



Armored Textiles Incorporated

FORMERLY JAFFREY FIRE PROTECTION



# Municipal Fire Hose

Over 45 Years of Extruded Nitrile Hose Technology

1-888-229-9655 [armtexinc.com](http://armtexinc.com)



## A Proven History of Hose Quality and Durability

Located in Peterborough, New Hampshire, Armored Textiles, Inc. (ATI) is comprised of two distinct divisions: Municipal and Industrial. The Municipal Division supplies fire hose to municipal fire departments throughout the U. S. and Canada, while the Industrial Division includes product lines for agricultural and industrial applications.

In 2001, ATI purchased the fire hose lines of thirty-five year old Jaffrey Fire Protection, which pioneered the use of LDH (large diameter hose) and developed innovative water supply methodologies for fighting fires in rural environments. ATI's municipal product line includes nitrile rubber hose in diameters ranging from one to six inches, and double-jacket hose from one and a half to five inches. All fire hose and fittings conform to NFPA standards, and carry a 10-year *non pro-rated* warranty.

ATI's Industrial Division, also headquartered in Peterborough, serves customers in a wide variety of markets, providing hose for use in sludge, wastewater, irrigation supply, construction, and drainage applications. ATI's industrial hoses carry a 5-year *pro-rated* warranty.

### **ARMORED TEXTILES INCORPORATED**

Formerly Jaffrey Fire Protection

9 Vose Farm Road  
P.O. Box 90  
Peterborough, NH 03458  
Tel: 603-924-2122 Toll-Free 1-888-229-9655  
Fax: 603-924-2322  
e-mail: [ati@armtexinc.com](mailto:ati@armtexinc.com)  
[armtexinc.com](http://armtexinc.com)



### **MUNICIPAL**

JAFX4  
JAFRIB  
ARMTEX <FM>  
JAFLINE  
JAFLINE HD  
JAFLITE  
JAFLITE HD  
FOREST LITE  
ARMORED REEL



**JAFX4 Hose:** Unique 4-layer rubber hose made with an extruded outer layer of proprietary super-tough RLH synthetic rubber compound, making this hose highly resistant to flame, heat, abrasion, and chemicals.



**Meets or Exceeds:**

NFPA 1961 Standard on Fire Hose (2013 edition).

**Unique One-Piece Construction:**

ATI's revolutionary co-extrusion technology creates a "Four Layer Hose In One Operation" without the use of glues or adhesives thereby forming a homogeneous hose which cannot delaminate. 100% high tenacity synthetic yarn is circular woven and completely protected and locked-in by tough highly resistant synthetic rubber.

**Best Abrasion Protection:**

The fourth layer of proprietary RLH rubber compound is super resistant to abrasion — so much so that you can drag it through the hot desert sand to put out oil well fires, day after day. (Yes, we've done that).

**Resists Burn-through:**

Unique outer layer rubber compound makes this hose more resistant to heat, flames and burn-through than traditional double jacket hose.

**Super Durable:**

Excellent resistance to heat, ozone, weather, most chemicals (acids, bases, salts, oils, solvents, etc.), flame, wear, tear and puncture.

**Great Flow and Kinking Resistance**

Highly flexible and smooth inner lining provides excellent dilation characteristics with low friction loss and high kinking resistance.

**Recommended for:**

- Very Active Municipal Departments
- Heavy Industrial Municipalities
- Refining, Chemical, Utility Industries
- Coarse, Abrasive Landscapes
- Marine Environments
- Daily Use Applications such as washdown and sewage treatment plants

Hose Diameter	Weight of 100'	Coil Diameters	Service Pressure	Acceptance Pressure	Burst Pressure	Coupling Bowl Sizes
inches	lbs	inches	psi	psi	psi	inches
1 1/2"	30	17	300	600	900	1 3/4"
1 3/4"	36	17	300	600	900	2 1/16"
2	42	18	300	600	900	2 9/32"
2 1/2"	62	19	300	600	900	2 13/16"
3"	Available by special request, call for details					
4"	92	27	250	500	750	4 17/32"
5"	112	28	250	500	750	5 3/8"

<sup>1</sup>Weight includes couplings





Available with Storz or threaded couplings



## Suitable For Use and Recommended For Fire Fighting Activities In:

- Municipal fire departments
- Industrial fire brigades
- Petro-chemical fire protection
- Shipboard fire fighting
- Municipal supply lines
- Emergency water supply lines

ARMTEX

ARMTEX

## JAFRIB synthetic, single-jacket hose with a nitrile/PVC rubber lining and cover

### Meets or Exceeds:

NFPA 1961 Standard on Fire Hose (2013 edition).

