



High Water Hose Inc.

"The Mark of Quality"

12, Rue Willard
East Angus, QC
J0B 1R0, Canada
Tel : 888-832-4310
Fax : 819-832-4340

Deluge™



Applications

- ▶ "LDH" Supply Overland Volume Hose
- ▶ Supplying Stand Pipe Systems
- ▶ Supply Line
- ▶ Supply stand alone portable Hydrants

Hose Construction

Large water flows impose very special requirements for hose. It is mandatory that the hose is designed specifically for flowing large amounts of water at maximum working pressure. To meet these unique needs, the finished product shall be flexible, abrasion, heat and kink resistant. Recognizing also the physical limitations of the Firefighter, the maximum weight of the hose shall be controlled without compromising these properties. Hose shall be constructed of top quality synthetic yarns woven into an optimized web to produce high strength and low friction loss. To ensure complete conformance, the resultant hose must meet the following minimum requirements or it will be unacceptable.

Hose Physical Properties

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. As a minimum it shall meet the requirements of NFPA 1961 (Latest edition) for Supply Hose and if required, listing by Underwriters Laboratories. Also, when tested as such it shall have the following minimum properties:

Ultimate Tensile Strength

Tensile strength of the vulcanized rubber compound used in the hose shall not be less than 1750 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 22%.

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 ultimate 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 -35°F (-37°C)

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.



High Water Hose Inc.

"The Mark of Quality"

12, Rue Willard
 East Angus, QC
 J0B 1R0, Canada
 Tel : 888-832-4310
 Fax : 819-832-4340

Abrasion and wear Resistance.

Long term use is determined in no small measure by the abrasion resistance of the cover of the hose. To ensure this is adequate, the hose, when built to the weights listed, shall with-stand the following abrasion tests:

Underwriters Laboratories Method.

When tested according to the method listed in Underwriters Laboratories Inc. Standard 219, Hose shall withstand 5,000 cycles on the defined reciprocating abrasion tester.

Taber Abraser Method.

When evaluated against the procedure listed in ASTM D2215 Reinforcement shall not show signs of damage after 15,000 cycles.

Water Absorption.

When tested against the procedure listed in MIL STD 24606 the maximum water absorbance shall be no more than 0.5 lbs in a 50 foot length.

Packability

Because packability is vital, each 100' of coupled hose, as supplied, shall be capable of occupying a volume of no greater than 3.89 cubic feet, for 4" and 4.48 cubic feet for 5", when averaged over a 1,000 foot hose lay.

Couplings.

- ▶ Unless otherwise specified, the hose shall be fitted with Storz couplings fitted with 3- part collars.
- ▶ The couplings and collars shall be gold anodized for greater visibility and better corrosion resistance. Powder Coating is not acceptable.
- ▶ The coupling must be designed in such a way to completely protect the lock from damage that could occur when using the hose, particularly during deployment (Lock Protector). Locks shall be metal.
- ▶ The storz coupling's lock lever must have brightly colored recessed reflective material that provides rapid identification of the coupling locks.
 - The reflective material must be recessed, to provide maximum protection against abrasion
 - The reflective material must reflect toward any light source
 - The reflective material must be easily visible to firefighters and oncoming vehicles
 - The lock lever must be anodized in a bright color, to enhance daytime visibility
- ▶ The couplings must have an engraved reflective arrow pointing the rotational direction to engage the coupling set.
 - The arrow must align with it's counterpart arrow or with the locking lever as an added means to determine that the lock mechanism is engaged.
 - The reflective material must reflect toward any light source
 - The reflective material must be recessed, to protect against abrasion
 - The reflective material must be easily visible to firefighters and oncoming vehicles
- ▶ 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.

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.

Miscellaneous

- ▶ The hose shall be U.L. (US) and U.L.C. (Canada) listed, and can be labeled U.L. or U.L.C. upon request.
- ▶ 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) 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	
4	102	4 3/8	111	45.0	20.5	24.0	61.0	250	1 725	500	3 450	750	5 175	
5	127	5 3/8	137	59.0	26.8	26.0	66.0	200	1 375	400	2 750	600	4 140	

Pessure Loss at nozzle / Perte de pression au bec / Pérdida de presión al pico (100' /33M)														
In.	mm	400 gpm	600 gpm	800 gpm	1000 gpm	1250	1500 gpm	1750 gpm	2000 gpm	2250 gpm	2500	3000		
4	102	1.4	3.2	5.9	9.1	13.7	20.5	27.5						
5	127	0.5	1.2	2.1	3.4	5.1	7.6	9.1	13.1				30.2	