# Eldon James Antimicrobial Protected Products



Silver Ion Protection

Inhibits Biofilm

Flexelene™ FXAG Tubing

### Applications:

- Antimicrobial protected products inhibit colonization by pathogenic bacteria and the formation of biofilms. They can be useful in limiting risks associated with Hospital Acquired Infection (HAIs)
- Cooling systems for lasers that use miniature components and heat exchangers benefit from the use of antimicrobial protected products since biofilm accumulation in these sensitive devices reduces efficiency and can lead to clogging.
- Antimicrobial protected products are frequently used in water, food and beverage delivery systems. Retention of residual nutrients and back flush potential in these appliances make them particularly susceptible to bacterial colonization.
- Spray and mist systems that use small orifice nozzles risk clogging when biological films form within the system. Antimicrobial protected components offer an effective solution for inhibiting formation of these films.

Silver ions, in the quantities released by Eldon James antimicrobial products, have an extremely low toxicity. They are considered safe for the environment and there is no evidence that their use leads to production of resistant organisms.



Fittings are antimicrobial protected on all surfaces - tubing is protected by an inner co-extruded liner.

Antimicrobial protected tubing - pages 47 and 54



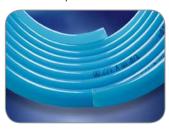
MFXAG Medical Tubing

# Antimicrobial Protected Polyolefin Elastomer

# Flexelene™ FXAG

**RoHS Compliant** 





#### Animal Derivative Free

- Abrasion resistant
- No phthalate plasticizers or DEHP additives
- Inner wall antimicrobial protected
- Polyolefin elastomer

Additional Specifications - page 50

Tube Number	ID	OD Nominal	Wall	Roll Size
FXAG .5-2	1/32"	1/8"	3/64"	100 ft.
FX AG 1-2	1/16"	1/8"	1/32"	100 ft.
FXAG 1.5-2.5	3/32"	5/32'	1/32"	100 ft.
FXAG 2-3	1/8"	3/16"	1/32"	100 ft.
FXAG/CFXAG 2-4	1/8"	1/4"	1/16"	100 ft.
FXAG/CFXAG 3-4	3/16"		1/32"	100 ft.
FXAG/CFXAG 3-5	3/16"	5/16"	1/16"	100 ft.
FXAG 4-6	1/4"	3/8"	1/16"	100 ft.
FXAG 5-7	5/16"	7/16"	1/16"	100 ft.
FXAG 6-8	3/8"	1/2"	1/16"	100 ft.
FXAG 6-10	3/8"	5/8"	1/8"	100 ft.
FXAG 8-10 N	1/2"	5/8"	1/16"	100 ft.
FXAG 8-12 N	1/2"	3/4"	1/8"	100 ft.
FXAG 10-12 N	5/8"	3/4"	1/16"	100 ft.
FXAG 12-14 N	3/4"	7/8"	1/16"	100 ft.
FXAG 12-16 N	3/4"		1/8"	100 ft.
FXAG 16-20 N	1"	1 1/4"	1/8"	100 ft.

Temp. Range: -40 °C to 76 °C (-40 °F to +170 °F) • Shore A 86 hardness

Eldon James developed its **AG tubing products to** offer protection against microbial colonization. Algae, molds, bacteria and fungi often form a biofilm layer on inner tubing walls, presenting health risks and causing undesirable tastes and odors. Portions of this biofilm may eventually break away, clogging filters or lodging in sensitive systems. Eldon James Flexelene AG Silver tubing releases natural silver ions, which are effective in preventing biofilm formation. Silver disrupts respiration and other metabolic functions of microbes and inhibits their growth.

