Technical Specification for Polyethylene (PE) Flexible Hose

Polyethylene (PE) Industrial Tubing Technical Data Sheet

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Manufacturer: Hefei Yuan Nai Pneumatic Equipment Co., Ltd. / YUANNAI TUBE
Quality Commitment: 20 years of dedication · 100% pure raw materials · zero recycled materials

1. Product Overview and Material Properties

This product is carefully selected and manufactured using 100% genuine, high-quality, entirely new polyethylene material via extrusion; no recycled or reclaimed material is added. This product is recommended for general industrial conveying applications, auxiliary piping for equipment, and proven low-pressure pneumatic connection applications.

- **Applicable media:** room-temperature water, compressed air.
- **Application scope:** Generally used for auxiliary pipe routing, low-pressure liquid transportation, and fixed connections.
- **Appearance:** The natural milky-white color and color matching of this product are subject to the confirmation sample.
- **Fitting compatibility:** Fittings suitable for the corresponding outer diameter, wall thickness, and hardness of the PE pipe shall be used.
- **Environmental compliance documentation:** Compliance with RoHS, REACH, and other requirements shall be subject to valid declarations or test reports pertaining to the actual raw materials, color masterbatches, and finished products.
- **Special applications**: food contact, drinking water, medical use, respiratory gases, gas applications, and high-pressure applications; these shall not constitute the default claims for products covered by this standard.

2. Physical and Mechanical Properties

Test item	Numeric value
Density	Approximately 0.920 g/cm³
Melt mass flow rate (MFR)	Approx. 2.0 g/10 min
Tensile yield strength (Tensile Stress at Yield)	Approximately 10 MPa
Tensile stress at break	Approximately 16 MPa
Elongation at Break	Approximately 750%
Air operating temperature range	-10°C ~ +50°C
Hydraulic operating temperature range	0°C ~ +55°C; freezing is not permitted.

3. Specifications and dimensions, as well as pressure-bearing parameters (under standard conditions of 23°C)

(1) Metric Sizes

Model	External diameterOD	Bore sizeID	Common difference	Working pressureWP	Bursting pressure of tank shellBP	Bending radius	Standard sample length
YN-PE 0425	4.0 mm	2.5 mm	±0.10 mm	6 bar (87 psi)	18 bar (261 psi)	20 mm	200 m
YN-PE 0640	6.0 mm	4.0 mm	±0.10 mm	6 bar (87 psi)	18 bar (261 psi)	30 mm	200 m
YN-PE 0850	8.0 mm	5.0 mm	±0.10 mm	7 bar (113 psi)	15 bar (227 psi)	40 mm	100 m
YN-PE 0855	8.0 mm	5.5 mm	±0.10 mm	5 bar (73 psi)	15 bar (218 psi)	45 mm	100 m
YN-PE 0860	8.0 mm	6.0 mm	±0.10 mm	6 bar (99 psi)	17 bar (256 psi)	50 mm	100 m
YN-PE 1065	10.0 mm	6.5 mm	±0.10 mm	6 bar (87 psi)	18 bar (261 psi)	50 mm	100 m
YN-PE 1080	10.0 mm	8.0 mm	±0.10 mm	4 bar (71 psi)	14 bar (213 psi)	75 mm	100 m
YN-PE 1280	12.0 mm	8.0 mm	±0.10 mm	5 bar (85 psi)	13 bar (199 psi)	60 mm	100 m
YN-PE 1410	14.0 mm	10.0 mm	±0.10 mm	5 bar (73 psi)	15 bar (218 psi)	80 mm	100 m
YN-PE 1612	16.0 mm	12.0 mm	±0.10 mm	3 bar (56 psi)	11 bar (170 psi)	110 mm	100 m

(2) Imperial Fractional/inch Sizes

Nominal specifications	External diameterOD	Bore sizeID	Common difference	Working pressureWP	Bursting pressure of tank shellBP	Bending radius	Standard sample length
1/8″	3.175 mm	1.58 mm	±0.10 mm	8 bar (116 psi)	24 bar (348 psi)	16 mm	200 m
1/4″	6.35 mm	4.35 mm	±0.10 mm	5 bar (73 psi)	15 bar (218 psi)	35 mm	200 m
3/8″	9.525 mm	6.35 mm	±0.10 mm	6 bar (87 psi)	18 bar (261 psi)	50 mm	100 m
1/2″	12.70 mm	9.60 mm	±0.10 mm	4 bar (58 psi)	12 bar (174 psi)	80 mm	100 m

4. Packaging, Appearance, and Customization Support (OEM/ODM)

1. Standard colors: milky white, dark blue, black, green, and yellow (customization available)
2. Example of metering and coding on the tube body: AIR PASSAGE PE 8X5 001M (supports customized customer-brand logos, model identifiers, and continuous meter-number marking)
3. Packaging specifications: wrap film packaging

The indicators in this data table represent reference values based on laboratory tests conducted at room temperature; for specific operating conditions, please refer to the actual test results.