YUANNAI TUBE

# Fluorinated Ethylene Propylene (FEP) Industrial 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 virgin material, with no recycled or reprocessed material added. Recommended for industrial fluid transfer, chemical-media lines, laboratory equipment connections and other applications requiring corrosion resistance and visual monitoring. Finished FEP tubing can offer good transparency, chemical resistance and melt-processability.

• Suitable media listed in the source: strong acids, strong alkalis, salt solutions, various organic solvents and oxidising agents.

• Main applications: auxiliary chemical-equipment lines, laboratory fluid connections, automation equipment and transfer lines requiring visual monitoring of media flow.

• Product positioning: fixed industrial equipment routing, pneumatic-component connections, auxiliary instrumentation lines and validated lubrication lines.

• Key characteristics: transparent for visual monitoring; resistance to high and low temperatures, corrosion, acids and alkalis.

• Environmental and special compliance: RoHS, REACH, food-contact, drinking-water and medical conformity is subject to valid documentation for the corresponding resin, colour formulation and finished product; none is included by default.

## 2. Physical and mechanical properties

| Test item | Reference value |
|---|---|
| Density | Approx. 2.12-2.17 g/cm³ |
| Hardness | 55 ± 5 Shore D |
| Tensile strength | >20 MPa |
| Elongation at break | ≥250% |
| Melting temperature | Approx. 260°C |
| 24-hour water absorption | Approx. 0.01% |
| Finished-product service temperature range | -196°C to +200°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-FEP 0425 | 4.0 mm | 2.5 mm | ±0.10 mm | 16 bar (224 psi) | 48 bar (672 psi) | 25 mm | 100m |
| YN-FEP 0640 | 6.0 mm | 4.0 mm | ±0.10 mm | 17 bar (238 psi) | 52 bar (728 psi) | 40 mm | 100m |
| YN-FEP 0850 | 8.0 mm | 5.0 mm | ±0.10 mm | 20 bar (280 psi) | 60 bar (840 psi) | 60 mm | 100 m |
| YN-FEP 0855 | 8.0 mm | 5.5 mm | ±0.10 mm | 20 bar (280 psi) | 60 bar (840 psi) | 65 mm | 100 m |
| YN-FEP 0860 | 8.0 mm | 6.0 mm | ±0.10 mm | 13 bar (182 psi) | 40 bar (580 psi) | 70 mm | 100 m |
| YN-FEP1065 | 10.0 mm | 6.5 mm | ±0.10 mm | 19 bar (270 psi) | 58 bar (812 psi) | 80 mm | 100 m |
| YN-FEP 1080 | 10.0 mm | 8.0 mm | ±0.10 mm | 14 bar (196 psi) | 42 bar (588 psi) | 110 mm | 100 m |
| YN-FEP 1280 | 12.0 mm | 8.0 mm | ±0.10 mm | 18 bar (261 psi) | 56 bar (784 psi) | 100 mm | 100 m |
| YN-FEP 1410 | 14.0 mm | 10.0 mm | ±0.10 mm | 12 bar (168 psi) | 36 bar (504 psi) | 120 mm | 100 m |
| YN-FEP 1612 | 16.0 mm | 12.0 mm | ±0.10 mm | 10 bar (145 psi) | 30 bar (420 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 | 16 bar (232 psi) | 64 bar (928 psi) | 13 mm | 100 m |
| 1/4″ | 6.350 mm | 4.35 mm | ±0.10 mm | 10 bar (145 psi) | 40 bar (580 psi) | 50 mm | 100 m |
| 3/8″ | 9.525 mm | 6.35 mm | ±0.10 mm | 10 bar (145 psi) | 40 bar (580 psi) | 26 mm | 100 m |
| 1/2″ | 12.70 mm | 9.60 mm | ±0.10 mm | 6 bar (87 psi) | 24 bar (348 psi) | 130 mm | 100 m |

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

- Standard colours: high-transparency clear, transparent blue and transparent red.
- 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.

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