

Revowrap 110

PRODUCT SHEET



PRODUCT OVERVIEW

REVOWRAP 110

-50°C to 109°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 "Revowrap110 ®" composite systems are engineered to operate in working temperatures from -50°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 | 8°C |
| Maximum Application Temperature | 100°C |
| Minimum Allowable Operating Temperature | -50°C |
| Maximum Allowable Operating Temperature | 109°C for non Leaking Defects |
| Maximum Allowable Operating Pressure | No Limitations |
| Shelf Life | 2 Years – Extendable |
| Set Time @29°C | 4 Hours |
| Minimum Pipe Diameter | No Limitations |
| Maximum Pipe Diameter | No Limitations |
| Repair Lifespan | Up to 20 Years |
| Through Wall Defects | Permissible |

REVOWRAP 110



PRODUCT ISO TS-24817 & ASME PCC2 QUALIFICATION DATA

| REVOWRAP 110 | TEST | TEST CODE | METRIC | IMPERIAL |
|----------------------------------|---------------------------------------|--------------|-----------------------|----------------------|
| | Ply Thickness | N/A | .4mm | 0.01575 Inch |
| | Tensile Modulus Hoop | ASTM D3039 | 48.8 GPa | 7077,8 ksi |
| | Tensile Modulus Axial | ASTM D3039 | 41 GPa | 5947 ksi |
| | Tensile Strength Hoop | ASTM D3039 | 568 MPa | 82.4 ksi |
| | Tensile Strength Axial | ASTM D3039 | 229 MPa | 33.2 ksi |
| | Tensile strain to failure | ASTM D3039 | 1.1% | 1.1% |
| | In plane shear modulus | ASTM D5379 | 1.6 GPa | 232 ksi |
| | Compressive modulus -filler putty | ASTM D695 | 2.55 GPa | 369.8 ksi |
| | Poisson's Ratio | ASTM D3039 | 0.33 | 0.33 |
| | CTE (mm/mm°C, in/in°F) | ASTM E831 | 1.45×10^{-6} | 8.6×10^{-7} |
| | Heat Distortion Temperature | ASTM D648-07 | 124°C | 255°F |
| | Shore D Hardness | ASTM D2583 | 92 | 92 |
| | Lap Shear Strength - SA2.5 | ASTM D3165 | 14.1MPa | 2.05 ksi |
| | Lap Shear Strength - Bristle Blaster® | ASTM D3165 | 7.71MPa | 1.12 ksi |
| Lap Shear Strength - Hand Sanded | ASTM D3165 | 5.86 MPa | 0.85 ksi | |



PACKAGING INFORMATION

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 |
|--------------|------------------------------------|
| R110-P-A-1 | Revowrap110 Primer, Part A, 250g |
| R110-P-B-1 | Revowrap110 Primer, Part B, 68g |
| R110-P-A-2 | Revowrap110 Primer, Part A, 500g |
| R110-P-B-2 | Revowrap110 Primer, Part B, 131g |
| R110-P-A-3 | Revowrap110 Primer, Part A, 1000g |
| R110-P-B-3 | Revowrap110 Primer, Part B, 256g |
| R110-P-A-4 | Revowrap110 Primer, Part A, 10000g |
| R110-P-B-4 | Revowrap110 Primer, Part B, 10000g |

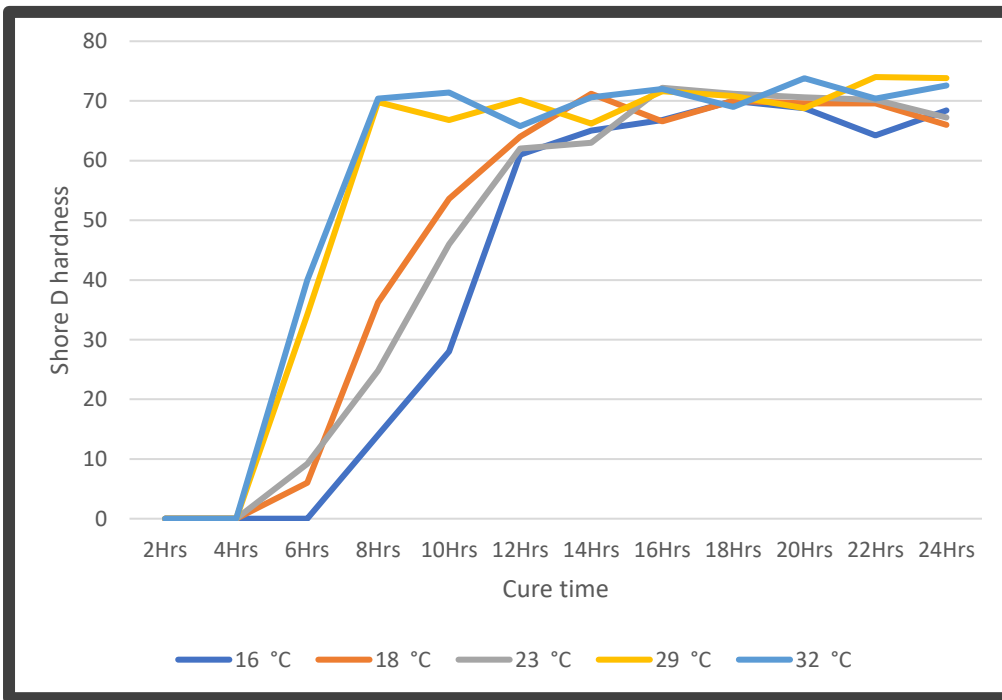
SATURATOR

| Product Code | Description |
|--------------|---------------------------------------|
| R110-S-A-1 | Revowrap110 Saturator, Part A, 260g |
| R110-S-B-1 | Revowrap110 Saturator, Part B, 68g |
| R110-S-A-2 | Revowrap110 Saturator, Part A, 510g |
| R110-S-B-2 | Revowrap110 Saturator, Part B, 131g |
| R110-S-A-3 | Revowrap110 Saturator, Part A, 1010g |
| R110-S-B-3 | Revowrap110 Saturator, Part B, 256g |
| R110-S-A-4 | Revowrap110 Saturator, Part A, 25000g |
| R110-S-B-4 | Revowrap110 Saturator, Part B, 25000g |

REVOWRAP 110



Revowrap 110 cure time VS Shore D Hardness

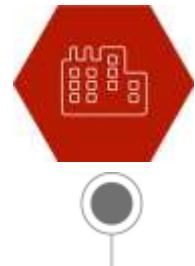


ADVANTAGES

- 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
- Potable water



USES

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



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

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PROGRESSIVE COMPOSITE ENGINEERING

