



WD Washdown Hose

Hose Construction

Clean-up in today's aggressive industrial environment requires specialized products and hose is no exception. It is essential that hoses used in this application have excellent resistance to oil and chemicals. They must be lightweight, abrasion, and heat resistant. They must also be resistant to environmental pollutants and capable of easy decontamination. For this purpose, it is mandatory that the reinforcement be totally encapsulated in a matrix of *Synthetic Nitrile Rubber*, compounded to optimize the above. To avoid confusion with fire fighting hoses the hose shall be *black or blue* in color. Old fashioned jacketed mill hose or coated products are not acceptable. 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.

When tested as such it shall have the following 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



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Hose Specification

Ozone Resistance.

When evaluated in accordance with standards ASTM D 1149 and ASTM D518, procedure B, 70 hours at 118°F 100 ppm 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 chemical resistance chart for the hose shall be provided on request by the manufacturer.

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 withstand the following abrasion tests:

Factory Mutual Method.

Hose shall exceed the Factory Mutual Research Corporation test for abrasion. This is listed in their Standard 2111, Latest edition.

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 7,000 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.

Couplings.

The hose shall be fitted with lightweight, extruded aluminum alloy, hard coated, rocker lug couplings. These shall be expansion ring type, NH threads or as specified.

Hose Specification

Average Uncoupled Weights

Size	50'	100'	Coil Diameter
1-1/2"	10.5 lbs	21 lbs	12.5 ins
1-3/4"	16 lbs	32 lbs	13.5 ins
2"	17.5 lbs	35 lbs	14.0 ins
2-1/2"	20 lbs	40 lbs	14.5 ins

Sizes and Pressures

Size	Bowl Size	Service Pressure	Proof Pressure	Minimum Burst Pressure
1 1/2"	1 3/4"	250 psi	500 psi	750 psi
1 3/4"	2"	250 psi	500 psi	750 psi
2"	2 3/16"	250 psi	500 psi	750 psi
2 1/2"	2 3/4"	250 psi	500 psi	750 psi

Average Friction Loss in PSI per 100' Length

Flow in U.S. g.p.m.	1 1/2"	1 3/4"	2"	2 1/2"
60	7.2	3.5	1.4	
80	13.1	6.1	2.5	
100	21.0	9.6	4.0	1.1
150	47.5	21.3	8.8	2.9
200		40	16.0	4.7
250		59	24.7	8.0
300			35.0	11.8
350			49.0	15.4
450			62.5	20.0
500				33.5

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