HighWater Hose Inc.
"The Mark of Quality"

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Jet-Stream™

Applications

- Aggressive Interior Attack Hose
- Pre-Connected Cross-Lay & Attack Hose
- Pre-Connected Front Bumper Attack Hose
- De-Contamination & Wash Down Hose

Hose Construction

- As Fire Hose forms the front line of attack in any fire department, it is mandatory that the design meets the requirements of today's premier municipal firefighters. To meet these needs, Highwater Hose Inc. has now developed Jet-Stream. Highwater Hose Inc. has taken their third generation Matrix Encapsulated Technology and combined it with the latest techniques for obtaining high burst, minimizing kinking, abrasion damage, cutting and drag resistance. The synergized hoses so produced will have the following properties as a minimum:

Outer Jacket Properties

The outer jacket shall be woven with high tenacity spun polyester warp yarns with a minimum diameter corresponding to 8/7 type. The jacket shall have an elastomeric impregnation to optimize abrasion resistance and dragging coefficient and minimize water absorbtion. Filament Yarns that create poor handling and poor jacket distortion characteristics are unacceptable.

Inner Hose Properties

- The inner hose shall be constructed of top quality synthetic yarns woven into an optimized web and embedded in a matrix of nitrile rubber, to produce high strength and low friction loss. The inner hose must be a commercially available product with a minimum burst of 900 psi. Inner hoses not produced by a through the weave type process are unacceptable.
- To ensure complete conformance, this inner hose must meet the following minimum requirements or it will be unacceptable.
- Hose shall be evaluated in accordance with the principles and practices listed in the National Fire Protection Association Standard 1961 (Latest edition, and related standards).

Ultimate Tensile Strength

Tensile strength of the vulcanized rubber compound used in the hose shall not be less than 1650 psig.

Ultimate Elongation

Ultimate elongation of the vulcanized rubber compound shall be not less than 500%.

Permanent Elongation

Permanent elongation of the vulcanized rubber compound shall be less than 20%.

Adhesion

The adhesion between samples of the reinforcement web and either the liner or the cover shall exceed NFPA 1961 requirements. The sample width shall be 1 1/2" as called out in the standard.

Accelerated Aging Properties

When subjected to hot air oven aging at 158 °F for 96 hours, the tensile strength and ulti-mate elongation shall be at least 75% of the original values.

Heat Resistance

When subjected to an internal static water pressure of 100 psi, the hose shall withstand a surface temperature of 1200° F for at least 60 seconds without bursting.

Cold Resistance

Hose shall be capable of practical use down to -35ºF (-37ºC)

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Ozone Resistance.

When evaluated in accordance with standards ASTM D 1149 and ASTM D518, procedure B, 70 hours at 118'F, 100pphm of ozone, the cover or liner shall show no visible signs of cracking.

Chemical Resistance.

Contamination by most chemical substances, Oils, greases, hydrocarbons, and exposure to sea-water shall have no effect on the short or long-term performance of the hose. A copy of the products chemical resistance chart shall be provided by the manufacturer, if requested.

Abrasion and wear Resistance.

When subjected to the abrasion test listed in the Underwriters Laboratories Standard UL19, the hose shall withstand at least 3,000 cycles without compromising the hoses ability to be used as a primary attack hose as defined in NFPA Standard 1961 (latest edition).

Water Absorption.

When tested against the procedure listed in MIL STD 24606 the maximum water absorbance shall be less than 3 lbs in a 50 foot length.

Couplings.

- ► The coupling must be manufactured in North America and be NAFTA compliant. Written certification is required.
- ► Couplings must be marked permanently and legibly with Country of origin per NFPA 1963 latest edition.
- ► Paper labels are not permanent, and as such are unacceptable, no exceptions.
- ► The hose shall be fitted with lightweight, extruded aluminum alloy, hard coated, rocker lug couplings. These shall be expansion ring type, NH threads per NFPA 1963, latest edition, or as specified.
- ► The female coupling must have at least 3 reflective arrows, in order to be visible from any position.
  - The reflective arrows must be engraved into and below the surface of the coupling, to resist abrasion
  - The arrows must point in the direction of the water source
  - The couplings must be available in sizes from 1 ½ to 3 inch diameter (38mm to 76mm)
  - The couplings must be anodized. The anodized treatment must be resistant to chipping & deterioration due to abrasion

Burst, Hydrostatic and Physical Data.

Synergized hose shall comply with the requirements listed in the tables below and the requirements of The National Fire Protection Association Standard 1961, latest edition.

Maintenance.

Hose shall not support mold or mildew growth.

Warranty.

Hose shall be warrantied against all hazards for a period of two (2) years. It shall also be warrantied against defects in materials and workmanship for a period of five (5) years. All warranty claims will be processed on a company issued RGA form. Repairs / replacement shall be at the discretion of the manufacturer.

Miscellaneous

Each fire hose must be tested to "test pressure" with their couplings installed. A letter of certification must be available upon request.

Technical Grid / Grille Technique / Rejilla Técnica

Trade Size		Bowl Size		Weight 50' (15.2M) Un-Coupled		Coil Diameter 50' (15.2M)		Service Pressure		Test Pressure		Burst Pressure	
In.	mm	In.	mm	Lbs	Kg	In.	Cm.	PSI	kPa	PSI	kPa	PSI	kPa
1 1/2	38	1 13/16	46	15.5	7.0	14.5	36.8	500	3 450	1 000	6 900	1 500	10 340
1 3/4	45	2 1/8	54	18.0	8.2	16.0	40.6	500	3 450	1 000	6 900	1 500	10 340
2 1/2	64	2 7/8	73	26.0	11.8	17.0	43.2	400	2 750	800	5 500	1 200	8 275

Pessure Loss at nozzle / Perte de pression au bec / Pérdida de presión al pico (100' /33M)													
In.	mm	60 gpm	80 gpm	100 gpm	125 gpm	150 gpm	175 gpm	200 gpm	225 gpm	250 gpm	275 gpm	300 gpm	400 gpm
1 1/2	38	7.2	13.1	21.0		47.5							
1 3/4	45	3.5	6.2	9.6		21.0		38.0		57.0			
2 1/2	64			1.2		3.0		4.8		8.5		12.0	21.0