

# Revowrap 185

PRODUCT SHEET



## PRODUCT OVERVIEW

### Revowrap 185

-50°C to 208 °C with no pressure limitations!

Revowrap is an engineered composite solution used to restore damaged critical assets back to the original design specification of the equipment. Each repair is engineered using ASME PCC2 or ISO TS 24817 engineering codes for High risk non-metallic repairs. Carbontech engineers have the technology to perform FEA (Finite element analysis) on both the damaged piping systems and the Revowrap composite repair system. Revowrap provides re-enforcement of the piping in both the axial and hoop directions, and delivers uniform loading throughout the repair. The “Revowrap185 ®” composite systems are engineered to operate in working temperatures from -40°C to 109°C and bares no pressure limitations. Our composite systems can be applied by hand lamination or by infusion methods and may be applied to live piping systems without shutting down for the repair. Revowrap may be applied to any pipe size, most substrates and almost any piping configuration including tanks, vessels, flanges, and other compromised structural assets.



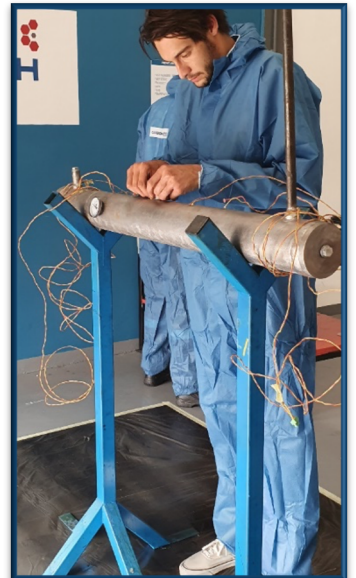
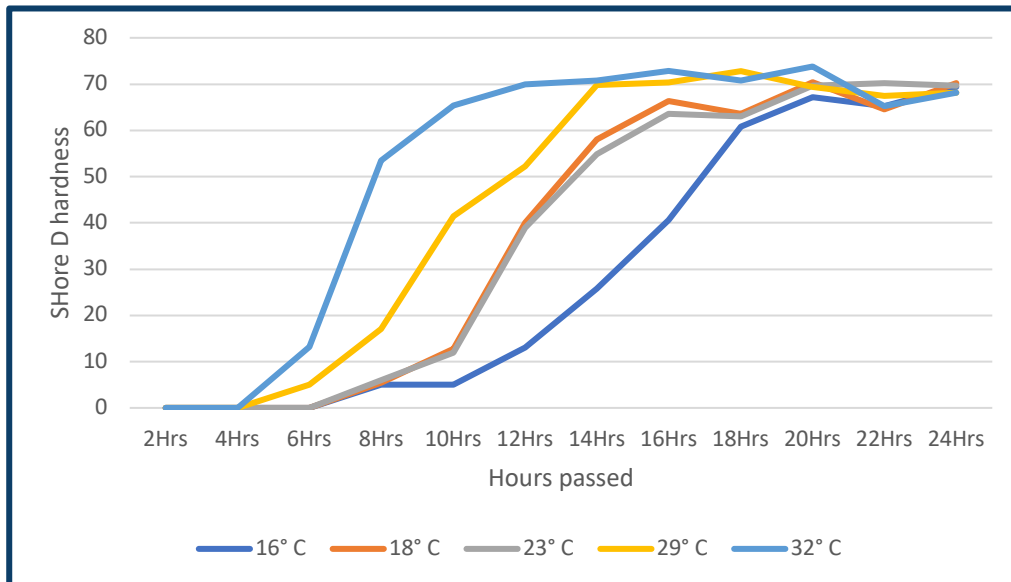
| PRODUCT PERFORMANCE INDICATORS          |                                 |
|-----------------------------------------|---------------------------------|
| ASME PCC2 Compliant                     | Fully Compliant                 |
| ISO T- 24817 Compliant                  | Fully Compliant                 |
| Minimum Application Temperature         | 18°C                            |
| Maximum Application Temperature         | 120°C                           |
| Minimum Allowable Operating Temperature | -50°C                           |
| Maximum Allowable Operating Temperature | 211.8°C for non Leaking Defects |
| Maximum Allowable Operating Pressure    | No Limitations                  |
| Shelf Life                              | 1 Year – Extendable             |
| Set Time @29°C                          | 12 Hours                        |
| Minimum Pipe Diameter                   | No Limitations                  |
| Maximum Pipe Diameter                   | No Limitations                  |
| Repair Lifespan                         | Up to 20 Years                  |
| Through Wall Defects                    | Permissible                     |

