YUANNAI TUBE

Polyurethane (PU) 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

Produced from high-quality, 100% virgin thermoplastic polyurethane (TPU), with no regrind or waste material added. The source describes excellent flex-fatigue resistance, high resilience and tight dimensional and roundness tolerances, and claims compatibility with push-in fittings to eliminate air-leak and tube-burst risks. The source claim is not an independently verified guarantee.

• Suitable media: compressed air, inert gases and vacuum circuits. Continuous, long-term transfer of large quantities of liquid lubricating oil is not recommended.

• Source compliance statement: conforms to RoHS and REACH environmental requirements; silicone-free and without harmful leachables. See the source-statement qualification on page 2.

2. Physical and mechanical properties

Test item	Reference value
Hardness	98 ± 2 Shore A
Tensile strength	≥ 42 MPa
Elongation at break	≥ 480%
Tear strength	≥ 115 kN/m
Abrasion volume loss	≤ 30 mm³
Operating temperature range	-20°C to +55°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-PU 0425	4.0 mm	2.5 mm	±0.10 mm	8 bar (128 psi)	26 bar (384 psi)	10 mm	200 m
YN-PU 0640	6.0 mm	4.0 mm	±0.10 mm	8 bar (128 psi)	25 bar (369 psi)	15 mm	200 m
YN-PU 0850	8.0 mm	5.0 mm	±0.10 mm	7 bar (116 psi)	24 bar (348 psi)	20 mm	100 m
YN-PU 0855	8.0 mm	5.5 mm	±0.10 mm	6 bar (99 psi)	20 bar (298 psi)	22 mm	100 m
YN-PU 0860	8.0 mm	6.0 mm	±0.10 mm	5 bar (75 psi)	15 bar (227 psi)	25 mm	100 m
YN-PU 1065	10.0 mm	6.5 mm	±0.10 mm	7 bar (106 psi)	22 bar (320 psi)	25 mm	100 m
YN-PU 1080	10.0 mm	8.0 mm	±0.10 mm	6 bar (94 psi)	19 bar (284 psi)	30 mm	100 m
YN-PU 1280	12.0 mm	8.0 mm	±0.10 mm	7 bar (104 psi)	21 bar (313 psi)	50 mm	100 m
YN-PU 1410	14.0 mm	10.0 mm	±0.10 mm	7 bar (106 psi)	22 bar (320 psi)	70 mm	100 m
YN-PU 1612	16.0 mm	12.0 mm	±0.10 mm	7 bar (109 psi)	22 bar (327 psi)	95 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	3.17 mm	1.58 mm	±0.10 mm	12 bar (174 psi)	36 bar (504 psi)	8 mm	200 m
1/4	6.35 mm	4.35 mm	±0.10 mm	10 bar (145 psi)	30 bar (420 psi)	16 mm	200 m
3/8	9.52 mm	6.35 mm	±0.10 mm	10 bar (145 psi)	30 bar (420 psi)	25 mm	100 m
1/2	12.7 mm	9.6 mm	±0.10 mm	8 bar (116 psi)	24 bar (336 psi)	35 mm	100 m
3/4	19.05 mm	15.88 mm	±0.10 mm	6 bar (87 psi)	18 bar (252 psi)	65 mm	100 m

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

• Standard colours - transparent range: clear, transparent blue and transparent red. Solid range: orange, dark blue, sky blue, black, green and yellow.

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

• Packaging: engineering-plastic reels or colour boxes.

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 V3 source version. AIR PASSAGE is retained as a product marking.