TECHNICAL DATA SHEET

PMAFLEX Multilayer - XPCS - Corrugated Conduit

Very flexible, heavy-duty



Flexible, weather resistant multilayer conduit suitable for use in external rail rolling stock applications

Applications:

Static and dynamic external applications on railway vehicles

- On the roof ☑
  PA12 outer layer has excellent UV resistance characteristics
- On inter-carriage connections ☑
  Excellent resistance to fatigue when exposed to continuous bending
- On bogies and undercarriage ☑
  Excellent resistance to impact at low temperatures

Features & Benefits:

- Excellent mechanical characteristics, also under extreme climatic conditions (low temperature and low humidity)
- Very Good flexibility
- Self-extinguishing
- High fire safety specification

Materials:

- High-grade, specially formulated PA12/PA6

Compatible with:

- PMAFIX Pro, PMAFIX fittings
- PMA accessories
- PMAGRIP flange

Temperature range:

- –50°C ... +95°C continuous, +150°C short-term

Conforms to:

- EN 45545-2 HL2 (R22 & R23)
- NFPA 130
- UN Regulation No. 118

Weathering resistance:

- Excellent UV resistance and weathering characteristics

Colour:

- Outer layer: black
- Inner layer: green

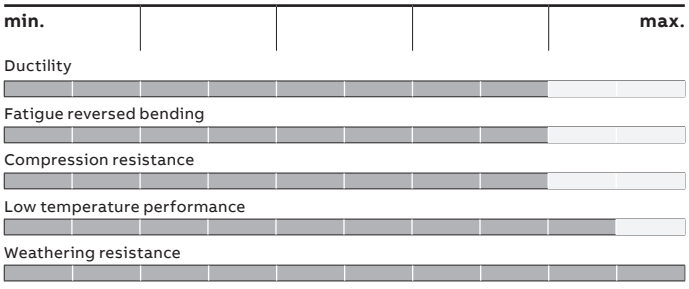
Chemical properties:

- Please refer to www.pma.ch
- (Technical Information / Chemical Resistance)

Environmental properties:

- Free from halogens and cadmium
- RoHS and REACH compliant

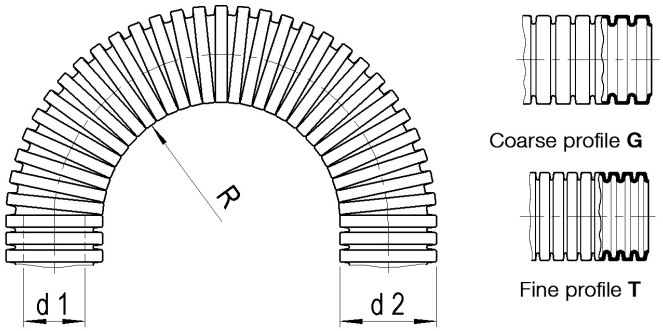
XPCS-Index



Product selection:

Part no.	Profile	Conduit size		rec. fitting thread size		Dimensions in mm (nom.)				Weight	Packing unit
black/green	T/G	NW	metric	PG	metric	d1	d2	stat. R	dyn. R.	kg/100 m	metre
XPCST-07BG	T	7	10	9	M12x1.5	6.9	10.0	15	40	2.2	100
XPCST-10BG	T	10	12	9	M12x1.5	9.8	12.8	20	50	2.8	50
XPCST-12BG	T	12	16	11	M16x1.5	12.1	15.6	25	65	3.8	50
XPCST-17BG	T	17	20	16	M20x1.5	16.5	21.1	35	85	5.7	50
XPCSG-17BG	G	17	20	16	M20x1.5	15.8	21.1	35	85	6.3	50
XPCSG-23BG	G	23	25	21	M25x1.5	21.9	28.4	45	110	9.9	50
XPCSG-29BG	G	29	32	29	M32x1.5	27.7	34.5	55	135	13.3	50
XPCSG-36BG	G	36	40	36	M40x1.5	36.6	42.4	65	170	16.0	30
XPCSG-48BG	G	48	50	48	M50x1.5	47.5	54.5	85	220	22.8	30
XPCSG-56BG	G	56	68	-	-	56.7	67.5	110	270	33.0	30
XPCSG-70BG	G	70	80	-	-	67.5	79.6	130	320	46.0	10
XPCSG-95BG	G	95	106	-	-	91.6	107.0	170	430	66.0	10

Our customer service dept. or local distribution partner will be pleased to help you concerning product availability and lead time



stat. R. = min. bending radius for static (fixed) installation

dyn. R. = min. bending radius for dynamic (flexible) installation

Mechanical Properties:	Value:	Test parameters:	Test method:
Impact strength	> 6 J	(+23°C)	PMA DO 9.21-4330
	> 12.2 J	(-18°C)	CSA C22.2 Nr. 227.3 / UL 1696
	class 3, > 2 J	(-45°C)	IEC EN 61386
	class 4, > 6 J	(-15°C)	IEC EN 61386
	class 5, > 20 J	(+23°C)	IEC EN 61386
Compression strength	> 270 N	(50 x 50 mm)	PMA DO 9.21-4320
	> 540 N	(100 x 100 mm)	PMA DO 9.21-4320
	class 2		IEC EN 61386
Resistance to fatigue	> 5‘000 cycles	(-45°C)	IEC EN 61386-23
	1‘000‘000 cycles	Jumper cable test	TSSC-EC-TP00061
Pull-out resistance conduit - fitting series			
PMAFIX Pro	> 460 N		PMA DO 9.21-4610
PMAFIX IP68	> 430 N		PMA DO 9.21-4610
PMAFIX IP66	> 380 N		PMA DO 9.21-4610
PMAFIX Pro, PMAFIX IP66 & IP68	class 2		IEC EN 61386

Note: Testing at 23°C, 50% r.h., conduit nominal width 17, unless otherwise stated

Thermal properties:	Value:	Test parameters:	Test method:
Continuous application temperature	–50 ... +95°C		PMA DO 9.21-4510
Upper application temperature	+110°C	(20‘000 h)	PMA DO 9.21-4360
Short-term	+150°C	(168 h)	PMA DO 9.21-4360
Application temperature range	–45 ... +105°C		IEC EN 61386

Fire safety properties:	Value:	Test parameters:	Test method:
Fire performance	non flame-propagating		IEC EN 61386
Fire hazard level	HL2		EN 45545-2 (R22)
Oxygen index	> 28 %		EN ISO 4589-2
Smoke density	< 300 Ds max.		EN ISO 5659-2 (25 kW/m2)
Toxicity	< 0.9 CIT_{NLP}		NF X 70-100-1/-2: (600°C)
Fire hazard level	HL2		EN 45545-2 (R23)
Oxygen index	> 28 %		EN ISO 4589-2
Smoke density	< 600 Ds max.		EN ISO 5659-2 (25 kW/m2)
Toxicity	< 1.8 CIT_{NLP}		NF X 70-100-1/-2: (600°C)
Fire performance NFPA 130:			NFPA 130
- Flammability	compliant		ASTM E 162
- Smoke density	compliant		ASTM E 662
Heat and visible smoke	23.22 MJ/kg		ASTM E 1354
Smoke emission toxicity	compliant		Bombardier SMP 800-C
Smoke emission toxicity	compliant		Boeing BSS 7239

Note: Requirement sets (R22 & R23) apply for conduit sizes up to and including NW48

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