

TECHNICAL DATA SHEET

PMAFLEX Multilayer - XVCSF - Corrugated Conduit

Flexible, heavy-duty

PMA



Multilayer conduit for external rail applications



Applications:

Static external applications on railway vehicles

- On bogies and undercarriage
- Excellent resistance to impact at low temperatures

Features & Benefits:

- Good flexibility
- High compression and impact strengths at low temperature and low humidity
- Self-extinguishing

Materials:

- Outer layer: specially formulated polyamide 6
- Inner layer: specially modified polyamide 6

Compatible with:

- PMAFIX Pro, PMAFIX, PMA Smart Line fittings
- PMA accessories

Temperature range:

- -50°C ... +105°C continuous, +160°C short-term

Conforms to:

- EN 45545-2 HL2 (R22 & R23)

Weathering resistance:

- Very good UV resistance and weathering characteristics

Colour:

- Outer layer: black
- Inner layer: blue

Chemical properties:

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

Environmental properties:

- Free from halogens and cadmium
- RoHS and REACH compliant

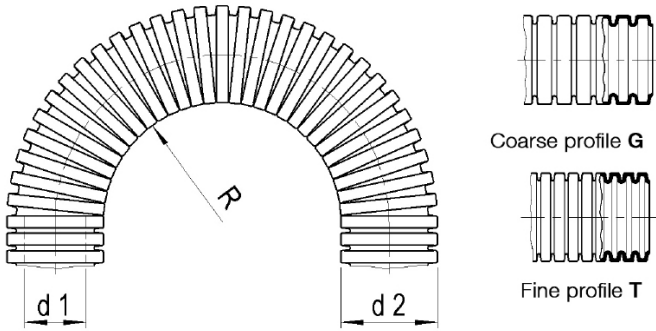
XVCSF-Index

	min.									max.
Ductility	[Progressive bar chart from min to max]									
Fatigue reversed bending	[Progressive bar chart from min to max]									
Compression resistance	[Progressive bar chart from min to max]									
Low temperature performance	[Progressive bar chart from min to max]									
Weathering resistance	[Progressive bar chart from min to max]									

Product selection:

Part no.	Profile	Conduit size		rec. fitting thread size		Dimensions in mm (nom.)			Weight kg/100 m	Packing unit metre
		NW	metric	PG	metric	d1	d2	stat. R		
XVCSFT-07BB	T	7	9	9	M12x1.5	6.7	10.0	15	2.5	50
XVCSFT-10BB	T	10	12	9	M12x1.5	9.6	12.8	20	3.1	50
XVCSFT-12BB	T	12	16	11	M16x1.5	11.9	15.6	25	4.2	50
XVCSFG-17BB	G	17	20	16	M20x1.5	15.6	21.1	40	7.5	50
XVCSFG-23BB	G	23	25	21	M25x1.5	21.5	28.4	50	12.0	50
XVCSFG-29BB	G	29	32	29	M32x1.5	27.7	34.5	60	15.0	50
XVCSFG-36BB	G	36	40	36	M40x1.5	35.9	42.4	75	19.0	30
XVCSFG-48BB	G	48	50	48	M50x1.5	46.8	54.5	90	25.0	30

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

Mechanical Properties:	Value:	Test parameters:	Test method:
Impact strength	> 12.2 J	(-18°C)	CSA C22.2 Nr. 227.3 / UL 1696
	class 3, > 2J	(-45°C)	IEC EN 61386
	class 4, > 6J	(-15°C)	IEC EN 61386
	class 5, > 20J	(+23°C)	IEC EN 61386
	> 13.5 J	(+23°C)	PMA DO 9.21-4330
	> 4.5 J	(-40°C)	PMA DO 9.21-4330
Compression strength	class 2		IEC EN 61386
	> 250 N	(50 x 50 mm)	PMA DO 9.21-4320
	> 500 N	(100 x 100 mm)	PMA DO 9.21-4320
Resistance to fatigue	> 5'000 cycles	(-45°C)	IEC EN 61386-23
Pull-out resistance conduit - fitting series			
PMAFIX IP68	class 2		IEC EN 61386
	> 350 N		PMA DO 9.21-4610
PMAFIX IP66	class 1		IEC EN 61386
	> 200 N		PMA DO 9.21-4610

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

Thermal properties:	Value:	Test parameters:	Test method:
Application temperature range	-45 ... +105°C		IEC EN 61386
Continuous application temperature	-50 ... +105°C		PMA DO 9.21-4510
Upper application temperature	+120°C	(20'000 h)	PMA DO 9.21-4360
Short-term	+160°C	(168 h)	PMA DO 9.21-4360

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/m ²)
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	< 300 Ds max.		EN ISO 5659-2 (25 kW/m ²)
Toxicity	< 1.8 CIT _{NLP}		NF X 70-100-1/-2: (600°C)

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

ABB Switzerland Ltd,
PMA Cable Protection
Aathalstrasse 90
8610 Uster, Switzerland
Phone: +41 58 585 00 11
pma-info@ch.abb.com
www.pma.ch

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