YUANNAI TUBE

Hydrolysis-Resistant Polyether TPU 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

Precision-extruded from selected, high-quality, 100% virgin polyether thermoplastic polyurethane (TPU), with no regrind or waste material added. The source describes excellent resistance to hydrolytic ageing and mould growth, weather resistance over a broad temperature range, stable performance in humid, water-contact or low-temperature environments, and precise dimensional and roundness tolerances for push-in fittings.

• Suitable media listed in the source: compressed air, industrial water, cleaning-liquid circuits, inert gases, dilute acid and alkali solutions, and low-pressure lubricating oil.

• Source compliance statement: conforms to RoHS 2.0 (2011/65/EU) and REACH environmental requirements, meets FDA food-contact standards, and is suitable for silicone-free paint shops. See the source-statement qualification on page 2.

2. Physical and mechanical properties

Test item	Reference value
Hardness	95 ± 2 Shore A
Tensile strength	≥ 40 MPa
Elongation at break	≥ 500%
Tear strength	≥ 110 kN/m
Abrasion volume loss	≤ 35 mm³
Operating temperature range	-40°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-PUR 0425	4.0 mm	2.5 mm	±0.10 mm	10 bar (145 psi)	30 bar (435 psi)	15 mm	200 m
YN-PUR 0640	6.0 mm	4.0 mm	±0.10 mm	10 bar (145 psi)	30 bar (435 psi)	25 mm	200 m
YN-PUR 0850	8.0 mm	5.0 mm	±0.10 mm	12 bar (175 psi)	36 bar (526 psi)	30 mm	100 m
YN-PUR 0855	8.0 mm	5.5 mm	±0.10 mm	8 bar (116 psi)	24 bar (348 psi)	40 mm	100 m
YN-PUR 0860	8.0 mm	6.0 mm	±0.10 mm	8 bar (116 psi)	24 bar (348 psi)	40 mm	100 m
YN-PUR 1065	10.0 mm	6.5 mm	±0.10 mm	10 bar (145 psi)	30 bar (435 psi)	40 mm	100 m
YN-PUR 1080	10.0 mm	8.0 mm	±0.10 mm	8 bar (116 psi)	24 bar (348 psi)	45 mm	100 m
YN-PUR 1280	12.0 mm	8.0 mm	±0.10 mm	10 bar (145 psi)	30 bar (435 psi)	50 mm	100 m
YN-PUR 1410	14.0 mm	10.0 mm	±0.10 mm	10 bar (145 psi)	30 bar (435 psi)	70 mm	100 m
YN-PUR 1612	16.0 mm	12.0 mm	±0.10 mm	8 bar (116 psi)	24 bar (348 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"	3.18 mm	1.7 mm	±0.10 mm	12 bar (174 psi)	36 bar (522 psi)	8 mm	200 m
1/4"	6.35 mm	4.35 mm	±0.10 mm	10 bar (145 psi)	30 bar (435 psi)	16 mm	200 m
3/8"	9.52 mm	6.35 mm	±0.10 mm	10 bar (145 psi)	30 bar (435 psi)	25 mm	100 m
1/2"	12.70 mm	9.52 mm	±0.10 mm	8 bar (116 psi)	24 bar (348 psi)	35 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.

• Tubing print example: AIR PASSAGE Polyether 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 V2 source version. AIR PASSAGE is retained as a product marking.