

# ELDON JAMES

Braided silicone alternative tubing engineered for high-purity fluid under pressure with biocompatibility for demanding biomedical and pharmaceutical applications.

Braided Flexelene™ 135C has been developed to meet the critical demands of bioprocess, medical and laboratory applications. This newly formulated TPE (thermoplastic elastomer) tubing is an excellent alternative to silicone.

FLXCBR135C tubing is durable and an excellent choice for use in high pressure applications. Sterilized by Ethylene Oxide (EtO), Gamma resistance to 45 kGy, Autoclave to 135C, temperature range -80°C to 135°C (-112°F to 275°F), RoHS Compliant, Shore A 68 Hardness.

Manufactured for ultra-pure fluid transfer and meets a diverse range of pharmaceutical, medical and bioprocessing applications. Braided Flexelene™ 135C meets the requirements of REACH, RoHS, USP 661, CFR, USP VI, ISO 9001 and 13485 and other special test requirements.

## Typical Applications:

- Pharmaceutical and biotech processing
- Single-use systems
- High volume ultra-pure fluid transfer
- Media processing
- Sterile filling
- Laboratory use
- Skid transfers
- Processing lines

## Product Features:

- Superior Bio Compatibility
- No Halogens or Phthalates
- High Pressure Rating
- Extremely Flexible
- Ultra-low Extractables / Leachables
- USP 661 Compliant
- REACH and RoHS Compliant
- Non-pyrogenic Material
- Non-animal derived – BSE/TSE compliant
- Ultra-Pure Medical Grade
- Material Certificate and Lot Traceability

## Typical Material Physical Properties

Property	Value / Rating	ATSM Method
Durometer, (Hardness) Shore A	68	D2240
Color	Translucent Solid	N/A
Specific Gravity - (Cured 1:1 A&B)	.89	D792
Tensile Strength psi (Mpa)	(Break, 73 °F / 22.3 °C) 870 psi 6.00 MPa	D 412
Elongation - %	(Break, 73 °F / 22.3 °C) 470 %	D 412

*Testing completed on raw materials*

## Order Information

Cat. No.	Ref ID	Actual ID	Ref OD	Actual OD	Wall	Roll Length	Minimum Bend Radius	Max. working pressure* at 68°F (20°C) psi* (bar)
FLXCBR2-6	1/8"	0.125 ± 0.005	3/8"	0.375 ± 0.005	1/8"	25, 50 ft.	0.25	162 psi (11.16 bar)
FLXCBR4-8	1/4"	0.265 ± 0.005	1/2"	0.510 ± 0.008	1/8"	25, 50 ft.	0.44	116 psi (8.0 bar)
FLXCBR6-10	3/8"	0.385 ± 0.008	5/8"	0.635 ± 0.008	1/8"	25, 50 ft.	0.88	95 psi (6.55 bar)
FLXCBR8-12	1/2"	0.510 ± 0.008	3/4"	0.760 ± 0.010	1/8"	25, 50 ft.	1.13	110 psi (7.58 bar)
FLXCBR10-16	5/8"	0.635 ± 0.010	1"	1.010 ± 0.010	1/8"	25, 50 ft.	1.50	118 psi (8.14 bar)
FLXCBR12-18	3/4"	0.760 ± 0.010	1 1/8"	1.135 ± 0.010	3/16"	25, 50 ft.	2.00	90 psi (6.20 bar)
FLXCBR16-22	1"	1.010 ± 0.020	1 3/8"	1.375 ± 0.020	3/16"	25 ft.	2.50	56 psi (3.86 bar)

\*Working pressure is determined using a 4:1 safety factor of the maximum burst pressure per ASTM D1599

## Other Specifications

Property	Value / Rating
Protein Binding	Low - will not absorb your product
Gas Permeability	Low - 2260- Barrier 02 (CC/MIL/100), N2/ATM/Day
Multiple Autoclave Cycles	Can be re-sterilized and reused
Temperature	Min: -80°C (-112°F)
	Max: 135°C (+275°F)
Brittle Temperature	-55°C (-67°F)

Information provided by material vendor

## Certifications

- USP Class VI biocompatibility requirements
- USP 661 Compliant
- Cytotoxicity Criteria
- CFR Title 21 Section 177.2600
- ISO 10993 (part 4 and 5)
- REACH Compliant
- RoHS Compliant
- Cleanroom Manufactured
- Fully Lot Traceable
- Non-animal derived – BSE/TSE compliant

## Sterilization

Tubing can be sterilized by one of these methods:

- E-beam/Gamma 25 to 45 kGy, no deficiencies, may color shift at higher doses.
- EtO No issues. Can safely be used.
- Autoclave Up to 135°C (30 minute cycle).

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