### One Piece Construction:

Synthetic, single jacket with nitrile/PVC rubber lining and cover, made in a single extrusion eliminating risks of separation or blistering.

### Great Durability:

Superior resistance to sea water, acids, oils, gasoline and ozone.

### Excellent Abrasion and Puncture Resistance:

Tough extruded rubber outer layer resists abrasion and puncture and won't snag when dragged as woven jackets sometimes do.

### Highest Flow Capability:

Minimum friction loss: 5" hose has less than 10 psi at 1500 gpm.

### Extreme Temperature Performance:

From extreme cold (-36°F) to extreme hot (+1200°F) environments.

### Lightweight:

A 4" 100' coupled length weighs just 85 lbs.

### High Visibility Colors:

Standard in yellow and red. 1" is only available in yellow.

### Standard Length:

100' and 50'.

## Also Available As ARMTEX

## ARMTEX is same-quality hose as JAFRIB with these additional features:

- FM Global approved as ARMTEX.
- ARMTEX hose meets the requirements of Factory Mutual Class 2111 and NFPA 1961 (2013 edition).
- Available in 1.5" and 2.5" diameters.
- Available in red only.

Hose Diameter	Weight of 100'	Coil Diameters	Service Pressure	Acceptance Pressure	Burst Pressure	Coupling Bowl Sizes
inches	lbs	inches	psi	psi	psi	inches
1"	16	15"/50'	300	600	900	1 3/16"
1 1/2"	34	16"/50'	250	500	750	1 3/4"
1 1/2"	34	16"/50'	300	600	900	1 3/4"
1 3/4"	38	16"/50'	300	600	900	2 1/16"
2"	42	17"/50'	300	600	900	2 9/32"
2 1/2"	53	19"/50'	250	500	750	2 13/16"
2 1/2"	53	19"/50'	300	600	900	2 13/16"
3"	70	23"/50'	300	600	900	3 5/16"
4"	85	25"/100'	225	450	675	4 17/32"
5"	109	27"/100'	225	450	675	5 3/8"
6"	135	32"/100'	200	400	600	6 3/8"

\*Weight includes couplings





## JAFLINE synthetic, double-jacket fire hose with polyurethane lining

### Meets or Exceeds:

NFPA 1961 Standard on Fire Hose (2013 edition)

### Double-Jacket Construction:

Synthetic double-jacket with polyurethane lining, available in yellow, red, orange, blue, tan, green and white.

### High Burst Rating:

1200 psi up to 3" diameter, 900 psi for larger diameters.

### Superior Performance:

Very low friction loss.

### Coated for Better Durability:

All colored hose is impregnated with our tough heat-set polymer coating for the best abrasion resistance.

### All-Weather Performance:

Retains pliability down to -40° F.

### Very Lightweight:

This is ATI's lightest weight American made hose. A 1 1/2" 50' coil weighs under 15 lbs.

### Maintenance Free:

Immune to mildew and rot.

### Standard Lengths:

100' and 50'.



### Suitable For Use And Recommended For Fire Fighting Activities In:

- Municipal fire departments
- Industrial fire brigades
- Attack and supply lines
- High rise packs

Hose Diameter	Weight of 100'	Coil Diameters	Service Pressure	Acceptance Pressure	Burst Pressure	Coupling Bowl Sizes
inches	lbs	50'	psi	psi	psi	inches
1 1/2"	26	15.5"	400	800	1200	1 15/16"
1 3/4"	30	15.5"	400	800	1200	2 1/8"
2"	37	15.75"	400	800	1200	2 15/32"
2 1/2"	47	17"	400	800	1200	3"
3"	54	19"	400	800	1200	3 1/2"
4"	77	26"	300	600	900	4 17/32"
5"	98	27"	300	600	900	5 15/32"

<sup>1</sup>Weight includes couplings





## JAFLINE HD synthetic, double-jacket fire hose with an EPDM rubber lining

### Meets or Exceeds:

NFPA 1961 Standard on Fire Hose (2013 edition).

### Double-Jacket Construction:

Jafline HD is a synthetic double-jacket hose with an EPDM rubber ozone resistant lining and is available in yellow, red, orange, blue, tan, green and white.

