

## POLYURETHANE COATED FELT LINER (PU)

### PRODUCT DESCRIPTION

Polyester fibre Liner with Polyurethane coating custom sized for pipe rehabilitation manufactured in accordance with ISO 9001:2015. To accommodate the requirement for liners of varying thicknesses multi-layer liners are employed using multiple polyester fibre rolls.

### DIMENSION AVAILABILITY

|                | HOT CURE EVERSION                                                                              | AMBIENT/WARM CURE EVERSION | HOT CURE DRAG-IN | AMBIENT/WARM CURE DRAG-IN |
|----------------|------------------------------------------------------------------------------------------------|----------------------------|------------------|---------------------------|
| DIAMETER       | 100mm to 2500mm                                                                                | 70mm to 225mm              | 100mm to 600mm   | 70mm to 225mm             |
| THICKNESS      | 3mm to 50mm                                                                                    | 3mm to 6mm                 | 3mm to 12mm      | 3mm to 6mm                |
| LENGTH         | ANY                                                                                            | ANY                        | ANY              | ANY                       |
| COATING WEIGHT | 400GSM (NOMINAL)                                                                               |                            |                  |                           |
| LINER DESIGN   | Liner undersized <10%                                                                          |                            |                  |                           |
|                | Liner features a welded or stitched seam. Stitched liners only available up to 450mm diameter. |                            |                  |                           |
|                | Liner can negotiate pipe bends up to 45°                                                       |                            |                  |                           |

### INSTALLATION METHODS

| LINER TYPE                 | RESIN TYPE |                      | CURING REGIME   |             |         |                  |                      |
|----------------------------|------------|----------------------|-----------------|-------------|---------|------------------|----------------------|
|                            | EPOXY      | POLYESTER/VINYLESTER | HOT WATER <90°C | STEAM <90°C | AMBIENT | WARM WATER <50°C | WARM AIR ACCELERATED |
| HOT CURE EVERSION          | ✗          | ✓                    | ✓               | ✓           | ✗       | ✗                | ✗                    |
| AMBIENT/WARM CURE EVERSION | ✓          | ✓                    | ✗               | ✗           | ✓       | ✓                | ✓                    |
| HOT CURE DRAG-IN           | ✗          | ✓                    | ✓               | ✓           | ✗       | ✗                | ✗                    |
| AMBIENT/WARM CURE DRAG-IN  | ✓          | ✓                    | ✗               | ✗           | ✓       | ✓                | ✓                    |

### TEST SPECIFICATIONS

|       | CHARACTERISTIC                                                         | TEST                                                                                 | STANDARD |
|-------|------------------------------------------------------------------------|--------------------------------------------------------------------------------------|----------|
| ROLL  | Density and density distribution at various applied pressures.         | Compression measured at increasing pressure.                                         | ISO 845  |
|       | Load at break in machine and cross directions.                         | Tensile testing - Maximum Resistive Force.                                           | ISO 1421 |
|       | Secant Modulus in machine and cross directions (resistance to stretch) | Tensile testing - Maximum Resistive Force vs Extension %.                            | ISO 1421 |
|       | Coating weight and distribution.                                       | Samples weighed to determine distribution of coating in cross direction of the roll. | -        |
|       | Coating adhesion and ability to weld.                                  | Peel strength of welded tape.                                                        | ISO 2411 |
| LINER | Density, Gauge of liner under various applied pressures.               | Compression test of sample of all layers.                                            | ISO 845  |
|       | Felt weld strengths.                                                   | Each weld is sampled and destructively tested.                                       | ISO 1421 |
|       | Sealing tape weld strengths.                                           | Each weld is sampled and destructively tested.                                       | ISO 1421 |

Note: - Liners are manufactured to internal standard or customer specifications. All liners are tested to the tests declared above and adhere to the declared ISO standards. Test data is available on request.

