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## PRODUCT DATA SHEET

### Lateral CIPP Epoxy Resin Data Sheet

#### Description

- 100% solids epoxy system, styrene free, solvent free, and VOC free
- Base resins are tinted transparent blue, and the hardeners are tinted transparent yellow. A uniform aqua color is achieved when the components are mixed
- A wide range of resin and hardener combinations are available to meet varying project conditions
- All resins and hardeners are available in 5, 55, and 275 gallon containers

#### Certifications and Approvals

- ASTM F1216 / NSF 14 / ICC-ES LC1011 / IAPMO

**Physical Properties:** We recommend full cure based on these guidelines (adjusted to jobsite conditions). Set times (the minimum amount of curing time needed before calibration tube and/or air pressure may be removed from the liner) are considerably less than full cure and vary based on cure temperature, initial resin temperature, and external conditions. Full performance properties of the CIPP are not achieved until cure is complete.

HDT values are affected by cure temperature and time. Maximum HDT will not be achieved without full cure at the desired HDT temperature (up to the resin maximum HDT value). Average cure time can vary by as much as 15%. Always use field conditions as a guide and when in doubt extend cure time.

Pot life (working time of the mixed resin) and cure time are affected by external temperature or ambient conditions. Warmer temperatures result in shorter pot life and may require less cure time. Colder temperatures provide increased pot life and may require longer cure time.

| Epoxy Resin (Part A)                | Hardeners (Part B)        |                   |                  |                   |
|-------------------------------------|---------------------------|-------------------|------------------|-------------------|
|                                     | Winter                    | Standard          | Summer           | Extended          |
| Mixed viscosity at 77°F (45°C), cps | 3460                      | 2360              | 2460             | 2350              |
| Parts Hardener by Weight            | 22                        | 22                | 22               | 30                |
| Mix Ratio by Volume                 | 4:1                       | 4:1               | 4:1              | 3:1               |
| Heat Deflection Temperature (HDT)   | 190°F (88°C)              | 190°F (88°C)      | 240°F (115°C)    | 155°F (68°C)      |
| Average Pot Life @ 77F (45°C)       | 12-15 min                 | 30-35 min         | 50-55 min        | 3 Hrs (180 min)   |
| Average Cure Times 130°F (54°C)     | 2 Hrs (120 min)           | 3 Hrs (180 min)   | 4 Hrs (240 min)  | 6.5 Hrs (390 min) |
| Average Cure Times 158°F (70°C)     | 1.5 Hrs (90 min)          | 2.5 Hrs (150 min) | 3 Hrs (180 min)  | 5.5 Hrs (330 min) |
| Average Cure Times 174°F (80°C)     | 1 Hrs (60 min)            | 2 Hrs (120 min)   | 2 Hrs (150 min)  | 4.5 Hrs (270 min) |
| Average Cure Times 194°F (90°C)     | 45 min                    | 1 Hr (60 min)     | 1.5 Hrs (90 min) | 3.5 Hrs (210 min) |
| Ambient Epoxy Resin (Part A)        | Ambient Hardener (Part B) |                   |                  |                   |
| Mixed viscosity at 77°F (45°C), cps | 150-250                   |                   |                  |                   |
| Parts Hardener by Weight            | 43                        |                   |                  |                   |
| Mix Ratio by Volume                 | 2:1                       |                   |                  |                   |
| Heat Deflection Temperature (HDT)   | 125°F (51°C)              |                   |                  |                   |
| Average Pot Life @ 77F (45°C)       | 12-15 min                 |                   |                  |                   |
| Average Set Times 77°F (25°C)       | 1.75 Hrs (105 min)        |                   |                  |                   |



| CIPP Initial Structural Properties |              |            |
|------------------------------------|--------------|------------|
| Flexural Strength                  | >4,500 psi   | ASTM D-790 |
| Flexural Modulus                   | >250,000 psi | ASTM D-790 |

**Safety Precautions:** Please reference all product Safety Data Sheets (SDS) for detailed information and handling guidelines. Applicable Safety Data Sheets are available online at [www.hammerheadshop.com](http://www.hammerheadshop.com).

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