Ethanol		Sulphuric Acid (10%)	
Ether	UNSUITABLE	Sulphuric Acid (70%)	
Ethylamine		Toluene	
Ethylene Glycol		Transformer Oil	
Ethyl Ethanoate	UNSUITABLE	1,1,1-Trichloroethane	
Freon 32	UNSUITABLE	Trichloroethylene	
Hydrochloric Acid (10%)	UNSUITABLE	Turpentine	UNSUITABLE
Hydrochloric Acid (36%)	UNSUITABLE	Vegetable Oil	
Hydrogen Peroxide (35%)		Vinyl Acetate	UNSUITABLE
Hydrogen Peroxide (87%)	UNSUITABLE	Water	
Lactic Acid		White Spirit	UNSUITABLE
Lubricating oil		Zinc Chloride	

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 Adaptaflex for further information.

IEC 61386 CLASSIFICATION

	Fitting	Compression	Impact	Min temp	Max temp	Bending	Electrical	IP Solids	IP Water	Corrosion	Tensile	Non-Flame Propagation	Suspended Load
LFH-SP	SP(M)	4	4	2	2	4	2	6	5	-	4	1	5