TECHNICAL DATA SHEET

PMA Smart Line - LLPA - Corrugated Conduit

Very flexible, medium-grade



Very flexible conduit ideal for machine building, installation and construction industries

Applications:
- In machine and equipment applications

Features & Benefits:
- Very good mechanical characteristics, also under extreme climatic conditions (low temperature and low humidity)
- Self-extinguishing
- Very good flexibility

Materials:
- High-grade, specially formulated polyamide 6

Compatible with:
- PMAFIX, PMA Smart Line fittings
- PMAGRIP flange
- PMA accessories

Temperature range:
- –40°C ... +105°C continuous, +160°C short-term

Conforms to:
- UL 1696 (UL File E80294)
- CSA C22.2 No. 227.3-05 (CSA File LL 88703)
- UN Regulation No. 118

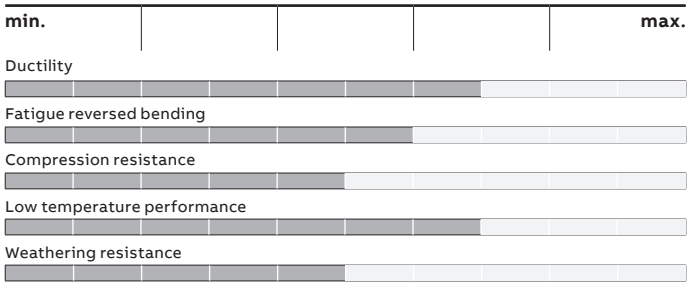
Weathering resistance:
- Good UV resistance and weathering characteristics, particularly in black

Colour:
- Black
- Grey

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

Environmental properties:
- Free from halogens and cadmium
- RoHS and REACH compliant

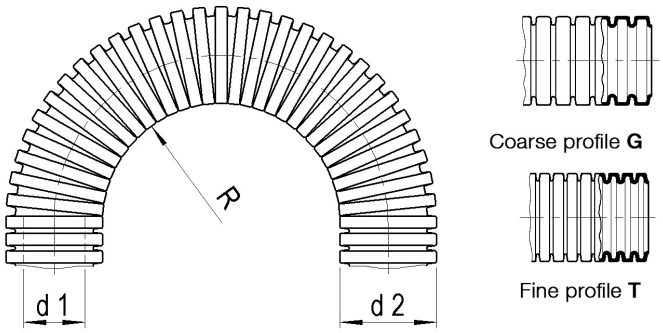
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Product selection:

Part no.		Profile	Conduit size		rec. fitting thread size		Dimensions in mm (nom.)			Weight	Packing unit
black	grey	T/G	NW	metric	PG	metric	d1	d2	stat. R	kg/100 m	metre
LLPA-07A	LLPA-07S	T	7	10	7	M12 x 1.5	6.6	10.0	15	2.2	50
LLPA-10A	LLPA-10S	T	10	12	9	M12 x 1.5	9.8	12.8	20	2.8	50
LLPA-12A	LLPA-12S	T	12	16	11	M16 x 1.5	12.1	15.6	25	3.8	50
LLPA-17A	LLPA-17S	T	17	20	16	M20 x 1.5	16.8	21.1	35	5.7	50
LLPA-23A	LLPA-23S	T	23	25	21	M25 x 1.5	23.2	28.4	45	9.9	50
LLPA-29A	LLPA-29S	T	29	32	29	M32 x 1.5	28.8	34.5	55	13.3	50
LLPA-36A	LLPA-36S	T	36	40	36	M40 x 1.5	36.7	42.4	65	16.0	30
LLPA-48A	LLPA-48S	T	48	50	48	M50 x 1.5	48.2	54.5	80	22.8	30
LLPAG-17A	LLPAG-17S	G	17	20	16	M20 x 1.5	15.8	21.1	40	6.3	50
LLPAG-23A	LLPAG-23S	G	23	25	21	M25 x 1.5	21.9	28.4	50	9.9	50
LLPAG-29A	LLPAG-29S	G	29	32	29	M32 x 1.5	27.8	34.5	60	13.3	50
LLPAG-36A	LLPAG-36S	G	36	40	36	M40 x 1.5	36.1	42.4	75	16.0	30
LLPAG-48A	LLPAG-48S	G	48	50	48	M50 x 1.5	46.9	54.5	90	22.8	30
LLPAG-56A	LLPAG-56S	G	56	-	-	-	56.7	67.5	120	33.0	30
LLPAG-70A	LLPAG-70S	G	70	-	-	-	67.5	79.6	140	46.0	10
LLPAG-95A	LLPAG-95S	G	95	-	-	-	91.6	107.0	190	66.0	10
LLPAG-125A	LLPAG-125S	G	125	-	-	-	125.5	146.0	260	85.0	6

Our customer service dept. or local distribution partner will be pleased to help you concerning product availability and lead time
Conduit size NW10 - NW95 UL recognized to UL 1696 (UL file E 80294)
Conduit size NW12 - NW48 are CSA C22.2 No. 227.3-05 (CSA File LL 88703)



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

Mechanical Properties:	Value:	Test parameters:	Test method:
Impact strength	> 4.5 J	(+23°C)	PMA DO 9.21-4330
	> 12.2 J	(-18°C)	UL 1696 / CSA C22.2 Nr. 227.3
	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	> 150 N	(50 x 50 mm)	PMA DO 9.21-4320
	> 300 N	(100 x 100 mm)	PMA DO 9.21-4320
	class 1		IEC EN 61386
Resistance to fatigue	> 50‘000 cycles		PMA DO 9.21-4420
	> 100‘000 cycles		PMA DO 9.21-4425
	class 3 (pliable)	(-45°C)	IEC EN 61386-22
	class 4 (flexible 5000 cyles)	(-25°C)	IEC EN 61386-23
Pull-out resistance conduit - fitting series			
PMAFIX IP68	> 250 N		PMA DO 9.21-4610
PMAFIX IP66	> 200 N		PMA DO 9.21-4610
PMA Smart Line	> 170 N		PMA DO 9.21-4610
PMA Smart Line, PMAFIX IP66 & IP68	class 1		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	–40 ... +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
Application temperature range	–18 ... +105°C		UL 1696 / CSA C22.2 Nr. 227.3
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 performance	V2		UL 94

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