### High Burst Rating:

1200 psi up to 3" diameter.

### Superior Performance:

Very low friction loss.

### Coated for Better Durability:

All colored hose is impregnated with our tough heat-set polymer coating for the best abrasion resistance.

### All-Weather Performance:

Retains pliability to -40°F.

### Lightweight:

A 1 1/2" 50' coil weighs under 20 lbs.

### Maintenance Free:

Immune to mildew and rot.

### Standard Lengths:

100' and 50'.



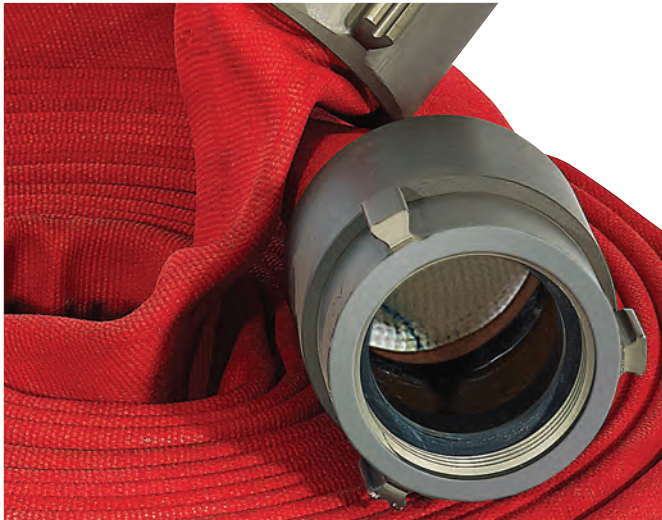
### Suitable For Use And Recommended For Fire Fighting Activities In:

- Municipal fire departments
- Industrial fire brigades
- Shipboard fire fighting

Hose Diameter	Weight of 100'	Coil Diameters	Service Pressure	Acceptance Pressure	Burst Pressure	Coupling Bowl Sizes
inches*	lbs	inches	psi	psi	psi	inches
1 1/2"	36	17"	400	800	1200	1 15/16"
1 3/4"	40	18"	400	800	1200	2 1/8"
2"	48	20"	400	800	1200	2 5/8"
2 1/2"	68	21"	400	800	1200	3"
3"	84	22"	400	800	1200	3 1/2"

\*Available in 4" and 5" diameters. Call for pricing.

\*Weight includes couplings



### Suitable For Use And Recommended For Fire Fighting Activities In:

- Municipal fire departments
- Industrial fire brigades
- Attack and supply lines
- High rise packs

## JAFLITE synthetic, double-jacket fire hose with polyurethane lining

### Meets or Exceeds:

NFPA 1961 Standard on Fire Hose (2013 edition)

### Double-Jacket Construction:

Synthetic double-jacket with polyurethane lining.

Jaflite is sourced outside the United States and is available in 1 ¾" in red, yellow, blue, green, orange and white. In 2 ½", available colors are red, yellow and white.

### High Burst Rating:

1200 psi up to 3" diameter.

### All-Weather Performance:

Retains pliability down to -40° F.

### Ultra Lightweight:

ATI's lightest weight hose. A 1 ¾" 50' coil weighs under 16 lbs.

### Packs Tight:

ATI's best packing and easiest to fold double-jacket hose.

### Maintenance Free:

Immune to mildew and rot.

### Standard Length:

100' and 50'.

Hose Diameter	Weight of 100'	Coil Diameters	Service Pressure	Acceptance Pressure	Burst Pressure	Coupling Bowl Sizes
inches	lbs	50'	psi	psi	psi	inches
1 ¾"	28	15.5"	400	800	1200	2 ⅞"
2 ½"	45	17"	400	800	1200	3"

<sup>1</sup>Weight includes couplings





## JAFILITE HD synthetic, double-jacket fire hose with an EPDM rubber lining

### Meets or Exceeds:

NFPA 1961 Standard on Fire Hose (2013 edition).

### Double-Jacket Construction:

Jaflite HD is a synthetic double-jacket hose with an EPDM rubber ozone resistant lining.

Jaflite HD is sourced outside the United States and is available in 1 1/2", 1 3/4", 2 1/2" and 3" in red, yellow, orange, white and blue.

### High Burst Rating:

1200 psi up to 3" diameter.

