



## Polycore™ High Density Polyethylene Liner



**Polycore™** is a High Density Polyethylene (HDPE) liner extruded to the Plastic Pipe Institute's Specification PE 3408. This patented product is highly abrasion resistant which accounts for its success in the elimination of rod on tubing wear. Wire line, mechanical, and handling damage are minimized when compared to internal plastic coatings. Polycore™ is chemically inert to corrosive materials enhancing its use as a corrosion barrier. The mechanically bonded seamless tube is tolerant to minor surface imperfections and eliminates holidays unlike adhesive or thermally bonded liners and coatings.

**Maximum Temperature 65°C (Oil) 75°C (Water)**

## Enercore™ Polyolefin Liner



**Enercore™** is manufactured from a specially formulated blend of Polyolefins, and has similar mechanical properties to our field proven Polycore™ liner with a moderate increase in tensile strength and temperature resistance. This second generation liner is specifically designed to limit permeability of acid gas such as CO<sub>2</sub> and H<sub>2</sub>S. Enercore™ is a seamless mechanically bonded liner providing a smooth tubing ID surface.

**Maximum Temperature 100°C**

## Ultracore™ PolyPhenylene Sulfide Liner



**Ultracore™** is a patent pending liner manufactured from a proprietary blend of PolyPhenylene Sulfide thermoplastic resins; specially formulated for use in aggressive downhole oil and gas production environments. This third generation liner has a significant increase in temperature stability, tensile strength, abrasion, and chemical resistance. The innovative polymers in this liner offer the broadest range of resistance to solvents, steam, strong bases, fuel and acids. Ultracore™ is specifically designed to limit permeability of acid gas such as CO<sub>2</sub> and H<sub>2</sub>S.

**Maximum Temperature 175°C**

### Applications

- Beam Pumping Wells
- PC Pumped Wells
- Flow Lines
- Submersible Pumped Wells
- Plunger Lift Wells
- Acid Gas Injection Wells
- Gas Lift Wells
- Injection Wells
- Disposal Wells

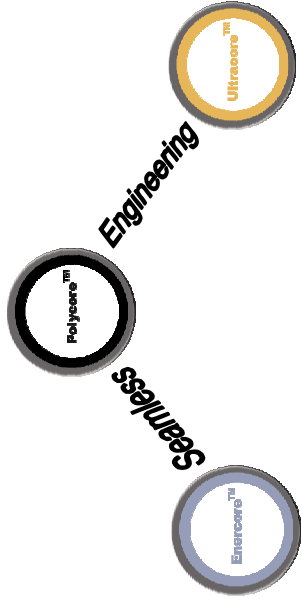
### Benefits

- Eliminate rod on tubing wear
- Corrosion control
- Reduce well servicing frequency and cost
- Reduce tubing and rod replacement
- Reduce corrosion inhibitor requirements
- Reduce friction and peak polish rod load
- Eliminate rod guides
- Apply over used coatings
- Optimize your current inventory by utilizing used tubing
- No field service technician required

### Specifications

- Coated couplings to protect J-area against corrosion
- API Minimum to Optimum Torque recommended during connection make-up
- No special position make-up required

**SEE REVERSE FOR COMMON OILFIELD DIMENSIONS AND THERMOPLASTIC LINER SPECIFICATIONS**



Lined Tubing Drift Specifications						
Tubing		Liner Drift		Liner Thickness		Liner Weight
in.	mm	in.	mm	in.	mm	kg/m
2 3/8	60.3	1.60	40.64	0.120	3.048	0.40
2 7/8	73.0	2.00	50.80	0.140	3.556	0.47
3 1/2	88.9	2.50	63.50	0.160	4.064	0.64
4 1/2	114.3	3.50	88.90	0.180	4.572	0.95
						1.14

