

## United UV GRP

### FEATURES AND BENEFITS

- Multi-layer, overlapping continuous glass fiber liner cure creates high strength, thinner wall
- Made in the USA, made on-demand and delivered in as little as 2 weeks, giving the contractor maximum in-hands shelf life — minimum 6-month in climate-controlled environment
- Pre-impregnated, installation ready up to 2,000 ft. | 610m\*
- Once cured, smooth inner surface improves flow capacity and minimizes abrasion
- Easily bridge and accommodate offset joints and diameter changes
- Liner design has internally expanding overlaps
- United UV GRP is cured using ultra-violet light resulting in a faster cure and lower overall CO<sub>2</sub> emissions

### UV INSTALLATION EQUIPMENT

Ask about the Vortex line of UV curing equipment for a broad range of diameters.

### TYPICAL APPLICATIONS

#### United UV GRP Removable Inner Film

- Round: 6" - 72" | 150mm - 1,828mm

## United UV GRP For Gravity Sewers

### DESCRIPTION

Explore United UV GRP liners, crafted from continuous fiberglass for exceptional strength and durability. Perfect for large-scale sewer UV liner projects, these pre-impregnated liners streamline the UV curing process, enhance quality control, and reduce environmental impact. Ideal for tough, long length, large-diameter applications.

### Anatomy of a United UV GRP CIPP Liner

#### UNITED UV GRP

Features multiple layers of material, which are overlapped to provide maximum strength. This multi-layer construction consists of:

1. Clear Inner Film
2. Fiberglass / Veil
3. Multiple fiberglass layers to meet desired thickness
4. Outer Film, UV Protective Layer



## LINER LENGTH & CRATE DETAILS

CRATE AND LINER INFORMATION		
Diameter	Max. Length	Crate / Crate Size
6"	1000'	36" Standard / 84" x 36" x 46"
8"	1000'	36" Standard / 84" x 36" x 46"
8"	2000'	Super Crate / 84" x 66" x 47"
10"	1000'	36" Standard / 84" x 36" x 46"
12" up to 3.0mm	1000'	36" Standard / 84" x 36" x 46"
12" over 3.0mm	1000'	72" Crate / 84" x 72" x 46"
15"	1000'	72" Crate / 84" x 72" x 46"
18"	500'	72" Crate / 84" x 72" x 46"
21"	500'	72" Crate / 84" x 72" x 46"
24"	500'	72" Crate / 84" x 72" x 46"
30"	400'	72" Crate / 84" x 72" x 46"
36"	250'	72" Crate / 84" x 72" x 46"

CRATE WEIGHTS (ESTIMATED)			
Diameter	Max. Length	Crate / Crate Size	Thickness Range
6"	1000'	1,700lbs to 2,800lbs	3.0mm to 4.0mm
8"	1000'	2,100 lbs to 4,100 lbs	3.0mm to 4.0mm
8"	2000'	4,200 lbs to 8,200 lbs	3.0mm to 4.0mm
10"	1000'	2,400 lbs to 5,500 lbs	3.0mm to 5.0mm
12"	1000'	3,000 lbs to 6,800 lbs	3.0mm to 5.0mm
15"	1000'	3,600 lbs to 9,000 lbs	3.0mm to 6.0mm
18"	500'	2,300 lbs to 7,300 lbs	3.0mm to 7.0mm
21"	500'	2,450 lbs to 9,300 lbs	3.0mm to 8.0mm
24"	500'	3,000 lbs to 12,000 lbs	3.0mm to 10.0mm
30"	400'	TBD	3.0mm to 10.0mm
36"	250'	TBD	3.0mm to 10.0mm

**NOTE: Over 36", please call to inquire about liner lengths, crate dimensions and weights.**

## TYPICAL MATERIAL PERFORMANCE & PHYSICAL PROPERTIES

United GRP UV			
<b>APPLICATION TYPES</b>			
<b>GRAVITY PIPE &amp; CULVERTS</b>			
Round: 6 in. - 72 in. (150mm - 1800mm)			
<b>REINFORCEMENT MATERIAL</b>			
Stitched, multiaxial ECR glass			
<b>RESIN: HIGH MOLECULAR WEIGHT UV CURABLE POLYESTER</b>			
Test	Unit of Measure	Nominal	Test Methods
Flexural Strength	psi/MPa	35,000/241	ASTM D790
Flexural Modulus	psi/MPa	2,000,000/13,789	ASTM D790
Flexural Creep Retention (50%)*	psi/MPa	1,000,000/6895	ASTM D2990
Heat Distortion Temp.	°F/°C @264 psi	248/120	ASTM D648
Barcol Hardness	—	48	ASTM D2583
<b>GLASS FIBRE CONTENT ACCORDING TO ISO 1172 (MASS RELATED)</b>			
50% (±5%)			
<b>GLASS WEIGHT PER UNIT AREA (EACH MM STRUCTURAL WALL THICKNESS/LAMINATE)</b>			
850-900 gsm/m <sup>2</sup> (+/- 10%)			

\* Flexural creep testing currently underway.

