Conduit Systems - Polyketone

PKC Standard Weight - High Specification

Harnessflex
SPECIALIST CONDUIT SYSTEMS

Technical Characteristics

Conforms to	~~CE Low voltage directive~~ ~~RoHS Compliant~~
Approvals and Standards	CE RoHS
Degree of mechanical protection	High flexibility - Very High fatigue life & abrasion, impact and shock resistance
Degree of protection	IP40 - Hinged fittings IP67 - Sealed fittings
UV protection	Very High
Finish	Black (BL) only
Application	A high specification conduit with high performance characteristics, can be used in the some of the most demanding applications.

Normal operating temperature range

Application	Min Temp	Max Temp
Static	**- 60°C**	**+260°C**
Dynamic	**- 45°C**	**+~~260~~ °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	
UL94	V0	Self Extinguishing & Halogen Free
NF F16-102	I2 F1	
ISO 4589-2	35.0%	
IEC 60695	960°C	

Testing data	Click or See pages 3 & 4
Type of material	Polyketone - Super low fire hazard
Image	

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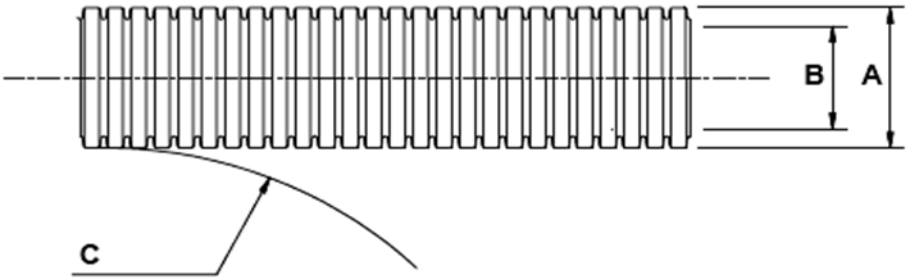
Technical & Dimensional Data

Part No.	Conduit Size		Dimensions				Average Weight
	(NC)	(NW)	(A) Outside Diameter	(B) Inside Diameter	(C) Min. Bend Radius	Reel Length (m)	(Kg/100m)
PKC12	13	10.0	14.1mm	10.0mm	35mm	25	1.0
PKC16	16	13.0	17.2mm	11.7mm	45mm	25	1.5
PKC20	21	17.0	23.6mm	16.6mm	60mm	25	1.9
PKC28	28	23.0	30.0mm	21.7mm	65mm	25	2.8
PKC32	34	29.0	36.0mm	27.7mm	80mm	25	3.9
To order quote part number, colour & reel length, e.g PKC/25m							



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Mechanical Properties

Test Type	Methods / Standards	Requirements	Value
Crush Strength	IEC61386-1	<25% crush >90% recovery	>320N
Tensile Strength	IEC61386-1	Fitting Pull off (Hinged Fitting)	125N
Impact Strength @ -45 °C	IEC61386-1	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		Permanent Use (30,000 Hours)	-60°C
Maximum Temperature		Permanent Use (30,000 Hours)	260°C
Maximum Short Term Temperature		Temporary Use	300°C
Heat Load Test @250°C	IEC61386-1	Weight @ crush classification 48hrs	Pass

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	% Oxygen to support combustion >34%	35	%
Glow Wire Rating	IEC 60695	No Ignition to Extinguish within 2s	960	°C
Flammability	UL94	Vertical (V0) or Horizontal (HB)	V0	HB/V0
Flammability	IEC 61386-1	Self Extinguishing <30s	4s	Seconds
Flammability	IEC 61386-1	1kW burner @45°	Pass	Pass/Fail
Flammability	NF F16-101/2	Glow Wire & oxygen index	I2	-

Smoke

Test Type	Method / Standard	Requirement	Result	Unit
Fume Rating	NF F16-101	Smoke & Toxicity	F1	-
Smoke Density	BS6853 Annex D	Ao <0.02	0.003	Ao
Smoke Density	ASTM E-662	Ds <100 in both modes	10	Ds Max

Toxicity

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

Pre Test Conditions

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

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