## Flexelene™ CFXAG

**RoHS Compliant** 

OD Sizes - For Push-on Fittings

# Flexelene CFXAG



#### Animal Derivative Free

- Abrasion resistant
- Inner wall antimicrobial protected
- Polyolefin elastomer

Additional Specifications - page 50

Tube Number	*OD*	ID Nominal	Wall	Roll Size
CFXAG 2-4	1/4"	.125"	1/16"	100 ft.
CFXAG 170-4	1/4"	.170'	1/25"	100 ft.
CFXAG 3-4	1/4"	.187"	1/32"	100 ft.
CFXAG 3-5	5/16"	.187"	1/16"	100 ft.
CFXAG 4-6	3/8"	.265"	1/16"	100 ft.
CFXAG 5-7	7/16"	.323"	1/16"	100 ft.
CFXAG 6-8	1/2"	.385"	1/16"	100 ft.
CFXAG 8-10	5/8"	.510"	1/16"	100 ft.
CFXAG 2MM-4MM	4 mm	2 mm	1/34"	100 ft.
CFXAG 4MM-6MM	6 mm	4 mm	1/25"	100 ft.

Temp. Range: -40 °C to 76 °C (-40 °F to +170 °F) • Shore A 86 hardness



# Flexelene™ FXAG and CFXAG Antimicrobial (Protected) Flexible Polyethylene Tubing

#### **RoHS Compliant**





**FXAG** - ID Sized Tubing Material - Polyethylene Color - Sky Blue

For maximum flow path protection, use with Eldon James AG antimicrobial (protected) fittings.

- Ultra-low extractables
- Chemical and abrasion resistant
- · UV stable with good ozone resistance
- Significantly more flexible than standard polyethylene tubing
- Working temperature range -40°F to +170°F (-40°C to 76°C) Maintains flexibility to -40°F
- Polyethylene based polymer a standard material used with food, beverages and water
- Pressure ratings similar to those of polyurethane and PVC tubing
- Antimicrobial protection works against a broad range of bacteria and other microorganisms
- Effectively self-protects its interior from colonizing bacteria that form biofilm
- Designed for use with hose barb connector fittings

**CFXAG** - OD Sized Tubing Material - Polyethylene Color - Sky Blue



# Compatible With Push-in, Compression Fittings

- Ultra-low extractables
- · Chemical and abrasion resistant
- · UV stable with good ozone resistance
- More flexible than common polyethylene tubing
- Working temperature range -40°F to +170°F (- 40°C to 76°C) Maintains flexibility to -40°F
- Polyethylene based polymer a standard material used for food, beverages and water
- Pressure ratings similar to those of polyurethane and PVC tubing
- · Antimicrobial protection works against a broad range of bacteria and other microorganisms
- Effectively self-protects its interior from colonizing bacteria that form biofilm

#### Advantages Over Rigid Tubing:

- Dampens on/off hammer and absorbs pump vibration, leading to guieter operation
- Decreases probability of leaks due to side-load stress at push-in fitting joints
- Cost benefit additional fittings are not necessary to negotiate bends (as they are with rigid tubing)



