Polyethylene Conduit Tubing

PE · Corrugated Conduit Series

Description

PE corrugated conduit is made by polyethylene extrusion molding, mainly used in automotive wiring harnesses, and also applicable to machine tools, automation instruments and electric motors — protecting cables and wires from external wear and tear.

Product Features

- Flexible, smooth surface, chemical corrosion resistance
- Operating Temperature: –30°C ~ +105°C
- Structure: corrugated inside and out (slit and non–slit versions)
- EU RoHS Compliant



Standard / Certification

ROHS · REACH

Raw Material Properties

Property	Test Condition	Test Method	Test Data	Test Data
Relative density		ASTM D–792	0.943	0.943 g/m3
melt flow rate	190℃ 2.16kg	ASTM D–1238	0.85	0.85 g/10min
environmental cracking stress	F0	ASTM D–1693	96	96 hr
Tensile strength		ASTM D–638	20	20 KJ/mm
Elongation at break		ASTM D–638	400	400 %
Electric constant	1E+6HZ	ASTM D–150	2.33	2.33
volume resistivity	23℃	ASTM D–257	1.00E+15	1.00E+15 Ω.cm
Loss factor	1E+6HZ	ASTM D–150	0.0003	0.0003

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Specification

Size	MM ID	MM OD	E (MM)	MM	L (M/R)
Φ5.0	4.8±0.2	7.2±0.2	1.1±0.2	5	500
Φ6.0	6.0±0.2	9.0±0.2	1.5±0.2	5	400
Φ7.0	7.0±0.3	10.0±0.3	1.5±0.2	10	200
Φ8.0	8.5±0.3	11.5±0.3	1.5±0.2	15	200
Φ10.0	10.0±0.3	13.0±0.3	1.5±0.2	20	200
Φ11.0	11.0±0.3	14.0±0.3	1.5±0.2	25	200
Φ12.0	12.0±0.3	15.8±0.3	1.6±0.2	30	200
Φ13.0	13.0±0.3	17.0±0.3	2.0±0.2	35	100
Φ14.0	14.3±0.3	18.5±0.3	2.0±0.2	40	100
Φ15.0	15.9±0.3	20.0±0.3	2.0±0.3	45	100
Φ17.0	17.0±0.5	21.2±0.5	2.1±0.3	45	100
Φ18.0	18.0±0.5	22.0±0.5	2.0±0.3	45	100
Φ21.0	21.0±0.5	25.0±0.5	2.2±0.3	50	100
Φ23.0	23.0±0.5	28.5±0.5	2.5±0.3	55	50
Φ25.0	25.0±0.5	30.0±0.5	3.0±0.3	55	50
Φ29.0	29.0±0.6	34.5±0.6	2.75±0.3	60	50
Φ36.0	36.0±0.6	42.5±0.6	3.25±0.3	70	25
Φ48.0	48.0±0.6	54.5±0.6	3.25±0.3	80	25

Product Advantages

- **Highly Flexible & Stress-crack Resistant**
  - Excellent flexibility and bending performance for easy routing in tight spaces. Highly resistant to environmental stress cracking (ASTM D-1693, over 96 hours).
- **Smooth Surface for Wire Protection**
  - Smooth double-sided corrugated profile effectively shields inner wires from friction, compression and sharp-object abrasion, reducing cable damage and maintenance cost.
- **Strong Chemical & Oil Resistance**
  - High-grade polyethylene (PE) resists acids, alkalis, salts and a wide range of industrial solvents — suitable for harsh and variable industrial environments.
- **Superior Electrical Insulation**
  - Dielectric constant of only 2.33 and very high volume resistivity (1.00E+15 Ω·cm) provide safe, reliable electrical isolation for power and signal cables.
- **Wide Temperature Range & Eco-friendly**
  - Operating range from -30°C to 105°C. Fully compliant with EU RoHS / REACH environmental standards, non-toxic and safe.
- **Full Size Range & Flexible Customization**
  - ID range Φ5.0~48.0mm, 19 standard sizes | Custom colors available | Slit & non-slit versions

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Application Scenarios

- **Automotive Industry**

- Automotive body, door and dashboard wiring harness protection.
- Non-extreme-temperature engine bay conduits, lighting circuits and chassis cable leads.
- **Machine Tools & Industrial Equipment**

- CNC machines, automated machining centres, industrial handling robots and servo motors.
- Drag-chain periphery and fixed wire harness routing.
- **Automation & Instrumentation**

- PLC control cabinets, sensor wiring, industrial meters and instruments.
- Internal / external control panel cable protection.
- **Electric Motors & Power Systems**

- Motor lead wires, generator harnesses and control cabinet internal wiring.
- Reducing wear risk under high-frequency vibration.
- **Municipal & Building Cable Ducts**

- Conduits for building structured cabling, server rooms and outdoor weak-current engineering.
- Protecting signal and fibre-optic lines.