

TECHNICAL DATA SHEET

PMAFLEX - ESD - Corrugated Conduit

Highly flexible, light-grade

PMA



Highly flexible conduit ideal for areas where electrostatic charge and uncontrolled discharge need to be avoided



Applications:

- For dynamic applications in robotics and automation where electrostatic charge and uncontrolled discharge need to be avoided

Features & Benefits:

- Prevents electrostatic charging
- For indoor and outdoor use
- High dynamic load resistance
- Very good cold temperature performance
- Very good chemical properties

Materials:

- High-grade, specially formulated polyamide 12

Compatible with:

- PMA Ex-System, PMAFIX fittings (ESD type on request)

Temperature range:

- -40°C ... +90°C continuous, +150°C short-term

Weathering resistance:

- Excellent UV resistance and weathering characteristics

Colour:

- Black

Chemical properties:

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

Environmental properties:

- Free from halogens and cadmium
- RoHS and REACH compliant

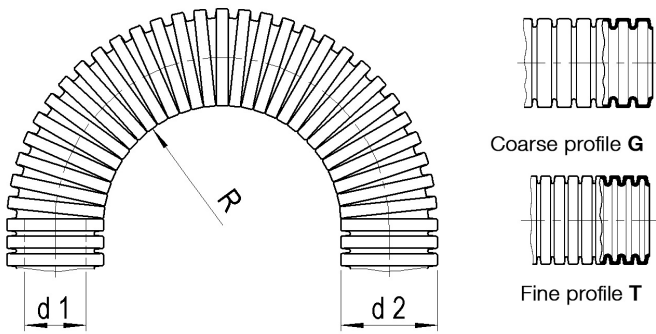
ESD-Index

| min. | | | | | max. |
|-----------------------------|------------|------------|------------|------------|------------|
| Ductility | ██████████ | ██████████ | ██████████ | ██████████ | ██████████ |
| Fatigue reversed bending | ██████████ | ██████████ | ██████████ | ██████████ | ██████████ |
| Compression resistance | ██████████ | ██████████ | ██████████ | ██████████ | ██████████ |
| Low temperature performance | ██████████ | ██████████ | ██████████ | ██████████ | ██████████ |
| Weathering resistance | ██████████ | ██████████ | ██████████ | ██████████ | ██████████ |

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 | dyn. R. | | |
| ESDT-07B | T | 7 | 10 | 7 | M12x1.5 | 6.7 | 10.0 | 15 | 40 | 2.2 | 50 |
| ESDT-10B | T | 10 | 12 | 9 | M12x1.5 | 9.7 | 12.8 | 20 | 50 | 2.8 | 50 |
| ESDT-12B | T | 12 | 16 | 11 | M16x1.5 | 12.0 | 15.6 | 25 | 65 | 3.8 | 50 |
| ESDT-17B | T | 17 | 20 | 16 | M20x1.5 | 16.6 | 21.1 | 35 | 85 | 5.7 | 50 |
| ESDT-23B | T | 23 | 25 | 21 | M25x1.5 | 23.0 | 28.4 | 40 | 110 | 9.9 | 50 |
| ESDT-29B | T | 29 | 32 | 29 | M32x1.5 | 28.7 | 34.5 | 50 | 135 | 13.3 | 50 |
| ESDT-36B | T | 36 | 40 | 36 | M40x1.5 | 36.8 | 42.4 | 60 | 170 | 16.0 | 30 |
| ESDT-48B | T | 48 | 50 | 48 | M50x1.5 | 48.0 | 54.5 | 75 | 220 | 22.8 | 30 |
| ESDG-56B | G | 56 | 68 | - | - | 55.8 | 67.5 | 110 | 270 | 33.0 | 30 |
| ESDG-70B | G | 70 | 80 | - | - | 67.4 | 79.6 | 130 | 320 | 46.0 | 10 |
| ESDG-95B | G | 95 | 106 | - | - | 91.5 | 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 | > 5 J | | PMA DO 9.21-4330 |
| Compression strength | > 175 N | (50 x 50 mm) | PMA DO 9.21-4320 |
| | > 350 N | > 350 (100 x 100 mm) | |
| Resistance to fatigue | > 3'000'000 cycles | (-45°C) | PMA DO 9.21-4420 |
| | > 10'000'000 cycles | | PMA DO 9.21-4425 |
| | > 5'000 cycles | | IEC EN 61386-23 |
| Pull-out resistance conduit - fitting series | | | |
| PMAFIX IP68 | > 200 N | | PMA DO 9.21-4610 |
| PMAFIX IP66 | > 150 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: |
|------------------------------------|---------------|-------------------------|---------------------|
| Continuous application temperature | -40 ... +90°C | | PMA DO 9.21-4510 |
| Upper application temperature | +110°C | (20'000h) | |
| Short-term | +150°C | (168 h) | |

| Electrical properties: | Value: | Test parameters: | Test method: |
|-------------------------------|---------------------|-------------------------|---------------------|
| Specific surface resistivity | < 10 ⁶ Ω | | IEC 62631-3-2 |