

## LINER

### GhostLiner

GhostLiner is a uniquely manufactured synthetic fiber felt CIPP liner with a TPU coating specifically designed to maximize LED light-cure capabilities. Tube forming and seam bonding are achieved by an overlocking chain stitched seam with an extruded taped joint - creating a superior, high-performance, impermeable liner designed for sweeping bends up to 45° and very minimal stretch. Manufactured in accordance with ISO9001:2015

| GHOSTLINER | TYPICAL<br>INSTALLED<br>THICKNESS | TYPICAL RESIN SATURATION |                   |                       | ADDITIONAL INFO |                     |
|------------|-----------------------------------|--------------------------|-------------------|-----------------------|-----------------|---------------------|
|            |                                   | LITERS PER<br>METER      | KG/M IF<br>SG 1.2 | LBS/FOOT IF<br>SG 1.2 | ROLLER<br>GAP   | STANDARD<br>LENGTHS |
| 3"/70 mm   | 3 mm                              | 0.6                      | 0.72              | 0.48                  | 8 mm            | 328'/100m           |
| 4"/100 mm  | 3 mm                              | 0.8                      | 0.96              | 0.64                  | 8 mm            | 328'/100m           |
| 5"/125 mm  | 3 mm                              | 1.1                      | 1.32              | 0.88                  | 8 mm            | 328'/100m           |
| 6"/150 mm  | 3 mm                              | 1.3                      | 1.56              | 1.04                  | 8 mm            | 328'/100m           |
| 6"/150 mm  | 4.5 mm                            | 1.9                      | 2.28              | 1.53                  | 11 mm           | 328'/100m           |
| 8"/200 mm  | 4.5 mm                            | 2.6                      | 3.12              | 2.09                  | 11 mm           | 328'/100m           |
| 8"/200 mm  | 6 mm                              | 3.4                      | 4.08              | 2.74                  | 14 mm           | 328'/100m           |
| 10"/250 mm | 4.5 mm                            | 3.2                      | 3.84              | 2.57                  | 11 mm           | 328'/100m           |
| 10"/250 mm | 6 mm                              | 4.3                      | 5.16              | 3.46                  | 14 mm           | 328'/100m           |
| 12"/300 mm | 4.5 mm                            | 3.9                      | 4.68              | 3.14                  | 11 mm           | 328'/100m           |
| 12"/300 mm | 6 mm                              | 5.2                      | 6.24              | 4.19                  | 14 mm           | 328'/100m           |

Vacuum level shall meet or slightly exceed Inversion and Curing Pressure. Always use a vacuum with proper vacuum gauge and regulator.

| LINER TYPE    | RESIN TYPE |                    |              |                               |       |                      |
|---------------|------------|--------------------|--------------|-------------------------------|-------|----------------------|
|               | LED EPOXY  | LED VINYL<br>ESTER | METHACRYLATE | FORMULATED<br>LED CURE RESINS | EPOXY | STYRENATED<br>RESINS |
| INVERSION     | yes        | yes                | yes          | yes                           | yes   | no                   |
| PULL IN PLACE | yes        | yes                | yes          | yes                           | yes   | no                   |

| LINER | CHARACTERISTIC   | TEST                                      | STANDARD |
|-------|--|---|----------|
|       |  |   | ISO 845  |
|       | Density, Gauge of liner under various applied pressures. | Compression test of sample of all layers. |          |

*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. Resin compatibility should be checked prior to use.*

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| GHOSTLINER | MINIMUM INVERSION HEAD (WITH HOLDBACK TENSION) |      | MAXIMUM INVERSION OR CURE HEAD |      | RECOMMENDED CURE HEAD |      |
|------------|--|------|--------------------------------|------|-----------------------|------|
|            | DIAMETER                                       | PSI  | BAR                            | PSI  | BAR                   | PSI  |
| 3"/70 mm   | 12.5   | 0.86 | 19.1                           | 1.32 | 12.5                  | 0.86 |
| 4"/100mm   | 8.7  | 0.60 | 13.3                           | 0.92 | 8.7                   | 0.60 |
| 5"/125mm   | 7  | 0.48 | 10.7                           | 0.74 | 7                     | 0.48 |
| 6"/150mm   | 5.8  | 0.40 | 9                              | 0.62 | 5.8                   | 0.40 |
| 6"/150mm   | 8.7  | 0.60 | 13.3                           | 0.92 | 8.7                   | 0.60 |
| 8"/200mm   | 6.5  | 0.45 | 10                             | 0.69 | 6.5                   | 0.45 |
| 8"/200mm   | 8.7  | 0.60 | 13.3                           | 0.92 | 8.7                   | 0.60 |
| 10"/250mm  | 5.2  | 0.36 | 8                              | 0.55 | 5.2                   | 0.36 |
| 10"/250mm  | 7  | 0.48 | 10.7                           | 0.74 | 7                     | 0.48 |
| 12"/300mm  | 4.3  | 0.30 | 6.7                            | 0.46 | 4.3                   | 0.30 |
| 12"/300mm  | 5.8  | 0.40 | 9                              | 0.62 | 5.8                   | 0.40 |

### STORAGE/HANDLING:

#### Avoid extremes of temperature

Recommended storage temperature 40°F – 95°F (4°C – 35°C).

#### Avoid extremes of humidity

Recommended storage humidity 25% rh – 65% rh.

#### Avoid storage from direct sunlight

#### Chemical attack

Avoid prolonged contact with solvents and chemicals.

#### Mechanical damage should be avoided:

- Ensure that liner is not placed directly onto grit or gravel floor – sweep and cover floor first.
- Ensure personnel are instructed not to walk on or smoke around the liner.
- Handle with care and always ensure safe transport.
- Ensure any rollers are clean, and the liner is not in contact with any sharp edges or snags anywhere during use.

#### Call technical support with additional questions at +1 (734) 744 5557

Disclaimer: The information contained herein is offered without charge for use by technically qualified personnel at their discretion and risk. All statements, technical information and recommendations contained herein are based on test and data which we believe to be reliable, but the accuracy or completeness thereof is not guaranteed and no warranty of any kind is made with respect thereto. Exact coating type and thickness depend on the specific types of resin being used. Always read, understand, and comply with hazard warnings described in the products' Safety Data Sheet(s) before use.