

POLYMERIC ENGINEERED SOLUTIONS

Product Selection Guide

Metal Repair

Product Selector Guide 2026

Product Selector Guide

		101	101 XHT	102	103	104	105	106	107
Characterisitcs	Epoxy	x	x	x	x	x	x	x	x
	Polyurethane								
	Solvent Free	x	x	x	x	x	x	x	x
	Solvent Based								
	Paste Grade	x	x					x	x
	Fluid Grade			x		x			
	Putty Grade				x		x		
	Machinable	x	x	x	x	x	x	x	x
Curing	Fast Curing < 45 mins				x	x	x	x	
	Standard Cure < 2 hours	x	x	x					
	Extended Cure < 4 hours								x
WFT	<40mil (< 1mm) Build			x					
	40-125mil (1mm - 3mm) Build					x			
	Up to ¾" (20mm) Build				x		x	x	
	Up to 1" (25mm) Build	x	x						x

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Surface Preparation	Manual				x	x	x	x	
	Mechanical SSPC-SP-2,3 (ST2/3)	x	x	x	x	x	x	x	x
	Hydro-Blasted					x		x	
	Abrasive Blast SSPC-SP-5 (SA2.5)	x	x	x					x
	Oily Surface					x			
	Damp/Wet Surface							x	
Temp Resistance	Dry 266°F (130°C)					x		x	
	Dry302°F (150°C)				x		x		
	Dry 356°F (180°C)								x
	Dry 392°F (200°C)	x	x	x					
Application	Plug Holes						x		
	Patch Repair	x	x					x	x
	Rebuild Surfaces	x	x					x	x
	Resurfacing			x		x			
	Crack Filling	x	x		x		x	x	x
	Metal to Metal Bonding	x	x					x	x
	Casting			x					
	Underwater						x	x	

Application Guide

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Rebuild Surface	Bearing Housing	x	x						x
	Bearing Support	x							x
	Bow Thruster	x							x
	Chutes	x						x	x
	Engine Block	x	x						x
	Evaporators	x	x						x
	Heat Exchanger End Plate	x	x						x
	Hoppers	x						x	x
	Keyways	x							x
	Kort Nozzles	x							x
	Pintle Sleeves	x							x
	Internal Pipework	x						x	x
	Process Vessel	x							x
	Plate Bonding	x	x			x		x	x
	Propeller	x							x
	Pump Casing	x	x						x
	Pump Impeller	x	x						
	Scrubber Unit	x	x						x

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Cracks	Base Plate	x				x		x	x
	Engine Block	x	x		x			x	x
	Hydraulic Rams	x							x
	External Pipework	x	x		x	x		x	x
Leaks & Repairs	Pump Casing	x			x	x		x	x
	Slug Catcher	x							x
	Sour Gas Treatment	x							x
	Sump	x	x					x	x
	Turbine Blades	x	x						x
	Tank Seam	x		x	x	x		x	x
	Tank Base	x						x	x
	Tanks	x	x	x	x	x		x	x
	Underwater	x					x	x	

Product Specification Guide

	101	101 XHT	102	103	104	105	106	107
Compressive Strength *Tested to ASTM D 695*	15,300psi (1075kg/cm²)	(10,500psi (738kg/cm²)	15,300psi (1075kg/cm²)	12,00psi (843kg/cm²)	2630psi (185kg/cm²)	12,000psi (843kg/cm²)	2630psi (185kg/cm²)	11,900psi (839kg/cm²)
Corrosion Resistance *Tested to ASTM B117*	5000 hours	5000 hours	5000 hours	----	5000 hours	----	5000 hours	5000 hours
Flexural Strength *Tested to ASTM D790*	10,000psi (703kg/cm²)	10,000psi (703kg/cm²)	10,000psi (703kg/cm²)	6470psi (455kg/cm²)	3400psi (240kg/cm²)	6470psi (455kg/cm²)	3400psi (240kg/cm²)	8300psi (585kg/cm²)
Hardness *Shore D to ASTM D785*	82	82	82	81	79	81	79	82
Slump Resistance	1" /(25mm)	1"/(25mm)	⅛"/ (3mm)	1"/(25mm)	⅛"/(3mm)	1"/(25mm)	¾"/(20mm)	¾"/(20mm)
Tensile Shear Adhesion *Tested to ASTM D1002*	2630psi (185kg/cm²)	2630psi (185kg/cm²)	2630psi (185kg/cm²)	2630psi (185kg/cm²)	2630psi (185kg/cm²)	2630psi (185kg/cm²)	2630psi (185kg/cm²)	2550psi (180kg/cm²)
Volume Capacity *In³ per kg*	24.7	23.4	26.8	27	33.8	27	33.8	23.6
Base Density *gm per cm²*	2.70	2.88	2.70	----	1.80	----	1.80	2.70
Activator Density *gm per cm²*	1.70	1.75	1.0	----	1.80	----	1.80	2.40

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Mixed Product Density *gm per cm²*	2.46	2.6	2.50	----	1.80	----	1.80	2.58
Intermittent Wet Heat Resistance	248°F (120°C)	356°F (180°C)	248°F (120°C)	248°F (120°C)	176°F (80°C)	248°F (120°C)	176°F (80°C)	194°F (90°C)
Immersion Temperature Resistance	158°F/(70°C)	356°F/(180°C)	158°F/(70°C)	140°F/(60°C)	140°F/(60°C)	140°F/(60°C)	140°F/(60°C)	140°F/(60°C)
Mixing Ratio by Volume	3:1	3:1	3:1	----	1:1	----	1:1	3:2
Mixing Ratio by Weight	5:1	5:1	8:1	----	1:1	----	1:1	1.7:1

About PES

A Texas based supplier of epoxy and polyurethane coatings and repair materials.

From our head office in the heart of Central Texas, we supply our range of Epoxy, Polyurethane & Silicone coatings and repair materials to the Oil & Gas, Petrochemical, Marine, Paper & Pulp, Water, Power Generation & Chemical Industries.

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