JAFLINE Hose Specification

Jafline is a superior double jacket, polyurethane-lined highly durable and lightweight fire attack hose. It **meets** or **exceeds** *NFPA 1961 Fire Hose Standard*, 2007 edition.

Potable Water Standard NSF 61: The Jafline product contains material approved by the National Sanitation Foundation under Standard 61, "*Listed Drinking Water System Components-Health Effects, Potable Water Material*."

Jacket Construction: The warp and weft for the outer and inner jackets is virgin spun polyester yarn. Hose comprised of all-synthetic fibers is much lighter in weight and more flexible than cotton-synthetic hose; therefore, a greater amount can be stored in a given space. The outer jacket is thoroughly impregnated with a polymer compound to provide superior resistance to chemicals, abrasion and ultra-violet light. Compound is heat set at 275ºF. The jackets must fit snugly inside one another under zero pressure or under proof and service test pressures.

Lining: The thermoplastic lining shall be a single-ply extruded tube and shall be unaffected by ozone. The finished form shall be free of pits or other imperfections and shall have a smooth finish. No reclaimed material shall be used. Thickness of the liner shall be .015 to .018 for 1", 1 ½" and 1 ¾" and . 022" to .025 for the 2 ½" hose. Shore hardness shall be 40 ± 5 durometer on the "D" scale. The tensile strength of the liner shall not be less than 3000 psi, with a minimum elongation of 400%.

Adhesion: The adhesion between the liner and the inside jacket is such that the rate of separation of a 1.5" wide strip cut transversely, shall not be greater than 1" per minute over a period of ten minutes, under a weight of 15 pounds.

Accelerated Aging: Lining specimens subjected to an exposure of 158 ° +/- 3.6 °, for a duration of 96 hours shall be conditioned to ASTM D 573, and ASTM D4112, *Standard Test Methods for Vulcanized Rubber and Thermoplastic Elastomers- Tension, Method A*. Under evaluation, the tensile and elongation properties of the liner shall not be less than 75% of their initial values.

Couplings: Expansion-type in either hardcoat anodized aluminum or brass, rocker lug are available. The anodize process creates a hard aluminum oxide coating which improves the abrasion, corrosion and electrolysis resistance of the completed fitting, while also preventing excessive wear on the male and female threads. Storz couplings are available by special order. All couplings meet NFPA 1963, *Standard for Fire Hose Connections*, 2009 edition.

Hydrostatic Tests:

Diameter (inches)	Pressure (p.s.i.)	Proof Test	Burst Pressure
1.5	400	800	1200
1.75	400	800	1200
2	400	800	1200
2.5	400	800	1200
3	400	800	1200

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4	400	800	1200
5	400	800	1200

All tests performed in compliance with *NFPA 1961 Fire Hose Standard*, 2007 edition .

Abrasion Resistance: Outer jacket must withstand a minimum of 2,800 cycles on the Taber Abraser with no abrasion through the filler yarn. H-22 Calibrade wheel to be used with 1,000 gram load on each wheel. The hose shall also withstand Underwriters Laboratory Abrasion Test in UL 19, *Lined Fire Hose and Hose Assemblies* and the Abrasion Test defined in FM Class Number 2111, *Factory Mutual Approval Standard for Fire Hose.*

Cold Resistance: Hose shall have the capability of use down to -40 **°** F. There shall be no apparent damage to jacket or lining when subjected to the following cold bend test: A 3-foot section of hose shall be exposed to a temperature of -40 **°** F. for a period of 24 hours. At the end of the exposure period, the hose shall be rapidly bent 180 degrees back onto itself, first one way and then the other. Following this procedure, the hose shall not leak, nor show any damage to the jacket when subjected to the burst pressure shown above.

Heat Resistance: The ability of the hose to resist heat shall be verified using the test procedures defined in UL 19*, Lined Fire Hose and Hose Assemblies*, Heat-Resistance Test; FM Class Number 2111, *Factory Mutual Appproval Standard for Fire Hose*, Heat Resistance.

Ozone Resistance: Hose liner shall show no signs of cracking under 7 power magnification when tested in accordance with ASTM D1149-86). Specimen shall be elongated at 15% for 120 hours of exposure at 100 pphm ozone at a temperature of 122**°** F.

Marking: Beginning at a point not less than 5' ± 6" from each end, each length shall be stenciled in letters at least one inch high with the manufacturer's identification, country of origin, month and year of manufacture, and the words, "Service Test to 400 p.s.i. per NFPA 1962."

Weights and Coil Sizes: 50' non-coupled lengths shall conform to the following averages:

Hose Diameter	Weight (pounds)	Coil Size (inches)	Consumed Space (cubic feet)
1.5	14	15.5	0.6
1.75	17	15.5	0.65
2	19	16	0.8
2.5	24	18	1
3	28	18	1

Colors: Available colors are Red, Yellow, Green, Orange, Blue, Tan, and White.

Inspection and Care: NFPA advises users to develop a fire hose inspection and care program based on NFPA 1962, *Standard for the Inspection, Care, and Use of Fire Hose, Couplings, and Nozzles and the Service Testing of Fire Hose,* 2008 edition. Such program should also address the retirement of fire hose.

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Warranty: ATI warranties both the hose and couplings to be free from defects in material and workmanship for a period of **10 years**. Upon evaluation, hose found to be defective will be repaired or replaced by ATI at no charge to the fire department.

ATI reserves the right to make changes to this specification at any time, as required.

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