



# Mercedes Textiles Limited

"Flowing with Technology"

## Aquaflow plus®

**Our Most Rugged  
Municipal Attack Fire Hose  
Premium all Synthetic Double Jacket  
400 PSIG / 2750 kPa Service Pressure  
Superior Performance & Durability**

5838 Cypihot  
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Canada, H4S 1Y5  
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**DESIGNED FOR FIRE SERVICES WHERE DURABILITY & LIGHT WEIGHT ARE PARAMOUNT**



### Applications

- ▶ Pre-Connected Cross-Lay & Attack Hose
- ▶ Pre-Connected Front Bumper Attack Hose
- ▶ Rapid Intervention Team (RIT) Hose
- ▶ De-Contamination & Wash Down Hose
- ▶ Potable Water Transfer Hose (Stenciled)

### Features and Benefits

- ▶ This hose features our Mercedes Textiles Limited "Two Year All Hazards Warranty".
- ▶ Tough and ready for action but light in weight.
- ▶ Our Patented Mertex® lining process produces an amazingly thin but smooth inner waterway, yielding an extremely low friction loss for maximum flow.
- ▶ Complete with Permatak™ HP treatment in a variety of colors, for even greater visibility & abrasion resistance. This treatment also greatly reduces moisture absorption through the jacket
- ▶ Resistant to most chemicals, petrol products, ozone & U.V. exposure, hydrolysis, and rot & mildew.
- ▶ Will remain flexible to -65° F (-55° C).
- ▶ Meets ULC requirements and can be labeled upon request in the sizes specified\*.
- ▶ Available with our unique patent pending Mertex Wayout™ couplings. The Mertex Wayout™ couplings' reflective recessed arrows help guide the way out of a fire.

### Patented Mertex® Lining Process

- ▶ Welds the lining directly to the textile while the hose is being woven.
- ▶ This allows the use of high strength Filament Polyester yarn to be used, due to the Mertex® process superior liner adhesion.
- ▶ Locks fibers together for greater strength while still allowing for a high flexibility.
- ▶ Creates a virtually inseparable bond without the use of adhesives. Huge advantage over competitors.
- ▶ Yields an extremely low friction (pressure) loss because the Mertex® process fills the corrugations of the weave, which creates an amazingly thin and smooth waterway.
- ▶ Mertex® lined hose produces lower elongation under pressure. This means less pull back when water is suddenly shut-off, resulting in a safer hose to work with.
- ▶ Permits manufacturing to special lengths. Consult factory for details.
- ▶ Mertex® Patented process >> Canadian patent # 1,295,104, plus 15 other countries

### Permatak™ Treatment

- ▶ Available in the following Colors : Yellow(Y), Blue(B), Green(G), Red(R), Orange(O), Black(K), Tan(T), and Clear C.
- ▶ Locks fibers together for greater strength, reduces water pickup and absorption.
- ▶ Provides protection against abrasion.
- ▶ Provides resistance to Petroleum products and Ozone.
- ▶ Provides for shorter drying times.



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## Bid Specifications

### How to Specify Aquaflo plus®

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#### Scope:

- ▶ Hose manufactured to this specification shall be of superior quality and workmanship. This heavy-duty double jacket fire hose shall be designed to withstand the rough usage of front line fire fighting.

#### Construction and Features:

- ▶ The hose shall be of double jacket construction.
- ▶ The inner jacket shall be made with high tenacity filament polyester yarn in both the warp and weft directions, to provide maximum strength.
- ▶ The outer jacket shall be made with virgin spun polyester warp yarn and a filament polyester weft yarn. Hose made using nylon or other materials shall not be considered as meeting this specification.
- ▶ The hose outer jacket shall have a minimum filler yarns of 10.0 per inch (394 per Meter)
- ▶ The hose shall be available in any of eight colors listed with our Permatek treatment, upon request.
- ▶ The hose shall have excellent resistance to most chemical substances, oils and greases. Exposure to salt water shall have no effect on the short or long term performance of the hose and copy of the chemical resistance shall be provided upon request.
- ▶ The hose must be of sufficient body and weight to meet the demands of heavy-duty fire fighting.
- ▶ When requested the hose shall be available with patent pending Mertex Wayout™ couplings. The Mertex Wayout™ couplings' reflective recessed arrows help guide the way out of a fire.

#### Performance:

- ▶ The inner hose by itself shall be a NFPA compliant attack hose with a minimum of 900 PSI (6210 kPa) burst.
- ▶ The hose, in all sizes, shall have minimum service, test, and burst pressures as specified in the Technical Chart. Hoses which do not meet these minimum pressures, shall not be considered as meeting this specification.
- ▶ The 1 3/4" (45mm) hose shall be capable of flowing 100 US GPM (378 LPM) with a maximum pressure loss of 8 PSIG (55 kPa) per 100' (30.48M). A hose with a friction loss greater than this shall not be considered as meeting this specification.
- ▶ The hose jacket shall be abrasion resistant.
- ▶ There shall, be no defects, dirt, knots, lumps or other irregularities affecting the performance of the hose.
- ▶ The hose must resist kinking and remain flexible to -65°F (-55°C).

#### Lining:

- ▶ The hose lining shall have excellent resistance to most chemicals, petrol products, ozone and U.V.
- ▶ The hose lining shall be capable of being approved for potable water, when so ordered.
- ▶ The thermoplastic lining material used for this specification shall have a flawless record in the fire hose industry.
- ▶ The hose jacket shall be lined by the patented Mertex® method. The lining material in its molten state shall fill the corrugations of the weave fusing to every warp and filler thread and provide a very smooth and low friction waterway. No adhesive or backing material shall be used to bond the lining and it shall yield maximum flow with minimum friction loss. A hose manufactured by inverting an exterior coated hose shall not be considered as meeting this specification. Hose manufactured with the use of adhesives or backing for bonding the liner, or hose made with rubber liners shall not be considered as meeting this specification.

#### Treatment:

- ▶ The exterior jacket shall be Permatek® treated for greater abrasion resistance, improved visibility & reduced moisture pick-up.

#### Standards:

- ▶ Fire hose manufactured to this specification shall meet & exceed all performance requirements of NFPA 1961, Underwriter's Laboratories & Factory Mutual.
- ▶ The hose shall be ULC approved and can be labeled upon request in the sizes specified\*
- ▶ The hose shall carry the Mercedes Textiles Limited "Two Year All Hazards Warranty".

#### Technical Chart

Hose Spec	Trade Size		Bowl Size		Weight 50' (15.2M) Un-coupled		Coil Diameter 50' (15.2M)		Service Pressure		Proof Pressure		Burst	Pressure
	In.	mm	In.	mm	Lbs	Kg	In.	Cm.	PSI	kPa	PSI	kPa	PSI	kPa
412	1.5*	38*	1 15/16	49	13.0	5.9	16.5	41.9	400	2 750	800	5 500	1 450	10 100
413	1.75*	44*	2 1/8	54	14.0	6.4	17.0	43.2	400	2 750	800	5 500	1 500	10 340
414	2*	51*	2 5/16	59	17.0	7.7	17.0	43.2	400	2 750	800	5 500	1 450	10 100
415	2.5*	64*	3	76	21.0	9.5	19.0	48.3	400	2 750	800	5 500	1 450	10 100
416	3*	76*	3 5/16	84	26.0	11.8	21.0	53.3	400	2 750	800	5 500	1 250	8 620

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