### POLYURETHANE COATED FELT LINER (PU)

CURING TEMPERATURE MAX 90°C

| DIAMETER (mm) | LINER THICKNESS (mm) | EVERSION PRESSURE (bar) | MAX EVERSION PRESSURE (bar) | CURING PRESSURE (bar) | MAX PRESSURE (bar) @ 90°C | RESIN AMOUNT (Litres/m) | PINCH ROLLER GAP (mm) |
|---------------|----------------------|-------------------------|-----------------------------|-----------------------|---------------------------|-------------------------|-----------------------|
| 70            | 3                    | 0.86                    | 1.32                        | 0.86                  | 1.15                      | 0.6                     | 8.5                   |
| 100           | 3                    | 0.60                    | 0.92                        | 0.60                  | 0.81                      | 0.8                     | 8.0                   |
| 125           | 3                    | 0.48                    | 0.74                        | 0.48                  | 0.65                      | 1.1                     | 8.0                   |
| 150           | 3                    | 0.40                    | 0.62                        | 0.40                  | 0.54                      | 1.3                     | 8.0                   |
| 150           | 4.5                  | 0.60                    | 0.92                        | 0.60                  | 0.81                      | 1.9                     | 12.0                  |
| 200           | 3                    | 0.30                    | 0.46                        | 0.30                  | 0.40                      | 1.7                     | 8.0                   |
| 200           | 4.5                  | 0.45                    | 0.69                        | 0.45                  | 0.61                      | 2.6                     | 11.5                  |
| 200           | 6                    | 0.60                    | 0.92                        | 0.60                  | 0.81                      | 3.4                     | 15.5                  |
| 225           | 3                    | 0.27                    | 0.41                        | 0.27                  | 0.36                      | 2.0                     | 8.0                   |
| 225           | 4.5                  | 0.40                    | 0.62                        | 0.40                  | 0.54                      | 2.9                     | 11.5                  |
| 225           | 6                    | 0.54                    | 0.82                        | 0.54                  | 0.72                      | 3.9                     | 15.5                  |
| 225           | 8                    | 0.71                    | 1.10                        | 0.71                  | 0.96                      | 5.1                     | 20.5                  |
| 225           | 10                   | 0.89                    | 1.37                        | 0.89                  | 1.20                      | 6.3                     | 26.0                  |
| 250           | 6                    | 0.48                    | 0.74                        | 0.48                  | 0.65                      | 4.3                     | 15.0                  |
| 250           | 8                    | 0.64                    | 0.99                        | 0.64                  | 0.86                      | 5.7                     | 20.5                  |
| 250           | 10                   | 0.80                    | 1.23                        | 0.80                  | 1.08                      | 7.0                     | 26.0                  |
| 275           | 6                    | 0.44                    | 0.67                        | 0.44                  | 0.59                      | 4.7                     | 15.0                  |
| 275           | 8                    | 0.58                    | 0.90                        | 0.58                  | 0.78                      | 6.3                     | 20.5                  |
| 275           | 10                   | 0.73                    | 1.12                        | 0.73                  | 0.98                      | 7.8                     | 25.5                  |
| 300           | 6                    | 0.40                    | 0.62                        | 0.40                  | 0.54                      | 5.2                     | 15.0                  |
| 300           | 8                    | 0.54                    | 0.82                        | 0.54                  | 0.72                      | 6.8                     | 20.0                  |
| 300           | 10                   | 0.67                    | 1.03                        | 0.67                  | 0.90                      | 8.5                     | 25.5                  |
| 350           | 6                    | 0.34                    | 0.53                        | 0.34                  | 0.46                      | 6.0                     | 15.0                  |
| 350           | 8                    | 0.46                    | 0.70                        | 0.46                  | 0.61                      | 8.0                     | 20.0                  |
| 350           | 10                   | 0.57                    | 0.88                        | 0.57                  | 0.77                      | 10.0                    | 25.0                  |
| 350           | 12                   | 0.69                    | 1.06                        | 0.69                  | 0.92                      | 11.9                    | 30.5                  |
| 400           | 10                   | 0.50                    | 0.77                        | 0.50                  | 0.67                      | 11.4                    | 25.0                  |
| 400           | 12                   | 0.60                    | 0.92                        | 0.60                  | 0.81                      | 13.6                    | 30.0                  |
| 450           | 10                   | 0.45                    | 0.68                        | 0.45                  | 0.60                      | 12.9                    | 24.5                  |
| 450           | 12                   | 0.54                    | 0.82                        | 0.54                  | 0.72                      | 15.4                    | 30.0                  |
| 500           | 10                   | 0.40                    | 0.62                        | 0.40                  | 0.54                      | 14.3                    | 24.5                  |
| 500           | 12                   | 0.48                    | 0.74                        | 0.48                  | 0.65                      | 17.1                    | 29.5                  |
| 500           | 14                   | 0.56                    | 0.86                        | 0.56                  | 0.75                      | 19.9                    | 34.5                  |
| 500           | 16                   | 0.64                    | 0.99                        | 0.64                  | 0.86                      | 22.7                    | 40.0                  |
| 550           | 10                   | 0.37                    | 0.56                        | 0.37                  | 0.49                      | 15.8                    | 24.5                  |
| 550           | 12                   | 0.44                    | 0.67                        | 0.44                  | 0.59                      | 18.9                    | 29.5                  |
| 550           | 14                   | 0.51                    | 0.78                        | 0.51                  | 0.68                      | 22.0                    | 34.5                  |
| 550           | 16                   | 0.58                    | 0.90                        | 0.58                  | 0.78                      | 25.0                    | 39.5                  |
| 550           | 18                   | 0.66                    | 1.01                        | 0.66                  | 0.88                      | 28.0                    | 45.0                  |
| 600           | 10                   | 0.34                    | 0.51                        | 0.34                  | 0.45                      | 17.3                    | 24.5                  |
| 600           | 12                   | 0.40                    | 0.62                        | 0.40                  | 0.54                      | 20.7                    | 29.5                  |
| 600           | 14                   | 0.47                    | 0.72                        | 0.47                  | 0.63                      | 24.0                    | 34.5                  |
| 600           | 16                   | 0.54                    | 0.82                        | 0.54                  | 0.72                      | 27.4                    | 39.5                  |
| 600           | 18                   | 0.60                    | 0.92                        | 0.60                  | 0.81                      | 30.7                    | 44.5                  |

1. Suitable only for BurrowTech Ltd liners designed for and to be installed by eversion.
2. Roller gap setting is for guidance only. Impregnation equipment differs: Rubber wrappings on rollers, positional hysteresis and flexing of rollers cause roller gap settings to vary between different equipment. Roller gap setting for any given equipment should be reasonably repeatable.
3. We strongly recommend the resin addition be monitored and controlled by adjustment of the roller gap setting. Ultimately, it is the correct resin addition which is imperative, not the roller gap.
4. All information is provided by BurrowTech Ltd in good faith, but without warranty. All calculations should be verified.