PA Standard Nylon Conduit Tubing

PA · Corrugated Conduit Series



Description

PA Corrugated Tube Is Made Of Nylon 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

- Material: Nylon
- Flexible, smooth surface, chemical corrosion resistance
- Operating Temperature: –40°C ~ +150°C
- Structure: corrugated inside and out (slit and non–slit versions)
- Color: black, orange, grey, white, red, blue, yellow, etc. (customizable)

Standard / Certification

ROHS · REACH · UL94–V0

Raw Material Properties

Property	Test Condition	Test Method	Test Data	Unit
Relative Density		ASTM D–1505	1.13	
Melt Flow Rate			224	℃
Tooling Shrink Ratio			1.0–1.5	%
Dielectric Constant	3.2mm	ASTM D–149	20	KV/mm
Rockwell Hardness		ASTM D–785	120	
IZOD Notched Impact Strength		ASTM D–256	0.04	KJ/mm
Tensile Strength		ASTM D–638	80	MPa
Elongation		ASTM D–638	100	%
Bending Strength		ASTM D–790	105	Mpa
Volume Resistivity		ASTM D–257	10.15	Ω.cm
Flammability		UL 94	V–2	
Hot Deformation Temperature	0.46MPa	ASTM D–648	160	℃

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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

- Product certification: ROHS, REACH, 5510 (smell test, TVOC optional)
- **Flame Retardant Safety**
- Wide Temperature Range: –40°C to +150°C, adapting to demanding conditions
- Flexible & Durable: Corrugated structure, flexible bending, crush & wear resistant

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Application Scenarios

- Scenario 1: Automotive Wire Harness Protection (Core Application)
- Application Description: PA corrugated tubes are designed for automotive wire harnesses, widely applied in cockpit, engine compartment, chassis harnesses, and other areas. Effectively protects wires and cables from external wear, oil contamination, high-temperature baking, and other damages.
- Specific Applications:
- Cockpit Harnesses: Dashboard, center console, door wire harness protection
- Engine Compartment Harnesses: Engine control, sensor, ignition system wire harness protection
- Chassis Harnesses: Chassis, suspension system, ABS wire harness protection
- New Energy Battery Packs: Internal cable protection, high-voltage harness protection
- Recommended Models:
- Normal temperature zones: YC-PA Nylon Flame-Retardant Corrugated Tubes 105°C
- High-temperature zones: YC-PA Nylon Flame-Retardant Corrugated Tubes 150°C (engine compartment, new energy battery packs)
- Scenario 2: Mechanical Equipment Cable Protection
- Application Description: PA corrugated tubes are used for cable protection in machine tools, automation equipment, electric motors, and other industrial equipment. Effectively prevents cables from being worn, pulled, or crushed during mechanical movement, extending cable service life and improving equipment operational safety.
- Specific Applications:
- Machine Tools: CNC machines, lathes, milling machines cable protection
- Automation Equipment: Robots, robotic arms, automated production lines cable protection
- Electric Motors: Motor lead wires, control cable protection
- Control Cabinets: Internal cable organization and protection
- Scenario 3: Special Working Conditions
- Application Description: With excellent chemical corrosion resistance and high-temperature performance, PA corrugated tubes are suitable for chemical, metallurgical, marine, and other special working conditions, providing reliable cable protection.
- Specific Applications:
- Chemical Environments: Acid/alkali resistant, chemical corrosion resistant, protecting cables from chemical erosion
- High-Temperature Environments: Temperature resistance up to 150°C, short-term tolerance up to 175°C, suitable for high-temperature workshops, smelting equipment
- Marine Applications: Salt spray resistant, corrosion resistant, suitable for ship cable protection