

# 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%
IEC 60695	850°C
UL94	V0
IEC 61386-1	Pass

(See Fire testing [data](#) for fire performance overview)

Testing data

Click or See pages [3](#) & [4](#)

Type of material

Galvanised steel & Kraft Paper core - PVC covering

Image



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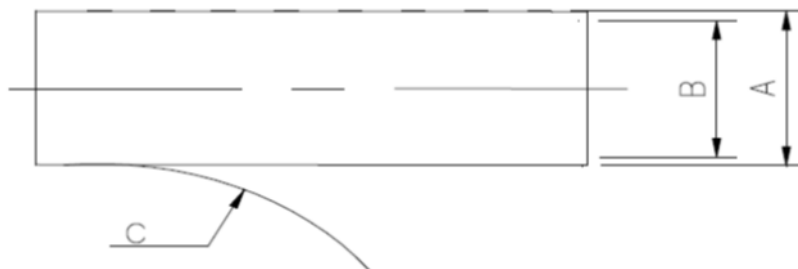
## PSBF - PVC Covered - Liquid Tight



### 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
<b>A</b> - Outside diameter (mm)	14.6	17.8	21.0	27.3	34.0	32.8	45.3
<b>B</b> - Inside diameter (mm)	8.3	11.6	14.6	20.4	26.7	32.8	45.3
<b>C</b> - 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:	● 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
Suitable :	● Acetone	● Ethylamine	● Oxalic Acid	● Transformer Oil
Limited Suitability :	● Aluminium Chloride	● Ethylene Glycol	● Ozone (Gas)	● 1,1,1-Trichloroethane
	● Aniline	● Ethyl Ethanoate	● Paraffin oil	● Trichloroethylene
Unsuitable :	● Benzaldehyde	● Freon 32	● Petrol	● Turpentine
	● Benzene	● Hydrochloric Acid (10%)	● Phenol	● Vegetable Oil
	● Carbon tetrachloride	● Hydrochloric Acid (36%)	● Sea Water	● Vinyl Acetate
Not Tested :	● 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

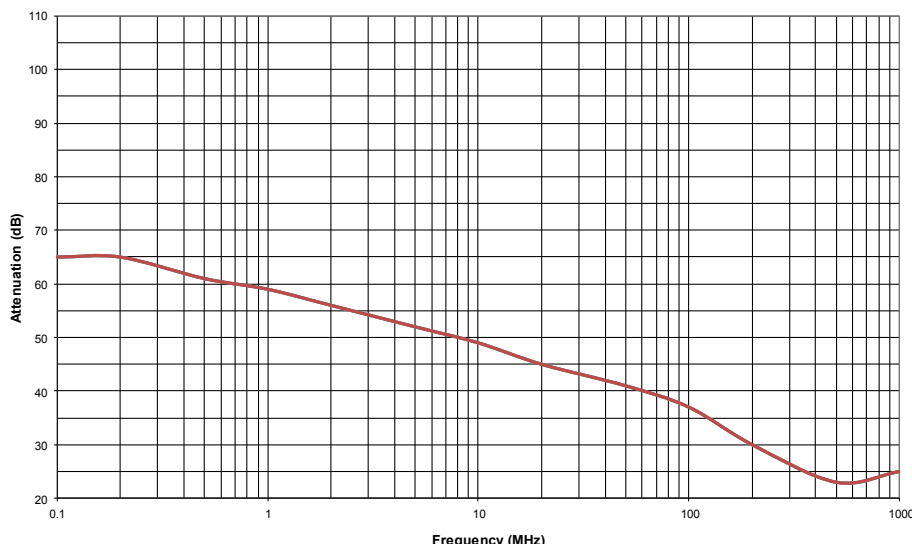
Test Type	Method / Standard	Requirement	Result	Unit
Oxygen Index	ISO 4589-2	% Oxygen to support combustion	28	%
Glow Wire Rating	IEC 60695	No Ignition to Extinguish with 30s	850	°C
Flammability	UL94	Vertical (V0, V2) or Horizontal (HB)	V0	
Flammability	IEC 61386-1	1Kw Burner @ 45°	Pass	Pass/Fail

### Pre Test Conditions

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

### EMC Screen Level

EMI Screening effectiveness of PS\* Pliable Conduits



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.