PP Flame-retardant Conduit Tubing

PP · Corrugated Conduit Series



Description

PP corrugated tube is made of polypropylene extrusion molding, mainly used in automotive wiring hardness, can also be used for machine tool, automation instrument, electrical motor, protect the cable wires from external, wear and tear.

Product Features

- Flexible, smooth surface, chemical corrosion resistance
- Operating Temperature: -30℃ ~ +105℃
- Structure: corrugated inside and out (slit and non-slit versions)
- Certification: SGS Report
- Color: black, orange, grey, white, red, blue, yellow, etc. (customizable)
- Flame Retardancy: UL94-V0
- Raw material properties: good moldability, good long-term heat stability, excellent low-temperature impact resistance

Standard / Certification

UL94-V0 · SGS · ROHS · REACH · ASTMD1238 · ASTMD792 · ASTMD638 · ASTMD790 · ASTMD785 · ASTMD648 · ASTMD256 · ASTMD955

Raw Material Properties

Property	Test Condition	Test Method	Value	Unit
Melt flow rate	230℃	ASTMD1238	2.0	g/10min
Density		ASTMD792	0.9	g/cm3
Yield point tensile strength		ASTMD638	265	g/cm2
Yield point elongation		ASTMD638	8	%
Bending elastic system		ASTMD790	13100	kg/cm2
Rocky hardness		ASTMD785	81	R scale
Hot deformation temperature		ASTMD648	90	℃
A impact strength		ASTMD256	18/13.7	kg-cm/cm
Falling ball impact strength		LCY	22	ft-lb
Shrink ratio		ASTMD955	1.4	%

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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
Φ14.3	14.3±0.3	18.5±0.3	2.0±0.2	40	100
Φ15.9	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

- **UL94-V0 Highest Flame-retardant Rating**
  - Self-extinguishing, prevents continuous burning. Certified by SGS for reliable quality and global export compliance.
- **Wide Operating Temperature Range**
  - Operating range from -30°C to 105°C with short-term peak up to 155°C (240h tested) — ideal for engine compartments and outdoor high-temperature equipment.
- **Flexible & Impact-resistant**
  - Flexible corrugated design adapts to tight-space routing. Falling ball impact resistance 22 ft-lb with excellent low-temperature toughness (Izod 18/13.7 kg-cm/cm).
- **Smooth Surface for Wire Protection**
  - Double-sided smooth corrugated surface protects cables from abrasion and friction, reducing wire damage and maintenance costs.
- **Chemical Corrosion Resistance**
  - Polypropylene material offers excellent chemical corrosion resistance against oils, solvents, acids and alkalis — built for long-term use in complex industrial environments.
- **Full Size Range & Flexible Customization**
  - ID range Φ5.0~48.0mm, 19 standard sizes | Custom colors available | Slit & non-slit versions
- **Full Certifications for Global Export**
  - SGS / ROHS / REACH certified. 125°C+ grades available with optional 5510 odor test and TVOC — meeting strict automotive interior low-odor requirements.

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Application Scenarios

- **Automotive Industry**

- Automotive wiring and wire harness protection (interior, dashboard, body)
- Engine compartment high-temp zones — recommend 125°C / 135°C grade
- EV high-voltage wiring and Battery Management System (BMS)
- VOC — 125°C 5510+TVOC
- Low-odor automotive interiors — 125°C grade with 5510+TVOC option
- **Machine Tools & Industrial Equipment**

- CNC machines, machining centers, industrial robot wire harness protection
- VFD and servo drive control cabinet wiring
- **Automation & Instrumentation**

- PLC control cabinets, sensor cables, instrumentation wire protection
- **Electric Motors**

- Motor lead wires, winding wire protection, high-speed equipment wiring
- **New Energy & Outdoor Equipment**

- PV junction boxes, EV charging stations, outdoor electrical cabinets