### All-Weather Performance:

Retains pliability to -40°F.

### Ultra Lightweight:

ATI's lightest weight rubber-lined hose. A 1 3/4" 50' coil weighs under 20 lbs.

### Packs Tight:

ATI's best packing and easiest to fold double-jacket, rubber-lined hose.

### Maintenance Free:

Immune to mildew and rot.

### Standard Length:

100' and 50'.



### Suitable For Use And Recommended For Fire Fighting Activities In:

- Municipal fire departments
- Industrial fire brigades
- Shipboard fire fighting

Hose Diameter	Weight of 100'	Coil Diameters	Service Pressure	Acceptance Pressure	Burst Pressure	Coupling Bowl Sizes
inches	lbs	inches	psi	psi	psi	inches
1 1/2"	32	17"	400	800	1200	1 15/16"
1 3/4"	36	18"	400	800	1200	2 1/8"
2 1/2"	62	21"	400	800	1200	3"
3"	70	22"	400	800	1200	3 1/2"

\*Weight includes couplings





**FOREST LITE** single jacket, circular woven, 100% high tenacity polyester hose intended for forestry and wildland firefighting

### Single-jacket Non-percolating Forestry Hose

#### Meets or Exceeds:

US Forest Service F-187 standard, NFPA 1961 Standard on Fire Hose (2013 edition).

#### Construction:

Circular woven, single jacket 100% high tenacity polyester.

#### Lining:

Extruded polyurethane with 0.014" thickness.

#### Burst Pressure:

900 psi

#### Lightweight:

A 1 1/2" 50' coil weighs just 6 lbs.

#### Maintenance Free:

Immune to mildew and rot.

#### Coupled:

Standard couplings are NH/NPSH. Quick connect 1/4 turn instantaneous couplings also available. Call for pricing.

#### Color:

White.

#### Standard Lengths:

100' and 50'.



### Suitable For Use and Recommended For Fire Fighting Activities In:

- All wildland and forestry applications
- Wildland and brush vehicles

Hose Diameter	1"	1 1/2"
Service Test	300 psi	300 psi
Proof Test	600 psi	600 psi
Burst Test	900 psi	900 psi
Weight <sup>1</sup>	4 lb/50'	6 lb/50'
Coil Diameter 50"	11"	11"

<sup>1</sup>Weight includes couplings





**ARMORED REEL** semi-rigid hose that replaces the traditional heavy red rubber booster hose. Attack hose that performs like a rigid reel hose.

**Meets or Exceeds:**

NFPA 1961 Standard on Fire Hose (2013 edition).

**Construction:**

Continuous high tenacity polyester woven jacket in a plain weave combined with a rigid and heavy polyester helical interior reinforcement. Lining is 0.023" extruded polyurethane.

**Ready to Go:**

Armored Reel is designed so that it can be charged while still on the reel.

**Burst Pressure:**

1500 psi

**Flexible:**

The polyurethane compound of the inner liner is flexible between -58°F and +180°F.

**Lightweight:**

A 1" 100'† coil weighs just 9.9 lbs.

**Coupled:**

NST expansion is standard. Field replaceable also is available. Call for pricing.

**Color:**

Red.

**Standard Lengths:**

200', 150', 100' and 50'.

**Suitable For Use and Recommended For Fire Fighting Activities In:**

- Municipal, volunteer and industrial firefighting
- Replaces traditional booster hose foot for foot
- Any type of firefighting reel application
- Skid units, booster reels, industrial reels, forestry, wildland applications, portable pumps

Expansion At Proof Pressure	< 5%
Elongation At Proof Pressure	< 5%
Warp At Proof Pressure	< 20"
Rise At Proof Pressure	0"
Service Test Pressure	300 psi
Proof Pressure	600 psi
Straight Burst Pressure	1500 psi
Minimum Bend Radius At 225 psi	3"
Weight for 100' Coil†	9.9 lbs.

†Weight includes couplings



# Characteristics of Fire Hose

There are a number of performance values that should be taken into account when assessing or comparing hoses. Many of these values are stipulated by National Fire Protection Association (NFPA) standards. Other parameters should also be considered in the evaluation process.

**Abrasion Resistance** The higher the abrasion resistance, the longer the hose will last when used on rough surfaces. If abrasion resistance is low, the hose jacket will wear through quickly, damaging the textile and leading to premature hose failure.