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Part Numbers		ID		OD		Wall	Working PSI @70 °F	Burst PSI @ 70 °F	Bend Radius in.	
FX		.5-1.5	1/32"	.0312"	.093"	3/32"	1/32"	160	500	1/16"
FX, FXAG		.5-2	1/32"	.0312"	.125"	1/8"	3/64"	n/a	n/a	5/32"
FX, FXAG		1-2	1/16"	.0625"	.125"	1/8"	1/32"	110	420	5/32"
FX, FXAG		1.5-2.5	3/32"	.0937"	.156"	5/32"	1/32"	86	260	3/16"
FX, FXAG		2-3	1/8"	.125"	.187"	3/16"	1/32"	73	220	1/4"
FX, FXAG	CFX, CFXAG	2-4	1/8"	.125"	.250"	1/4"	1/16"	150	450	1/4"
	CFX, CFXAG	170-4	11/65"	.170"	.250"	1/4"	1/25"	n/a	n/a	n/a
FX, FXAG	CFX, CFXAG	3-4	3/16"	.187"	.250"	1/4"	1/32"	n/a	n/a	n/a
FX, FXAG	CFX, CFXAG	3-5	3/16"	.187"	<u>.312"</u>	5/16"	1/16"	96	320	1/2"
FX, FXAG		4-6	1/4"	.265"	.390"	3/8"	1/16"	73	220	1"
	CFX, CFXAG	4-6	1/4"	.265"	.375"	3/8"	1/16"	73	220	1"
FX, FXAG		5-7	5/16"	.323"	.448"	7/16"	1/16"	66	200	1 1/2"
	CFX, CFXAG	5-7	5/16"	.323"	.438"	7/16"	1/16"	66	200	1 1/2"
FX, FXAG		6-8	3/8"	.385"	.510"	1/2"	1/16"	53	160	1 3/4"
	CFX, CFXAG	6-8	3/8"	.385"	.500"	1/2"	1/16"	53	160	1 3/4"
FXAG		6-10	3/8"	.385"	.635"	5/8"	1/8"	Please call for availability		
FX, FXAG		8-10	1/2"	.510"	.635"	5/8"	1/16"	48	145	2 1/2"
	CFX, CFXAG	8-10	1/2"	.510"	.625"	<u>5/8"</u>	1/16"	48	145	2 1/2"
FX, FXAG		8-12	1/2"	.510"	.760"	3/4"	1/8"	80	240	1 1/2"
FX, FXAG		10-12	5/8"	.635"	.760"	3/4"	1/16"	40	120	4"
FX, FXAG		12-14	3/4"	.760"	.885"	7/8"	1/16"	30	90	8"
FX, FXAG		12-16	3/4"	.760"	1.010"	1"	1/8"	33	100	8"
FX, FXAG		16-20	1"	1.010"	1.260"	1 1/4"	1/8"	45	135	8"

Burst pressures are approximately <u>3 times</u> the maximum working pressure. Higher temperatures will reduce the available working pressure. Results are based on tests at our facility under controlled conditions; therefore, Eldon James Corp. makes no warranty or claim as to the performance of its Flexelene<sup>TM</sup> products in a specific application. It is strongly recommended that application-specific testing be done, particularly in situations where pressures approach the listed working PSI.

# Tubing Specifications - MFX, MFXAG

Part Numbers		ID		OD		Wall Thickness	Working PSI @70 °F	Bend Radius in.	
MFX	MFXAG	.5-2	1/32"	.0312"	.125"	1/8"	3/64"	≤30 psi	1/8"
MFX	MFXAG	1-2	1/16"	.0625"	.125"	1/8"	1/32"	≤30 psi	1/8"
MFX	MFXAG	1.5-2.5	3/32"	.0937"	.156"	5/32"	1/32"	≤30 psi	5/32"
MFX	MFXAG	2-4	1/8"	.125"	.250"	1/4"	1/16"	≤30 psi	3/16"
MFX	MFXAG	3-4	3/16"	.187"	.250"	1/4"	1/32"	≤30 psi	3/8"
MFX	MFXAG	3-5	3/16"	.187"	.312"	5/16"	1/16"	≤30 psi	1/2"
MFX	MFXAG	4-6	1/4"	.265"	.390"	3/8"	1/16"	≤30 psi	5/8"
MFX	MFXAG	5-7	5/16"	.323"	.448"	7/16"	1/16"	≤30 psi	1"
MFX	MFXAG	6-8	3/8"	.385"	.510"	1/2"	1/16"	≤30 psi	1 1/4"
MFX	MFXAG	8-10	1/2"	.510"	.635"	5/8"	1/16"	≤30 psi	n/a
MFX	MFXAG	10-12	5/8"	.635"	.760"	3/4"	1/16"	≤30 psi	n/a
MFX	MFXAG	12-14	3/4"	.760"	.885"	7/8"	1/16"	≤30 psi	n/a