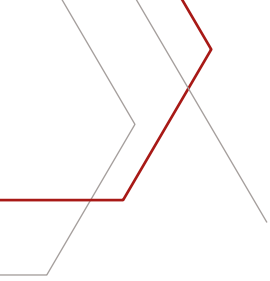


# PRODUCT ISO TS-24817 & ASME PCC2 QUALIFICATION DATA

| REVOWRAP 185 | TEST                                | Test Code        | Metric                  | Imperial                |
|--------------|-------------------------------------|------------------|-------------------------|-------------------------|
|              | Ply Thickness                       | N/A              | 0,52mm                  | 0,02inch                |
|              | Tensile Modulus Hoop                | ASTM D3039       | 37,6GPa                 | 5453,42ksi              |
|              | Tensile Modulus Axial               | ASTM D3039       | 19,6GPa                 | 2842,74ksi              |
|              | Tensile Strength                    | ASTM D3039       | 453,1MPa                | 65716,6psi              |
|              | Tensile Strain to Failure           | ASTM D3039/D638  | 1.3%                    | 1.3%                    |
|              | Shear Strength                      | ASTM D5379       | 82,1MPa                 | 11907,6psi              |
|              | Poisson's Ratio                     | ASTM D3039       | 0.37                    | 0,37                    |
|              | Lap Shear Strength To Steel (SA2.5) | ASTM D3165       | 9.2MPa                  | 1334,3psi               |
|              | Lap Shear Strength To Steel (ST2)   | ASTM D3165       | 4,8MPa                  | 696,2psi                |
|              | Lap Shear Strength To Steel (ST3)   | ASTM D3165/D1002 | 4,7MPa                  | 681,7psi                |
|              | Barcol/Shore D Hardness             | ISO 868          | 75 Minimum              | 75 Minimum              |
|              | Thermal Expansion Coefficient       | ISO 11369-2      | 1,88E-6°C <sup>-1</sup> | 1,04E-6°F <sup>-1</sup> |
|              | HDT (Heat Distortion Temperature)   | ASTM D648        | 226,8°C                 | 440,2°F                 |

## REVOWRAP 185 CURE TIME VS SHORE D HARDNESS





| PACKAGING INFORMATION |                     |                                               |
|-----------------------|---------------------|-----------------------------------------------|
| REVOWRAP 185          | CARBON FIBER FABRIC |                                               |
|                       | Product Code        | Description                                   |
|                       | RCT-50-10           | Carbon Cloth: T- 0.44mm-W-50mm x L-100 Meter  |
|                       | RCT-80-10           | Carbon Cloth: T- 0.44mm-W-80mm x L-100 Meter  |
|                       | RCT-100-10          | Carbon Cloth: T- 0.44mm-W-100mm x L-100 Meter |
|                       | RCT-150-10          | Carbon Cloth: T- 0.44mm-W-150mm x L-100 Meter |
|                       | RCT-250-10          | Carbon Cloth: T- 0.44mm-W-250mm x L-50 Meter  |
|                       | RCT-330-10          | Carbon Cloth: T- 0.44mm-W-330mm x L-50 Meter  |
|                       | PRIMER              |                                               |
|                       | Product Code        | Description                                   |
|                       | R185-P-A-1          | Revowrap185 Primer , Part A, 260g             |
|                       | R185-P-B-1          | Revowrap185 Primer , Part B, 93g              |
|                       | R185-P-A-2          | Revowrap185 Primer , Part A, 510g             |
|                       | R185-P-B-2          | Revowrap185 Primer , Part B, 181g             |
|                       | R185-P-A-3          | Revowrap185 Primer , Part A, 1010g            |
|                       | R185-P-B-3          | Revowrap185 Primer , Part B, 356g             |
|                       | R185-P-A-4          | Revowrap185 Primer , Part A, 20000g           |
|                       | R185-P-B-4          | Revowrap185 Primer , Part B, 7000g            |
|                       | SATURATOR           |                                               |
|                       | Product Code        | Description                                   |
|                       | R185-S-A-1          | Revowrap185 Saturator, Part A, 260g           |
|                       | R185-S-B-1          | Revowrap185 Saturator, Part B, 93g            |
|                       | R185-S-A-2          | Revowrap185 Saturator, Part A, 510g           |
|                       | R185-S-B-2          | Revowrap185 Saturator, Part B, 181g           |
|                       | R185-S-A-3          | Revowrap185 Saturator, Part A, 1010g          |
|                       | R185-S-B-3          | Revowrap185 Saturator, Part B, 356g           |
|                       | R185-S-A-4          | Revowrap185 Saturator, Part A, 20000g         |
|                       | R185-S-B-4          | Revowrap185 Saturator, Part B, 7000g          |