**Adhesion Between Layers** How well the hose layers adhere to each other is directly proportional to the useful life of the hose. A high level of adhesion prevents delaminating from occurring. When a hose delaminates, the hose layers separate, compromising the integrity of the hose. On occasion, a hose lining can be drawn into the pump, causing serious damage.

**Bend Radius** A low value of bend radius at both working and low pressures will yield a more flexible and maneuverable hose, minimizing the possibility of the hose kinking. In general, the higher the pressure in the hose, the better the bend radius performance. A high-quality hose will have good bend radius performance at working pressure as well as at low pressures.

**Chemical Resistance** Good resistance to aggressive chemical/hydrocarbon products, which fire hose may come into contact with, must be ensured. Resistance is provided by the properties of the cover and lining polymer and the textile reinforcement. Details on chemical resistance of the hose cover and lining materials can be provided by the hose manufacturer.

**Friction Loss** Friction loss is a drop in pressure due to turbulence created on the inner walls, and therefore the volume of water being moved through the hose. Several factors come into play when determining friction loss:

**Length of hose:** the longer the hose, the greater the potential for friction loss

**Diameter of hose:** the larger the diameter, the lower the friction loss

**Hose lining:** a hose with a smooth lining

will have lower friction loss than a hose with an uneven lining

**Hose dilation:** Increased pressure swells hose to large inner diameter, reducing friction loss.

**A quality fire hose** will have a smooth, even hose lining, ensuring minimal flow resistance.

**Handling** While low weight and small coil diameter are desirable features of a fire hose, there must be a balance to ensure optimal performance and safety. Simply reducing hose weight and thickness will reduce performance in other areas.

**Heat, Temperature and Ozone Resistance** Heat resistance and resistance to high and low temperatures are critical elements in fire hoses. Hoses used in extreme heat and cold must be capable of resisting these conditions. The hose should also be able to resist contact with burning embers. Ozone resistance is important because hoses with poor resistance will become brittle, and the cover and lining will fail. Strong heat, temperature and ozone resistance will ensure a long life for the hose.

**Hose and Coupling Assembly Safety** The hose itself and coupling assembly comprise a firefighting hose. The couplings must be attached at a higher pressure than the hose is rated. Abrupt valve opening and closing can cause water hammer, which greatly increases the load on the hose and couplings. In the event of a catastrophic failure, the hose should always burst along its length, known as the weft. A hose should never burst into two pieces. For this reason the hose is designed with more strength in the longitudinal direction.

**Kink Resistance** When a hose kinks, three things happen. The flow through the hose is reduced; a protrusion forms at the point of the kink, making it vulnerable to abrasion; and the burst pressure is

reduced. Therefore, it is very important that the hose design minimizes the ability of the hose to kink.

**Swell and Elongation** Hose swell is expressed as a percentage, and is the ratio of the diameter measured at two different pressures. As the diameter of the hose increases, pressure loss decreases. As such, hoses with high swell are preferred. Elongation is also expressed as a percentage and is the ratio between the unpressurized hose and the hose at working pressure. Hose elongation is important, because if it is too high, the hose is likely to snake.

**Warranty** The warranty period for fire hose is dependent on the manufacturer. Due to the nature of the fire suppression environment, hose is subjected to extremely rigorous conditions. No hose is fireproof. Typically, hoses are warranted against defects in materials and workmanship. While some hose manufacturers offer only a one-year warranty, ATI fire hoses carry a ten-year *non pro-rated* warranty.

**Weight** Hose weight is a direct consequence of the thickness of the hose, which is the sum of the lining, plus reinforcement, plus cover. A high-quality hose will have an abrasion resistant cover that does not depend on thickness. As such, the weight of the hose can be minimized.

**Working Pressure, Test Pressure and Burst Pressure** These terms reflect the safety factors for a hose in use, i.e., under pressure. Fire hoses conform to the following rule:

<b>Working Pressure:</b>	P
<b>Proof Pressure:</b>	2 x P
<b>Kink Burst Pressure:</b>	2 x P, minimum
<b>Short Length Burst Pressure:</b>	3 x P, minimum



# 10 YEARS Warranty

All Armored Textiles municipal fire hoses have a full *non pro-rated* ten-year warranty against defects in materials and workmanship.

Available upon request:

- Warranty details.
- Hose specification data.
- Chemical resistance chart.
- Friction loss data.



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