YUANNAI TUBE

High-Pressure Hose: PU Outer Layer + PA12 Inner Layer

Technical Data Sheet | English translation

Document ID: TDS-High-Pressure-Composite-Tubing-2026-V8 | Translation: EN-20261020

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 virgin material, with emphasis on dimensional stability, media resistance and routing adaptability. Construction: PU outer layer + PA12 inner layer. The source describes excellent abrasion resistance and flexibility from the outer layer, very low fuel permeability from the PA12 inner layer, and high pressure, abrasion and media resistance with very high burst pressure.

• Application scope listed in the source: high-pressure pneumatic and industrial automation systems, lubrication and oil-transfer systems, spraying/coating industries and fluid transfer under demanding conditions.

• Construction advantages: two-layer co-extrusion combines outer-layer abrasion resistance and support with inner-layer low permeability and high-pressure resistance.

2. Physical and mechanical properties

Test item	Reference value
Service pressure	Approx. 12.75-19.61 bar (178.5-274.4 psi)
Tear strength (source term/unit)	Approx. 9.95 MPa
Abrasion loss (source: wear strength)	30 mg-55 mg
Service temperature	-20°C to +55°C
Tensile strength	Approx. 58.8 MPa

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-0425	4.0 mm	2.5 mm	±0.10 mm	16 bar(242 psi)	41 bar(597 psi)	10 mm	200 m
YN-0640	6.0 mm	4.0 mm	±0.10 mm	14 bar(213 psi)	35 bar(512 psi)	15 mm	200 m
YN-0850	8.0 mm	5.0 mm	±0.10 mm	15 bar(228 psi)	38 bar(555 psi)	20 mm	100 m
YN-0855	8.0 mm	5.5 mm	±0.10 mm	12 bar(185 psi)	21 bar(313 psi)	20 mm	100 m
YN-0860	8.0 mm	6.0 mm	±0.10 mm	12 bar(185 psi)	21 bar(313 psi)	20 mm	100 m
YN-1065	10.0 mm	6.5 mm	±0.10 mm	19 bar(284 psi)	47 bar(683 psi)	25 mm	100 m
YN-1080	10.0 mm	8.0 mm	±0.10 mm	12 bar(185 psi)	21 bar(313 psi)	31 mm	100 m
YN-1280	12.0 mm	8.0 mm	±0.10 mm	17 bar(256 psi)	43 bar(626 psi)	35 mm	100 m
YN-1612	16.0 mm	12.0 mm	±0.10 mm	15 bar(228 psi)	39 bar(569 psi)	71 mm	100 m

High-Pressure Hose: PU Outer Layer + PA12 Inner Layer

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	14 bar(196 psi)	35 bar(490 psi)	7 mm	200 m
1/4	6.35 mm	4.35 mm	±0.10 mm	12 bar(168 psi)	33 bar(462 psi)	22 mm	200 m
3/8	9.52 mm	6.35 mm	±0.10 mm	15 bar(228 psi)	43 bar(602 psi)	24 mm	100 m
1/2	12.7 mm	9.6 mm	±0.10 mm	14 bar(196 psi)	36 bar(504 psi)	32 mm	100 m
3/4	19.05 mm	15.88 mm	±0.10 mm	13 bar(213 psi)	43 bar(602 psi)	70 mm	100 m

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

• Standard solid colours: milky white, black, blue and orange (custom colours available).

• Example of metre-marked printing: AIR PASSAGE PU-PA 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 V8 source version. AIR PASSAGE is retained as a product marking.

YUANNAI TUBE

High-Pressure Hose: Polyether TPU Outer Layer + PA12 Inner Layer

Technical Data Sheet | English translation

Document ID: TDS-High-Pressure-Composite-Tubing-2026-V9 | Translation: EN-20261020

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 virgin material, with emphasis on dimensional stability, media resistance and routing adaptability. Construction: polyether TPU outer layer + PA12 inner layer. The outer layer improves hydrolysis and weather resistance; the PA12 inner layer improves pressure stability. Permeation performance depends on the specific medium and test results. Designed for demanding outdoor conditions. The source describes high pressure, abrasion and media resistance with very high burst pressure.

• Application scope listed in the source: high-pressure pneumatic and industrial automation systems, lubrication and oil-transfer systems, spraying/coating industries and fluid transfer under demanding conditions.

• Construction advantages: two-layer co-extrusion combines outer-layer abrasion resistance and support with inner-layer low permeability and high-pressure resistance.

2. Physical and mechanical properties

Test item	Reference value
Service pressure	Approx. 12-19 bar (174-276 psi)
Tear strength (source term/unit)	Approx. 9.81 MPa
Abrasion loss (source: wear strength)	30 mg-55 mg
Service temperature	-30°C to +60°C
Tensile strength	Approx. 50 MPa

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-0425	4.0 mm	2.5 mm	±0.10 mm	16 bar(232 psi)	41 bar(595 psi)	16 mm	200 m
YN-0640	6.0 mm	4.0 mm	±0.10 mm	14 bar(203 psi)	35 bar(508 psi)	16 mm	200 m
YN-0850	8.0 mm	5.0 mm	±0.10 mm	15 bar(218 psi)	38 bar(551 psi)	29 mm	100 m
YN-0855	8.0 mm	5.5 mm	±0.10 mm	12 bar(174 psi)	21 bar(305 psi)	29 mm	100 m
YN-0860	8.0 mm	6.0 mm	±0.10 mm	12 bar(174 psi)	21 bar(305 psi)	29 mm	100 m
YN-1065	10.0 mm	6.5 mm	±0.10 mm	19 bar(276 psi)	47 bar(682 psi)	44 mm	100 m
YN-1080	10.0 mm	8.0 mm	±0.10 mm	12 bar(174 psi)	21 bar(305 psi)	30 mm	100 m
YN-1280	12.0 mm	8.0 mm	±0.10 mm	17 bar(247 psi)	43 bar(624 psi)	46 mm	100 m
YN-1612	16.0 mm	12.0 mm	±0.10 mm	15 bar(218 psi)	39 bar(566 psi)	70 mm	100 m

High-Pressure Hose: Polyether TPU Outer Layer + PA12 Inner Layer

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	15 bar(218 psi)	37 bar(537 psi)	8 mm	200 m
1/4	6.35 mm	4.35 mm	±0.10 mm	14 bar(203psi)	35 bar(508 psi)	15 mm	200 m
3/8	9.52 mm	6.35 mm	±0.10 mm	17 bar(247psi)	44 bar(638 psi)	25 mm	100 m
1/2	12.7 mm	9.6 mm	±0.10 mm	15 bar(218psi)	38 bar(551 psi)	35 mm	100 m
3/4	19.05 mm	15.88 mm	±0.10 mm	15 bar(218psi)	45 bar(653 psi)	75 mm	100 m

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

• Standard solid colours: milky white, black, blue and orange (custom colours available).

• Example of metre-marked printing: Polyether AIR PASSAGE PU-PA 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

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