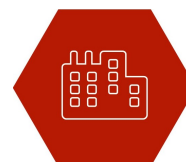


## ADVANTAGES

- Fast, Non-invasive repair - does not require hot work
- Repairs done live – no unplanned downtime
- Can Handle complex geometries
- Resistant to Harsh chemicals

## INDUSTRIES

- Oil and Gas facilities
- Petrochemical plants
- Chemical plants
- Transmission Pipelines



## USES

- Internal Corrosion
- External corrosion
- Mechanical damages
- Weld Anomalies



## CONCLUSION:

Revowrap is available in a range of widths and lengths and is designed for variants of pipe diameters and defect ranges. Revowrap may be applied in continuous spiral wraps (used for continuous lengths of pipe), circumferential wraps for localised defects and weld defects). Revowrap 185 is the ideal solution for pipes where corrosion, mechanical damage or support abrasion has reduced the remaining wall thickness to below the MAOP. Once applied Revowrap 185 restores the pipe integrity back to the original design specification and also provides excellent corrosion and abrasion protection.

## THE CARBONTECH INNOVATIVE PRODUCT RANGE:

|                       |                                                                                                 |
|-----------------------|-------------------------------------------------------------------------------------------------|
| Revowrap <b>80</b>    | High Performance quad-axial glass pipe wrap system used with super strength 2-part epoxy system |
| Revowrap <b>110</b>   | High Performance Carbon Fibre pipe wrap system used with high temperature 2-part epoxy system   |
| Revowrap <b>185</b>   | High Performance Carbon Fibre pipe wrap system used with high temperature 2-part epoxy system   |
| Revowrap <b>225</b>   | High Performance Carbon Fibre pipe wrap system used with ultra-high temp 2-part epoxy system    |
| Revoshield <b>124</b> | High Performance fibreglass coating system used with super strength 2-part epoxy system         |
| MV Putty              | Medium Viscosity High compression strength Putty used for the profiling of Revowrap® systems    |
| HV Putty              | High Viscosity High compression strength Putty used for the profiling of Revowrap® systems      |
| Revostrap             | A 20 Second Leak Repair system                                                                  |
| Revomat               | An Intelligent post cure system for high temperature wrap systems                               |
| Rescue saddle         | A Carbontech Initiative to safely wrap over active leaks                                        |





#### CARBONTECH

The place chemistry, engineering and global expertise are brought together to drive progressive innovation in advanced composite technologies for the emergency repair of critical assets **"There is nothing generic about us"** we don't just sell pipe wraps; we provide accurate engineering backing to deliver tailored solutions

Sound and responsible engineering is the basis on which we build our company, products and services. It is the core to our success and it is the foundation on which we have engineered and manufactured our innovative and bespoke products

We strive by a zero-failure philosophy and warrant our engineered composite solutions are tested, proven and validated. We vow to provide dependable, responsible and accurate information regarding the capabilities of our systems

[www.revowrap.com](http://www.revowrap.com)

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PROGRESSIVE COMPOSITE ENGINEERING

