

CIPP Resin Solutions from ELANTAS

ELANTAS PDG, Inc. has a commitment to innovation. Our resins have helped restore thousands of storm water, sewer, potable water and industrial pipes throughout North America. Whether you're a municipal professional, an engineer or a CIPP contractor, we're dedicated to providing you with innovative solutions, a broad product line, and support from expert field specialists—today and for decades to come.

As a specialist in formulating epoxy & polyester resins, our customers benefit from our know-how and long-term experience. Our epoxy solutions are ideal for use in potable water applications and have an exceptionally long pot life, while our polyester solutions eliminate the handling of peroxides onsite. We do it all!

- Expertise in custom formulations
- Potable water certification compliant
- Lower viscosity for improved processing
- No handling of peroxides
- Bisphenol A-free options



Certified to
NSF/ANSI 61

NSF 61 Compliant

Our epoxy systems are NSF 61 compliant. NSF 61 provides a universally accepted, 3rd-party verification that the pipes, gaskets, and meters utilized for water delivery are drinking water safe. This minimizes the liability faced by water systems and decreases the likelihood of costly repairs and updates in the future.

ELANTAS, as a specialty chemical company, has been developing custom engineered solutions for over 100 years. With a heavy investment in R&D and state of the art lab capabilities, we are experienced in formulating products to meet your individualized requirements. We have sister companies in Europe, Asia, and South America giving us access to global manufacturing flexibility as your logistics and supply chain needs evolve.



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Epoxy

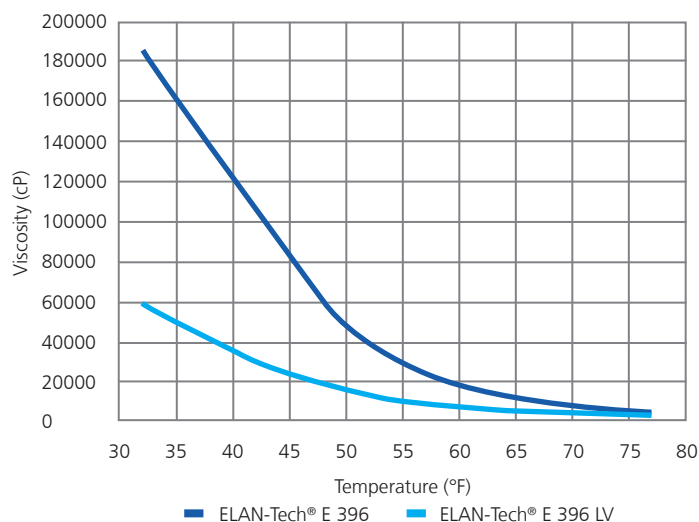
ELAN-Tech® E Series (C Series Hardener)

These solutions offer lower viscosity for improved wet out handling & installation capabilities. The pot life can be modified to meet various wet out & process conditions. Low viscosity allows you to wet out the liner with thorough absorption, making it easier to invert the liner.

Epoxy Systems for CIPP

You will experience improved handling time and flexibility with these epoxy systems, which meet ASTM F 1216 and D 5813 chemical resistance requirements. In addition, our LV system is Bisphenol A-free.

| Resin Hardener | ELAN-Tech® E 396 ELAN-Tech® C 396 | ELAN-Tech® E 396 LV ELAN-Tech® C 396 |
|--|--------------------------------------|---|
| Mix Ratio (pbw) | 100 to 4 | 100 to 6 |
| Viscosity (cP) | 3600 | 1600 |
| Room Temp Cure (hours) | 55 | 45 |
| Tg by DSC (Cured 4 hours 80°C) (°C) | 77 | 70 |
| Tensile Strength - 1/4-inch casting - ASTM D638 - Cured 4 hours at 80°C | | |
| Tensile Strength (psi) | 9600 | 9900 |
| Break Elongation (%) | 8 | 10 |
| MOE (psi) | 150000 | 88000 |
| Flexural Strength - 1/4-inch casting - ASTM D790 - Cured 4 hours at 80°C | | |
| Peak Stress (psi) | 15000 | 16500 |
| MOE (psi) | 470000 | 485000 |



Polyester

ELAN-Tech® UP Series

Typical polyester systems require peroxides to be added by the user. These peroxides carry special EHS considerations for storage and handling in order to reduce hazards such as fires. In contrast, ELANTAS polyester systems already contain the peroxide, and you just need to add different promoters that are less hazardous.

UPE Systems for CIPP

You do not have to handle a peroxide as the initiator system uses less hazardous promoters (material comes supplied with the peroxide already mixed in). This system offers superior flexural modulus and tensile strength that meet or exceed pressure pipe requirements. These polyester systems meet ASTM F 1216 and D 5813 chemical resistance requirements.

| Resin Filler | ELAN-Tech® UP 7570-010 n/a | ELAN-Tech® UP 7570-022 n/a |
|---|-------------------------------|-------------------------------|
| Viscosity (cP) | 400 | 400 |
| Tg by DSC (Cured 4 hours 80°C) (°C) | 97 | 89 |
| Tensile Strength - 1/4-inch casting - ASTM D638 - Cured 1 hour at 80°C | | |
| Tensile Strength (psi) | 7200 | 5000 |
| Elongation (%) | 8 | 6 |
| MOE (psi) | 85000 | 57000 |
| Flexural Strength - 1/4-inch casting - ASTM D790 - Cured 1 hour at 80°C | | |
| Peak Stress (psi) | 13500 | 19000 |
| MOE (psi) | 400000 | 520000 |

| Resin Filler | ELAN-Tech® UP-F 7349-041 30% Talc | ELAN-Tech® UP-F 7349-042 30% Talc |
|---|--------------------------------------|--------------------------------------|
| Viscosity (cP) | 4000 | 4000 |
| Tg by DSC (Cured 4 hours 80°C) (°C) | 102 | 92 |
| Tensile Strength - 1/4-inch casting - ASTM D638 - Cured 1 hour at 80°C | | |
| Tensile Strength (psi) | 3100 | 4300 |
| Elongation (%) | 4.5 | 4.5 |
| MOE (psi) | 48000 | 77000 |
| Flexural Strength - 1/4-inch casting - ASTM D790 - Cured 1 hour at 80°C | | |
| Peak Stress (psi) | 7500 | 7600 |
| MOE (psi) | 515000 | 500000 |

Ensure peace of mind with
ELAN-Tech® CIPP resin solutions.
Contact us today!