Berolina-HF-Liner


Photo: Eiffage Génie Civil Réseaux

Area of application

Gravity sewers

- Circular profiles: ID 400 (16“) - ID 1,600 (63“)
- Ovoid cross-sections: 350/525 mm (14“/21“) - 1,200/1,800 mm (48“/71“)

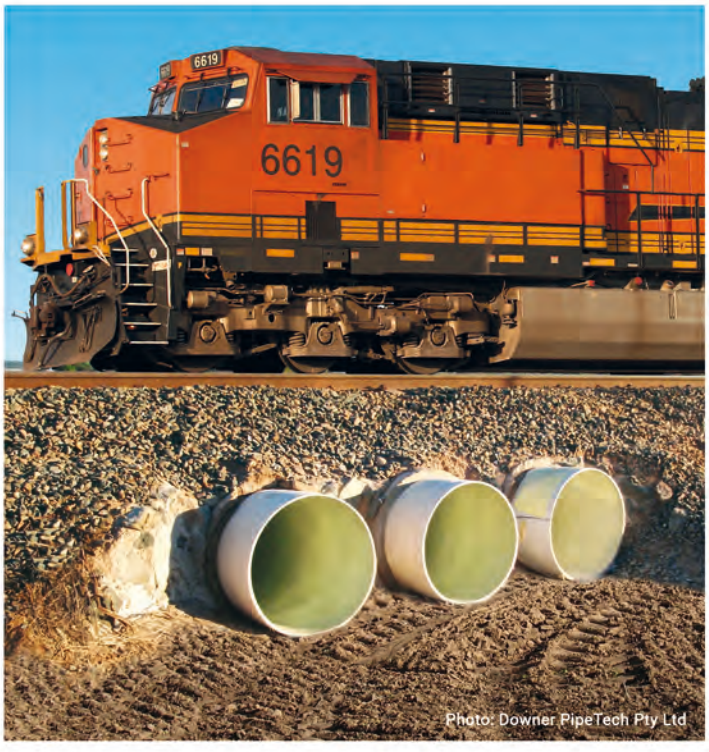

Photo: Downer PipeTech Pty Ltd

Advantages

- Higher mechanical characteristics compared to the Berolina-Liner
- Reduction of the structurally required wall thickness compared to the Berolina-Liner
- Seamless design, particular extensibility
- Ready-to-lay up, storable (min. 5 months)
- Fast curing (esp. compared to felt liners)
- Suitable for all standard pipe profiles
- Quality management in accordance with EN ISO 9001:2015
- Bridging small profile and cross-section changes
- Resin types depending on requirements (polyester, vinyl ester, polystyrene-free)
- Abrasion protection layer

Additional advantage: IES

Integrated Enhanced Security

- Can be a substitute for smooth slip film, reduces installation time
- Available up to DN 600

Berolina-HF-Liner

BKP Berolina – We Protect Pipes

Approvals

- **DIBt Z-42.3-336** (UP and VE resins)
- **WRc PT405/0417** (UP and VE resins)
- **CSTB 17.2/15-303** (UP resins)
- **City of Los Angeles, USA** (UP and VE resins)

Reinforcement material

Woven glass complex E-CR according to

- EN 14020-1
- EN 14020-2
- EN 14020-3

Resins

Unsaturated polyester resins (UP resins)

- Type 1140 according to DIN 16946-2
- Group 3 according to DIN 18820-1
- Group 4 according to EN 13121-1

Vinyl ester resins (VE resins)

- Type 1310 according to DIN 16946-2
- Group 5 according to DIN 18820-1
- Group 7 B according to EN 13121-1

Styrene-free resin

Technical data

Approved for UP and VE resins

Density after curing (EN ISO 1183-2):	1.59g/cm³ (± 0.5 g/cm³)
Glass fibre content (EN ISO 1172 / by mass):	53% (± 8%)
Glass weight per unit area (per mm load-bearing wall thickness)*:	900g/m² (+150/-100g/m²)
Short-term ring stiffness (EN 1228)*:	≥ 17,000 N/mm²
Short-term modulus of elasticity (EN ISO 178)*:	≥ 17,000 N/mm²
Short-term flexural strength (EN ISO 178)*:	≥ 280 N/mm²
Reduction factor for long-term values (EN 761):	A = 1.19
Long-term ring stiffness (EN 1228)*:	≥ 14,200 N/mm²
Long-term flexural strength (EN ISO 178)*:	≥ 235 N/mm²
Laminate design:	Multi-layer, seemless and overlapping in longitudinal direction; overlaps are offset
Linear expansion during calibration:	~ 0.0%
Allowable diameter tolerances of the host pipes:	DN ≤ 800: ± 5%; DN > 800: ± 2%

** Carrier laminate thickness to EN ISO 11296-4 (07/2011)*

02/2021 Englisch

BKP Berolina Polyester GmbH & Co. KG · Heidering 28 · 16727 Velten, Germany · Phone: +49 (0) 3304 20 88-100 · Email: info@bkp-berolina.de · bkp-berolina.de