YUANNAI TUBE

Polyamide 6 (PA6) Nylon Pneumatic Tubing

Technical Data Sheet | English translation

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Manufacturer: Hefei Yuannai Pneumatic Equipment Co., Ltd.

Source quality commitment: 20 years of focus | 100% virgin material | No regrind

1. Product overview and material characteristics

Extruded from selected, 100% virgin material, with no recycled or reprocessed material added. Intended for industrial pneumatic connections, fixed equipment routing and general industrial transfer.

• Suitable media: compressed air, lubricating oil, mineral oil, fuels and ethylene-glycol antifreeze, among others.

• Application positioning: industrial automation equipment connections, fixed pneumatic routing, instrumentation and auxiliary power lines. Dynamic use, such as continuous cable-carrier travel or repeated small-radius bending, requires specific validation.

• Environmental documentation: RoHS and REACH conformity is subject to valid declarations or test reports for the actual resin, colour masterbatch and finished product.

• Special uses: food contact, drinking water, medical use, breathing gases, braking systems and flame-retardant service are not default commitments for this standard product.

2. Physical and mechanical properties

Test item	Reference value
Density	Approx. 1.13 g/cm³
Hardness	75 ± 5 Shore D
Tensile stress at yield	Dry: >65 MPa; conditioned: >35 MPa
Tensile modulus	Dry: approx. 2500-3200 MPa; conditioned: approx. 800-1500 MPa
Melting temperature	Approx. 215°C
Equilibrium moisture absorption	Approx. 2.5%-3.5%
Pneumatic operating temperature range	-40°C to +130°C

3. Dimensions and pressure parameters at 23°C

Metric sizes. OD = outside diameter; ID = inside diameter; WP = working pressure; BP = burst pressure.

Model	OD	ID	Tolerance	WP	BP	Bend radius	Roll length
YN-PA6 0425	4.0 mm	2.5 mm	±0.10 mm	41 bar (592 psi)	122 bar (1777 psi)	40 mm	200 m
YN-PA6 0640	6.0 mm	4.0 mm	±0.10 mm	35 bar (512 psi)	105 bar (1536 psi)	35 mm	200 m
YN-PA6 0850	8.0 mm	5.0 mm	±0.10 mm	28 bar (412 psi)	85 bar (1237 psi)	45 mm	100 m
YN-PA6 0855	8.0 mm	5.5 mm	±0.10 mm	28 bar (412 psi)	85 bar (1237 psi)	47 mm	100 m
YN-PA6 0860	8.0 mm	6.0 mm	±0.10 mm	23 bar (341 psi)	70 bar (1024 psi)	48 mm	100 m
YN-PA6 1065	10.0 mm	6.5 mm	±0.10 mm	31 bar (455 psi)	94 bar (1365 psi)	65 mm	100 m
YN-PA6 1080	10.0 mm	8.0 mm	±0.10 mm	18 bar (265 psi)	54 bar (796 psi)	80 mm	100 m
YN-PA6 1280	12.0 mm	8.0 mm	±0.10 mm	22 bar (331 psi)	68 bar (995 psi)	70 mm	100 m
YN-PA6 1410	14.0 mm	10.0 mm	±0.10 mm	25 bar (363 psi)	77 bar (1123 psi)	140 mm	100 m
YN-PA6 1612	16.0 mm	12.0 mm	±0.10 mm	22 bar (327 psi)	67 bar (981 psi)	160 mm	100 m

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3. Dimensions and pressure parameters - continued

Fractional / inch sizes. Dimensions and units below are reproduced from the source.

Nominal size	OD	ID	Tolerance	WP	BP	Bend radius	Roll length
1/8″	3.175 mm	1.58 mm	±0.10 mm	20 bar (290 psi)	80 bar (1160 psi)	32 mm	200 m
1/4″	6.35 mm	4.35 mm	±0.10 mm	14 bar (203 psi)	56 bar (812 psi)	65 mm	200 m
3/8″	9.525 mm	6.35 mm	±0.10 mm	14 bar (203 psi)	56 bar (812 psi)	100 mm	100 m
1/2″	12.70 mm	9.60 mm	±0.10 mm	10 bar (145 psi)	40 bar (580 psi)	130 mm	100 m

4. Packaging, appearance and customisation (OEM/ODM)

• Standard colours: milky white, dark blue, black and red (custom colours available).

• Example of metre-marked printing: AIR PASSAGE PA6 8X5 001M. Customer brand logos, model identification and continuous metre markings can be customised.

• Packaging: stretch-film wrapping.

Source data and translation notes

The values in the source data sheet are laboratory reference values at ambient temperature. Actual operating conditions must be verified by testing.

Numbers, models, units and inequalities are reproduced from the supplied Chinese document. Some bar/psi pairs in the source are inconsistent; no conversion has been substituted. Confirm the applicable pressure rating with the manufacturer before specification or use. Burst pressure is not a working-pressure rating.

Media lists, performance, compliance and special-use statements above are translated source statements, not independent certification or application approval. Obtain applicable material/finished-product documents and validate the medium, concentration, temperature, pressure and fitting combination for the intended use.

English document prepared from the user-supplied V4 source version. AIR PASSAGE is retained as a product marking.