FutureWrap Cunifer Technical Summary

ENGINEERED COMPOSITE SOLUTIONS

FutureWrap Cunifer™

Repair system	Cunifer
Overview	FutureWrap Cunifer was developed for the repair of cunifer pipework (all components) on a glass cloth and a two-part ambient cure epoxy resin. Due to its excellent adhesion strength, FutureWrap Cunifer can seal through-wall defects and re-instate the integrity of the damaged/corroded pipework. The technical specification is based on the qualification requirements of ISO 248171.
Applications	Cunifer pipework (All components)
Defects	Internal, external, through wall
Fibre type	E-glass - tri-axial stitched cloth ($0^0/45^0/-45^0$)
Resin type	Epoxy resin (two part) – Ambient cure
Maximum design temperature (^{0}C)	62
Maximum design pressure (through wall defect) (bar)	20
Maximum design pressure (non-through wall defect) (bar)	350
Modulus 0^0 (GPa)	21
Modulus 90^0 (GPa)	8.9
Poisson's ratio 0^0	0.5
Poisson's ratio 90^0	0.21
Shear modulus (GPa)	2
Thermal expansion coefficient 0^0 (mm/mm/^{0}C * 10^{-6})	26
Thermal expansion coefficient 90^0 (mm/mm/^{0}C * 10^{-6})	35
Design allowable strain 0^0 (mm/mm)	0.004
Design allowable strain 90^0 (mm/mm)	0.004
Energy release rate (J/m^2)	112
Cure time (hrs)	24
Chemical resistance	3<pH<10