



Armored Textiles Inc.
FIRE HOSE DATA
April 2001

JAFRIB NITRILE HOSE SPECIFICATION

1. Applications:

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
- Well protection

Suitable for many other applications requiring a heavy duty, high pressure hose resistant to petroleum, chemicals, ozone attack in extreme conditions;

- Heavy duty wash down
- Jetting
- Snow making
- Dewatering & slurry applications
- Hydrant bypass

2. Hose Construction:

Hose shall be made from 100% high tenacity synthetic yarn circular woven and completely protected and locked-in by tough highly resistant synthetic nitrile rubber, forming a single homogenous construction without the use of glues or adhesives of any type. Cover incorporates a QR square rib configuration under 4' and SR single rib on 4" and over to enhance abrasion resistance.

3. Lining Properties:

- a. Ultimate Tensile Strength:
Tensile strength of the lining and cover shall not be less than 1500 psi (10,500 kpa).
- b. Ultimate Elongation:
400 % minimum.
- c. Accelerated Ageing Test:
The tensile strength and ultimate elongation of the vulcanized rubber compound which has been subjected to the action of oxygen at a pressure of 300 psi +/- 10 psi (2100kpa +/- 70kpa) and temperature of 70 degrees centigrade +/-1 degree centigrade (158 F +/- 18 F) for a period of 96 hours shall be greater than 60% of the original properties stated.

4. Hydrostatic Pressure Tests:

NOMINAL DIAMETER		SERVICE PRESSURE		ACCEPTANCE PRESSURE		BURST PRESSURE		COUPLING BOWL	
INCHES	mm	PSI	Kpa	PSI	Kg	PSI	Kg	INCH	mm
1"	25	300	2100	600	4,200	900	6,300	1 1/4"	32
1 1/2"	38	300	2100	600	4,200	900	6,300	1 13/16"	46
1 3/4"	45	300	2100	600	4,200	900	6,300	2 1/16"	52
2"	52	300	2100	600	4,200	900	6,300	2 5/16"	59
2 1/2"	65	300	2100	600	4,200	900	6,300	2 7/8"	73
3"	75	300	2100	600	4,200	900	6,300	3 5/16"	87
4"	100	200	1400	500	3,500	700	4,900	4 5/16"	109
5"	125	200	1400	400	2,800	600	4,200	5 5/16"	136
6"	150	200	1400	400	2,800	600	4,200	6 5/16"	162

5. Abrasion Resistance:

Hose shall withstand more than 30,000 cycles on the taber abrasion machine (H22 wheel ;1 kiloweight). Other standard abrasion test data can be supplied on request, including UL, DIN, ETC..

6. Cold Resistance:

Hose shall have a capability of use down to - 36 F. Hose shall have no apparent damage to cover, reinforcement or lining when subject to the following cold bending test: A soft length of dry hose is to be firmly coiled and placed in a cold box at - 36 F for a duration of 24 hours. Immediately after removal of the hose from the box, hose should be uncoiled and laid out by one operator. Following this procedure, the hose shall not leak nor show any damage to the reinforcement when subjected to hydrostatic acceptance tests stated above.

7. Ozone Resistance:

Hose shall show no visible signs of cracking of the lining or cover when tested in accordance with ASTM D1149-64 (R1970), ASTM D518 Procedure B, 100pphm/118 F/70 hours.

8. Chemical Resistance:

Exposure to sea water and contamination by most chemical substances, hydrocarbons, oils, alkalis, acids and greases must have no effect on the short or long term performance of the hose. A chemical resistance chart is available and **Ati** will supply specific chemical resistance data on request to the purchaser for unique applications.

9. Heat Resistance:

The hose when subjected to a static pressure of 100 psi (700 kpa) shall be capable of withstanding a surface temperature of 1200 F for a minimum of two minutes without rupture or damage to the synthetic reinforcement.

10. Repairability:

Cover damage, small holes and punctures are repairable with use of **REPOKIT** and vulcanizer. Full instructions for use supplied on request.

11. Hose Weight, Coil Diameters, Swell and Elongation Data:

The hose shall conform to the following average weights and diameters:

NOMINAL DIAMETER		WEIGHT		COIL DIAMETER		MAXIMUM SWELL	MAXIMUM ELONGATION
INCHES	mm	LBS	Kg	INCHES	mm		
1"	25	50'	15 m	15" / 50'	381	10%	5%
1 1/2"	38	8	3.6	16" / 50'	406	10%	5%
1 3/4"	45	17	7.7	16" / 50'	406	10%	5%
2"	52	19	8.6	17" / 50'	432	10%	5%
2 1/2"	65	21	9.5	19" / 50'	483	10%	5%
3"	75	26.5	12.0	23" / 50'	585	10%	5%
4"	100	35	15.8	25" / 100'	635	5%	4%
5"	125	85 / 100'	38.6	27" / 100'	686	5%	2%
6"	150	109 / 100'	49.1	32" / 100'	813	5%	2%
		135 / 100'	61.0				

12. Friction Loss Data:

FLOW	1"	1 1/2"	1 3/4"	2"	2 1/2"	3"	4"	5"	6"
GPM									
100	120	20.5	9.6	4.0	1.2				
150		47.9	21.3	8.7	2.9				
200			40.0	16.0	5.0	2.1			
250				24.8	8.0	3.4			
500						12.8	2.5	0.9	
800						33.0	6.5	2.3	
1000						54.0	10.1	3.7	
1250							14.5	5.7	
1500							23.0	8.9	
2000								15.5	
2500								24.6	
3000									

12. **Color:**

Sizes: 1", 1 1/2", 1 3/4", 2", 2 1/2", 3", Red QR & SR ribbed
1", 1 1/2", 1 3/4", 2", 2 1/2", 3", 4", 5", 6", Yellow QR & SR ribbed
Special colors available on request, minimum quantities apply consult your dealer or contact **Ati** directly.

13. **Branding:**

According to **NFPA** requirements, outlined in NFPA 1961, "Standard on Fire Hose" 1997 Edition

14. **Couplings:**

As required by purchaser, expansion ring threaded, storz clamp ring with lock , or any international Standard worldwide. Couplings meet NFPA 1963 Standard current edition.

15. **Lengths:**

Standard 25', 50' (15m), 75' (23m), 100' (30m). special lengths up to 660' (200m).

16. **Warranty:**

Hose shall carry a **10 year** written warranty, copy supplied on request.

17. **Ati** reserves the right to modify any specification without prior notice to meet or exceed changing standards.

Customers are advised that special diameters or construction characteristics can be produced on special request and you are requested to contact your local dealer or **Ati** at our email address firesafe2000@aol.com.