



Fillers

CSNRI Composites offers a wide range of fillers designed to meet your load transfer needs in various situations. Our fillers have application ranges that cover multiple temperatures and offer exceptional chemical resistance. Whether you need a filler material for high-temperature applications, harsh chemical environments, or general load transfer needs, we have a solution for you.

APPLICATIONS

High-strength, high-compression, load transfer resins are used within CSNRI's non-metallic composite repair systems as a critical component to their success and effectiveness. They perform the following functions for the repair system:

- Load transfer between pipe and composite
- Smooth transitional geometries to facilitate wrapping
- Plug through-wall defects to prevent resin from entering the pipe

COMPLIANT WITH:

(standards/regulations)

- US DOT CFR 192 and 195
- CSA Z662
- ASME PCC-2 Article 401
- ISO 24817

ASSOCIATED SYSTEMS

- **CSF:** Clock Spring[®], SnapWrap[™], Pipe Support, Casing Spacer
- **EPN-101:** Atlas[™], A+ Wrap[™], A+ Max[™], ViperSkin[™] Contour Apex[™], DiamondWrap[®], ThermoWrap[®], SynthoGlass[®] XT
- **EPN-242:** Atlas[™], A+ Wrap[™], A+ Max[™], ViperSkin[™] Contour Apex[™]
- **EPN-270:** AcidShield[™]
- **EPN-331:** DiamondWrap[®] MT, ThermoWrap[®] MT
- **EPN-453:** DiamondWrap[®] HT, ThermoWrap[®] HT
- **EPN-580:** DiamondWrap[®] UHT
- **EPN-590:** ThermoWrap[®] 500
- **ESN-202:** SynthoGlass[®], PipeWrap
- **ESN-330:** ThermoWrap[®] MT



CSNRI Fillers Properties

	EPN-101	EPN-242	EPN-270	EPN-331	EPN-453
Product Type	Putty	Putty	Putty	Putty	Putty
Stock Sizes Available	1-Quart 1-Pint	1-Pint	1-Quart 1-Pint	1-Quart 1-Pint ½-Pint	½-Pint
Compressive Modulus (psi)	781000 psi	547000 psi	380000 psi	291100 psi	547665 psi
(MPa)	5384.8 MPa	3771.4 Mpa	2620.0 Mpa	2007.1 MPa	3776.0 MPa
Mix Ratio (By Weight)	5:1	100:12	100:53	100:44	5:1
Working Time (Min.)	8	37	20	40	6
Set Time (Min.)	18	75	45	75	8
Glass Transition Temp. (°F)	199	206	252	363	439
(°C)	92.8	96.7	122.2	183.9	226.1

CSNRI Fillers Properties

	EPN-580	EPN-590	ESN-202	ESN-330	CSF
Product Type	Putty	Putty	Stick	Stick	Putty
Stock Sizes Available	1-Pint	1-Quart 1-Pint ½-Pint	7 inch	7 inch	16 OZ (450 gram)
Compressive Modulus (psi)	306000	330000	380000	NA	481770
(MPa)	2109.8	2275.3	2620.0	NA	3321.7
Mix Ratio (By Weight)	Single Component	Single Component	Pre-measured	Pre-measured	Variable (see charts)
Working Time (Minutes)	Heat Cure Required	Heat Cure Required	3	2	Variable (see charts)
Set Time (Min.)	Heat Cure Required	Heat Cure Required	5	15	Variable (see charts)
Glass Transition Temp. (°F)	651	550	286	356	223
(°C)	344	287.8	141.1	180	106

WARRANTY CSNRI routinely implements product improvements. Please contact your local distributor or office for the most current product specifications. CSNRI warrants the quality of this product when used according to directions.

PS_0523

ISO 9001 Certified

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