Metallic Systems - Pliable

PSBF - PVC Covered - Liquid Tight

Technical Characteristics

Conforms to	BSI Kitemark KM-90009 Low voltage directive
Approvals and Standards	
Degree of mechanical protection	Pliable (Bend to Shape)
Degree of protection	IP67 - Standard with C12 fittings IP66 - Standard with C12 fittings
UV protection	Very High
Finish	Black
Application	Liquid tight pliable - Indoors / Outdoors, marine, buildings, infrastructure

Normal operating temperature range

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

For use with - Fitting range	C12 - BCM

Fire performance

Test Standard	Performance Rating	
ISO 4589-2	28%	(See Fire testing data for fire performance overview)
IEC 60695	850°C	
UL94	V0	
IEC 61386-1	Pass	

Testing data	Click or See pages 3 & 4
Type of material	Galvanised steel & Kraft Paper core - PVC covering

Image

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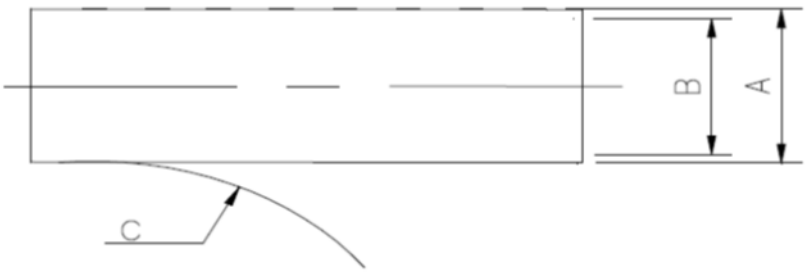
Technical & Dimensional Data

Conduit size metric **(mm)**	12	16	20	25	32	40	50
Conduit size US trade **(inches)**	5/16”	3/8”	1/2”	3/4”	1”	1 1/4”	1 1/2”
Part code	PSBF02*	PSBF03*	PSBF04*	PSBF05*	PSBF06*	PSBF07*	PSBF08*
Coil length **(m)**	10/30	10/30	10/30	10/30	10/20	10/20	10/20
A - Outside diameter **(mm)**	14.6	17.8	21.0	27.3	34.0	40.4	53.1
B - Inside diameter **(mm)**	8.3	11.6	14.6	20.4	26.7	32.8	45.3
C - Static bend radius **(mm)**	25.0	30.0	35.0	45.0	55.0	70.0	110.0
Average weight **(KG/100m)**	22.6	27.2	32.0	48.0	78.5	98.0	140.0
For ordering code add coil length to part code - e.g PSBF0430							



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BS EN 61386 Classification

	Fitting	Compression	Impact	Min temp	Max temp	bending	electrical	IP solids	IP water	Corrosion	Tensile	Non-flame Propogating	Suspended load
PSBF04	BCM	4	4	2	2	2	2	6	7	2	3	1	0

Mechanical Properties

Test Type	Methods / Standards	Requirements	Value
Crush Strength @ 23°C	IEC61386-1	<25% crush >90% recovery	>1250N
Crush Strength @ 23 °C		10% Crush, Instantaneous Value	1500N
Impact Strength @ 23 °C	IEC61386-1	No Cracks <20% deformation	>20J
Impact Strength @-5 °C	IEC61386-1	No Cracks. <20% deformation	>6J
Tensile Strength	IEC61386-1	With BCM Fitting	>1000N
Tensile Strength		Ultimate pull-out of BCM Fitting	1400N

Thermal Properties

Test Type	Methods / Standards	Requirements	Value
Minimum Static		Permanent Use	-20°C
Maximum Static		Permanent Use	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.

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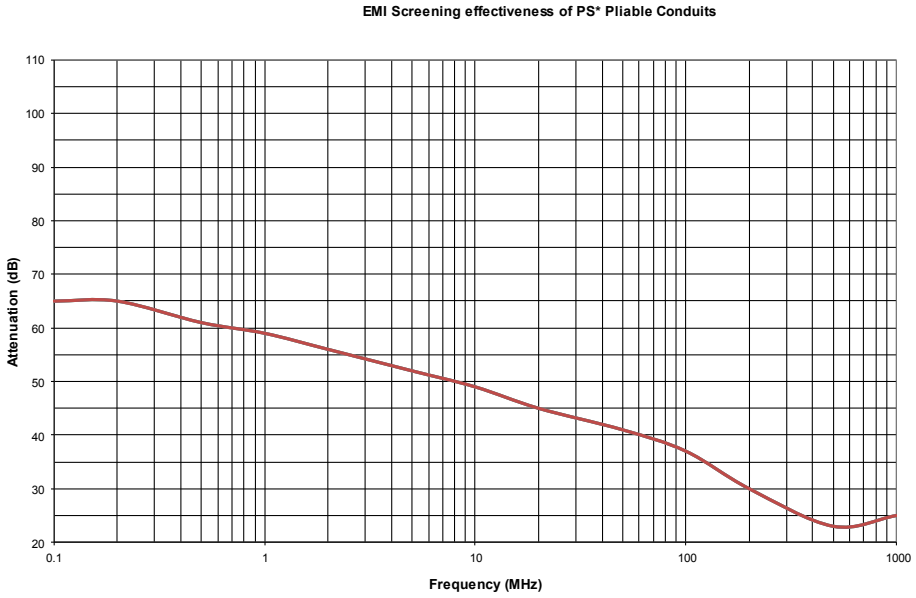
Flammability

Test Type	Method / Standard	Requirement	Result	Unit
Oxygen Index	ISO 4589-2	% Oxygen to support combustion	28	%
Glow Wire Rating	IEC 60695	No Ignition to Extinguish with 30s	850	°C
Flammability	UL94	Vertical (V0, V2) or Horizontal (HB)	V0	
Flammability	IEC 61386-1	1Kw Burner @ 45°	Pass	Pass/Fail

Pre Test Conditions

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

EMC Screen Level



The graph to the right shows the results of PSBF04 screened conduit, with its appropriate fittings.

The conduit is tested by ERA technology, to IEC60096/2:93 (radio frequency cables part 1).

Tests measured attenuation in decibels (dB) over the frequency range covered by the EMC directive, 0.1 to 1000MHz.

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