### Common Oilfield Dimensions and Thermoplastic Liner Specifications

API Standard Dimensions				Lined Tubing Dimensions				API EUE 8rd Coupling OD									
Tubing Diameter		Weights		Wall Thickness		Nominal ID		Drift Diameter		Nominal ID		Drift Diameter		Regular		Slim Hole	
in.	mm	lb/ft	kg/m	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm
2 3/8	60.3	4.70	6.99	0.190	4.83	1.995	50.67	1.901	48.28	1.720	43.68	1.600	40.64	3.063	77.80	2.910	73.91
2 7/8	73.0	6.50	9.67	0.217	5.51	2.441	62.00	2.347	59.61	2.160	54.86	2.000	50.80	3.668	93.16	3.460	87.88
3 1/2	88.9	9.30	13.84	0.254	6.45	2.992	75.99	2.867	72.82	2.670	67.81	2.500	63.50	4.500	114.3	4.180	106.17
4 1/2	114.3	12.75	18.97	0.271	6.88	3.958	100.53	3.833	97.35	3.680	93.47	3.500	88.90	5.563	141.3	5.094	129.38

Casing Diameter		Weights		Wall Thickness		Nominal ID		Drift Diameter		Nominal ID		Drift Diameter		Regular		Slim Hole	
in.	mm	lb/ft	kg/m	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm
4 1/2	114.3	9.50	14.14	0.205	5.21	4.090	103.9	3.965	100.7	3.750	95.25	3.500	88.90	5.000	127.0	N/A	N/A
4 1/2	114.3	10.50	15.63	0.224	5.69	4.052	102.9	3.927	99.7	3.700	93.98	3.500	88.90	5.000	127.0	N/A	N/A
4 1/2	114.3	11.60	17.26	0.250	6.35	4.000	101.6	3.875	98.4	3.640	92.45	3.500	88.90	5.000	127.0	N/A	N/A
5 1/2	139.7	14.00	20.83	0.224	6.20	5.012	127.3	4.887	124.1	4.600	116.84	4.500	114.3	6.050	153.6	N/A	N/A
5 1/2	139.7	15.50	23.07	0.275	6.98	4.950	125.7	4.825	122.6	4.550	115.57	4.400	111.76	6.050	153.6	N/A	N/A
5 1/2	139.7	17.00	25.30	0.304	7.72	4.892	124.3	4.767	121.1	4.490	114.04	4.300	109.22	6.050	153.6	N/A	N/A
5 1/2	139.7	20.00	29.76	0.361	9.17	4.778	121.4	4.653	118.2	4.380	111.25	4.200	106.68	6.050	153.6	N/A	N/A

Sucker Rod Dimensions			
Rod Size		Regular Coupling OD	Slim Hole Coupling OD
in.	mm	in.	mm
1/2	12.7	N/A	1.00
5/8	15.8	1.500	1.250
3/4	19.1	1.625	1.500
7/8	22.0	1.813	1.625
1	25.4	2.188	2.000
1 1/8"	28.6	2.375	N/A

API Torque (ft/lbs)			
Tubing	Min	Opt	Max
2 3/8	J-55 970	L-80 1290	1610
60.3mm	J-55 1320	L-80 1760	2200
2 7/8	J-55 1240	L-80 1650	2060
73.0mm	J-55 1690	L-80 2250	2810
3 1/2	J-55 1710	L-80 2280	2850
88.9mm	J-55 2350	L-80 3130	3910
4 1/2	J-55 2150	L-80 2866	3580
114.3 mm	J-55 2960	L-80 3940	4930

Insert Pump							
Tubing Size		Insert Bore		Barrel OD		Hold Down No-Go Seat	
in.	mm	in.	mm	in.	mm	in.	mm
2 3/8	60.3	1.25	31.7	1.625	41.2	1.531	38.8
2 7/8	73.0	1.50	38.1	1.750	44.4	1.875	47.6
3 1/2	88.9	2.00	50.8	2.250	57.1	2.344	59.5

Polycore Tubular Linings Corporation recommends connection make up between API Minimum and Optimum torque.

For product details and specifications, 403 444-5554 or [www.polycore.ca](http://www.polycore.ca)