Conduit Systems - Co-Polyester

CPC Medium Weight - Flame Retarded

Harnessflex
SPECIALIST CONDUIT SYSTEMS

Technical Characteristics

Conforms to	CE Low voltage directive RoHS Compliant Conforms with End of Life Vehicle directive (ELV) EU200/53/EC
Approvals and Standards	CE RoHS
Degree of mechanical protection	Very High flexibility & fatigue life. High abrasion, impact and shock resistance
Degree of protection	IP40 - Hinged fittings IP67 - Sealed fittings
UV protection	Very High
Finish	Black (BL) only
Application	A Low smoke, low toxicity conduit, CP has excellent high and low temperature properties, making ideal for harness applications such as engine, body section and chassis. CPC is resistant to hydrocarbons, greases, fuels and oils.

Normal operating temperature range

Application	Min Temp	Max Temp
Static	**- 50°C**	**+135°C**
Dynamic	**- 25°C**	**+~~150~~ °C**

For use with - Fitting range	For use with all hinged and sealed fittings in the Harnessflex range

Fire performance

Test Standard	Performance Rating	
IEC 61386	Pass	
NFF16-101 /2	I4 / F1	Self Extinguishing & Halogen Free
ISO 4589	30.5 %	
UL94	V2	
IEC 60695	960°C	

Testing data	Click or See pages 3 & 4
Type of material	Flame Retarded Co-Polyester
Image	

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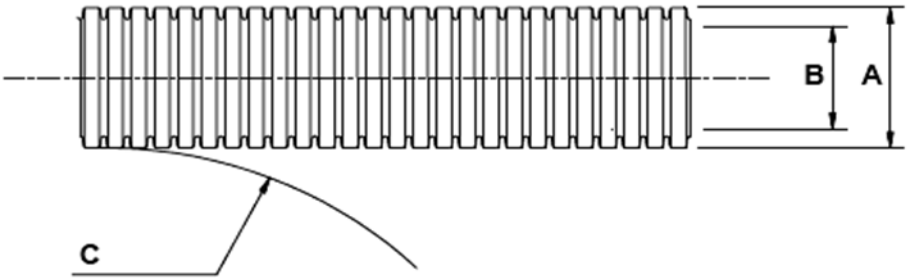
Technical & Dimensional Data

Part No.	Conduit Size		Dimensions				Average Weight
	(NC)	(NW)	(A) Outside Diameter (Mid Size)	(B) Inside Diameter	(C) Minimum Static Bend Radius	Reel Length (m)	(Kg/100m)
CPC08	08	7.5	9.8mm	6.2mm	20mm	50	2.6
CPC12	12	10	13.0mm	9.4mm	25mm	50	3.9
CPC16	16	13	16.0mm	11.0mm	30mm	50	5.3
CPC20	20	17	21.2mm	16.1mm	40mm	50	8.4
CPC25	25	22	25.3mm	21.0mm	45mm	50	13.5
CPC28	28	23	28.5mm	22.5mm	45mm	50	14.0
CPC32	32	29	34.5mm	27.2mm	55mm	50	17.3
CPC40	40	36	42.5mm	34.2mm	60mm	25	20.6
CPC50	50	48	54.1mm	46.0mm	70mm	25	33.0
To order quote part number, colour & reel length, e.g CPC/25m							



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Mechanical Properties

Test Type	Methods / Standards	Requirements	Value
Crush Strength	IEC61386-1	<25% crush >90% recovery	>125N
Tensile Strength	IEC61386-1	Fitting Pull off (Hinbged Fitting)	>100N
Impact Strength @-25°C	IEC61386-1	No Cracks <20% deformation min value	>6J
Impact Strength @ 23°C	IEC61386-23	-	-
Dynamic Bend radius @-45 °C	IEC61386-23	5000 cycles minimum	6xOD

Thermal Properties

Test Type	Methods / Standards	Requirements	Value
Minimum Temperature		Static Permanent Use	-50°C
Minimum Temperature	IEC61386-23	Dynamic Use (5000 cycles)	-45°C
Maximum Temperature		Permanent Use (30,000) Hours	135°C
Short Term Temperature		Temporary Use (3,000) Hours	150°C
Short Term Temperature		Temporary Use (200) Hours	175°C

Chemical Resistance Chart

Key:

Suitable :

Limited Suitability :

Unsuitable :

Not Tested :

Astm No.1	Diesel oil	Methyl Bromide	Sulphur Dioxide (Gas)
Astm No.2	Diethylamine	MEK	Sulphuric Acid (10%)
Astm No.3	Ethanol	Nitric Acid (10%)	Sulphuric Acid (70%)
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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Flammability

Test Type	Method / Standard	Requirement	Result	Unit
Oxygen Index	ISO 4589-2	% Oxygen to support combustion >34%	30.5	%
Glow Wire Rating	IEC 60695	No Ignition to Extinguish with 30s	960	°C
Flammability	UL94	Vertical (V0) or Horizontal (HB)	V2	HB/V0
Flammability	IEC 61386	Vertical Burn	Pass	Pass/Fail
Flammability	IEC 61386	Self extinguishing <30s	4	Seconds
Ignition Rating	NF F16-101/2	Glow Wire & oxygen index	I4	-

Smoke

Test Type	Method / Standard	Requirement	Result	Unit
Fume Rating	NF F16-101/2	Smoke & Toxicity	F1	-

Toxicity

Test Type	Method / Standard	Requirement	Result	Unit
Halogen Free	CEI20-37 Part 2	≤0.30%	0.0	%
Toxicity	CEI 20-37/7	**≤2**	1.7	-

Pre Test Conditions

Duration	Standard	Temperature	Relative Humidity
168 (Hours)	BS EN IEC61386	23 (^{0}C)	50 (%)

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