



Mercedes Textiles Limited

"Flowing with Technology"

Firebreak II®

Self-protecting (Percolating) All Synthetic Forestry Hose
300 PSIG / 2070 kPa Service Pressure
Superior Performance & Durability

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THE # 1 CHOICE" OF THE CANADIAN FOREST FIRE AGENCIES, FEATURES OUR HYDRO-WICK® SELF PERCOLATING PROCESS, A ULC APPROVED WEeping HOSE!



Applications

- ▶ Forestry Light Weight, Self-protecting Attack Hose
- ▶ Urban Interface, Grass Fire Kits, and Mop Up Hose
- ▶ Wildland Brush Fire Truck Attack Hose
- ▶ Cottage & Forestry Home Values Protection Hose

Features and Benefits

- ▶ Uses our patented Hydro-Wick® Weeping process which weaves the yarn through the liner producing a "Wick" effect to dampen the hose jacket. This "Wick" effect results in considerable less pressure loss due to Weeping and eliminates clogging, as compared to the needle prick process used by our competitors.
- ▶ 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.
- ▶ 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*.
- ▶ Meets or exceeds all performance requirements of NFPA 1961, Underwriter's Laboratories & Factory Mutual.

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.

Patented Hydro-Wick® Weeping Process

- ▶ Our patented Hydro-Wick® Weeping process is achieved by weaving the yarn through the liner which produces a "Wick" effect to dampen the hose jacket.
- ▶ This "Wick" effect results in considerable less pressure loss due to weeping and eliminates clogging, as compared to the needle prick process used by our competitors.
- ▶ The resulting wet jacket provides excellent protection against heat, i.e., such as in forest fire applications.



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Bid Specifications

How to Specify Firebreak II®

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Scope:

- ▶ Hose manufactured to this specification shall be of superior quality in both workmanship and raw materials. Within the scope of a single jacket construction the hose shall be resistant to wear and tear. The hose shall not deteriorate from the effects of aging.

Construction and Features:

- ▶ The hose shall be of single jacket construction.
- ▶ The jacket shall be made with high tenacity filament polyester yarn in both the warp and weft directions, to provide maximum strength to weight ratio.
- ▶ The jacket shall be woven in a tight twill weave to yield maximum abrasion resistance.
- ▶ The hose outer jacket shall have a minimum filler yarns of 10.8 per inch (425 per Meter)
- ▶ The hose shall be resistant to most chemicals and petrol products, rot & mildew, hydrolysis, and resist deterioration due to exposure to UV-rays and ozone.
- ▶ The hose shall be self-protecting by percolating just the right amount of water through the jacket for even protection along its entire length. This Weeping process shall be achieved by weaving the yarn through the liner thus producing a "Wick" effect to dampen (wet) the hose jacket.

Performance:

- ▶ 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 1/2" (38 mm) hose shall be capable of flowing 70 US GPM (264 LPM) with a maximum pressure loss of 10 PSIG (69 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 highly abrasion resistant, highly flexible, and very snag 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).
- ▶ Twisting and warping shall be at least 100% better than required, by the applicable NFPA standards.
- ▶ The hose shall not rise up from the test surface.

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 without the use of adhesives or backing material, to lock the fibers in place. 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. An inner 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.

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*

Technical Chart

Hose Spec	Trade Size		Bowl Size		Wt. 100' (30.5M) Un-coupled		Coil Diameter 100' (30.5M)		Service Pressure		Proof Pressure		Burst Pressure	
	In.	mm	In.	mm	Lbs	Kg	In.	Cm.	PSI	kPa	PSI	kPa	PSI	kPa
730	1.00	25	1 5/32	29	8.0	3.6	14.0	35.6	300	2 070	600	4 140	900	6 200
731	1.5*	38*	1 11/16	43	11.0	5.0	14.0	35.6	300	2 070	600	4 140	1 000	6 900
734	2.50	64	2 11/16	68	16.5	7.5	15.0	38.1	300	2 070	600	4 140	800	5 500