Conduit Systems - Polypropylene

PP - Medium Weight

Harnessflex
SPECIALIST CONDUIT SYSTEMS

Technical Characteristics

Conforms to	CE mark to the Low voltage directive RoHS Compliant End of Life Vehicle Directive (ELV) EU 2000/53/EC
Approvals and Standards	CE RoHS
Degree of mechanical protection	Very High flexibility and acid resistance. Medium fatigue life, impact and shock resistance
Degree of protection	IP40 - Hinged fittings IP67 - Sealed fittings
UV protection	High
Finish	Black (BL) only
Application	PP is particularly used in lighter applications where compression strength and LFH is not so important. The main property of this conduit, being acid resistance.

Normal operating temperature range

Application	Min Temp	Max Temp
Static	**- 20°C**	**+90°C**
Dynamic	**- 5°C**	**+105 °C**

For use with - Fitting range	For use with all hinged and sealed fittings in the Harnessflex range		
Fire performance	**Test Standard**	**Performance Rating**	
	ISO 4589	18 %	
	UL94	HB	Halogen Free **Not self extinguishing**
Testing data	Click or See pages 3 & 4		
Type of material	Modified Polypropylene		

Image

Cable Management Products Ltd.
CMG House - Station Road - Coleshill - B46 1HT - United Kingdom
Tel: +44(0)1675 468 222 - Fax: +44(0)1675 464 930
Technical Support e-mail: cmg.conduitsystems@tnb.com - www.harnessflex.com

Thomas&Betts
A Member of the ABB Group

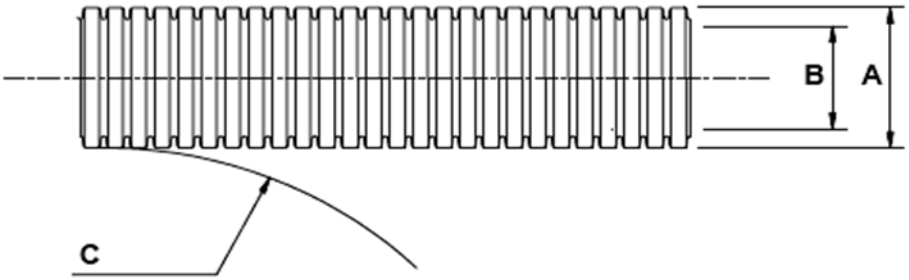
Conduit Systems - Polypropylene

PP - Medium Weight

Harnessflex
SPECIALIST CONDUIT SYSTEMS

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)
PP08	08	7.5	10.0mm	6.4mm	15mm	100	1.4
PP10	10	8.5	11.5mm	8.6mm	20mm	100	1.5
PP12	12	10	13.0mm	9.6mm	25mm	50	2.2
PP16	16	13	16.2mm	11.2mm	35mm	50	3.1
PP20	20	17	21.2mm	16.9mm	35mm	50	4.6
PP25	25	22	25.6mm	21.5mm	40mm	50	5.2
PP28	28	23	28.5mm	23.2mm	45mm	50	6.5
PP32	32	29	34.5mm	29.1mm	55mm	50	8.5
To order quote part number, colour & reel length, e.g PP25/50m							



Cable Management Products Ltd.
CMG House - Station Road - Coleshill - B46 1HT - United Kingdom
Tel: +44(0)1675 468 222 - Fax: +44(0)1675 464 930
Technical Support e-mail: cmg.conduitsystems@tnb.com - www.harnessflex.com

Thomas&Betts
A Member of the ABB Group

Conduit Systems - Polypropylene

PP - Medium Weight

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 @-5°C	IEC61386-1	No Cracks <20% deformation min value	>2J
Impact Strength @ 23°C	IEC61386-23	No Cracks <20% deformation min value	>6J
Dynamic Bend radius @-5 °C	IEC61386-23	5000 cycles minimum	4xOD

Thermal Properties

Test Type	Methods / Standards	Requirements	Value
Minimum Temperature		Static Permanent Use	-20°C
Minimum Temperature	IEC61386-23	Dynamic Use (5000 cycles)	-5°C
Maximum Temperature		Permanent Use (30,000) Hours	90°C
Short Term Temperature		Temporary Use (3,000) Hours	105°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.

Cable Management Products Ltd.
CMG House - Station Road - Coleshill - B46 1HT - United Kingdom
Tel: +44(0)1675 468 222 - Fax: +44(0)1675 464 930
Technical Support e-mail: cmg.conduitsystems@tnb.com - www.harnessflex.com

Conduit Systems - Polypropylene

PP - Medium Weight

Harnessflex SPECIALIST CONDUIT SYSTEMS

Flammability

Test Type	Method / Standard	Requirement	Result	Unit
Oxygen Index	ISO 4589-2	% Oxygen to support combustion >34%	18.0	%
Flammability	UL94	Vertical (V0) or Horizontal (HB)	HB	HB/V0

Smoke

Test Type	Method / Standard	Requirement	Result	Unit

Toxicity

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

Pre Test Conditions

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

Cable Management Products Ltd.
CMG House - Station Road - Coleshill - B46 1HT - United Kingdom
Tel: +44(0)1675 468 222 - Fax: +44(0)1675 464 930
Technical Support e-mail: cmg.conduitsystems@tnb.com - www.harnessflex.com

Thomas&Betts A Member of the ABB Group