610-874-8436
ers@wasinc.com

ENGINEERED RESIN SOLUTIONS

EXTERME SERVICE

ERS 306-METAL BUILD

PASTE GRADE

High performance, machineable, metalrebuild material used to repair erosion, cracks or wear in all kinds of equip-mentwhere distortion or annealing from welding, cannot be tolerated. High temperatureperformance, up to 500°F.

- Fast Curing
- Machineable
- Good Chemical Resistance
- Durable / Abrasive Resistant
- Outstanding Adhesion
- Suitable for Total and Permanent Immersion
- 100% Solids
- 2 Year Storage Life
- Trowel Applied
- Environmentally Friendly

» **ERS-306** is a two component, 100% solids, Novolac epoxy, coating system, used for creating an outstanding metal rebuild / repair material. It provides good protection and durability against a broad range of organic and inorganic acids, alkalis, solvents, salts and hydrocarbons.

» **ERS-306** is user friendly and readily applied by trowel or spatula. It mixes to a stiff, non-sagging paste, which cures rapidly to a metal hard material.

» **ERS-306** is easily machined on a lathe, drilled, tapped, sanded, filed or polished.

- » Pump Casings
- » Pump Internals
- » Worn Shafts
- » Sloppy Keyways
- » Stripped Threads
- » Tubesheets
- » Steam Lines
- » Bearing Housing
- » Scored Hydraulic/Pneumatic Rams
- » Pipe Wrap Systems
- » Aeration Units
- » Steam-cut flange faces
- » Warped or Disorted Flanges
- » Forming Specialty Parts

The metal rebuild material of choice for modern maintenance professionals.

TECHNICAL DATA

Volume Capacity	231cu in per gallon		
Weight per gallon	13.37 lb.		
Coverage per gallon	12.8 sf @ 1/8-in. DFT		
Volume solids	100% (No VOC)		
Applications required	1-2 coats		
Shelf Life	2 years		
Mixing Ratio	-Volume	3.0	1.0
	-Weight	5.0	1.0
Color		Dark Gray	Amber

CURE TIMES

Ambient Temp.	Pot Life	Overcoat Window Min	Overcoat Window Max	Light Load	Aqueous Immersion	Full Service
40° F	1 1/4 hr.	NR		NR	NR	NR
75° F	50 min.	30min.	1.5 hr.	12 hr.	48 hr.	5 day
95° F	20 min.	30min.	1 hr.	5 hr.	36 hr.	3 day

PHYSICAL PROPERTIES

	Test Value T	Test method
Compressive Strength	14,800 psi	ASTM D695
Pull Off Adhesion	2,200 psi	ASTM D4541
Rockwell Hardness	80	ASTM D2240
Abrasion Resistance	28 mg	ASTM D4060
		(CS17 Wheel 1kg)

CHEMICAL RESISTANCE

Acetic Acid (up to 10%)	(Mild) Organic Acids
***Ammonium Hydroxide**	(Most) Phosphates
Aromatic & Aliphatic Solvents	Phosphoric Acid
Black Liquor	*Potassium Hydroxide
Butyl Acetate	*Sodium Hydroxide
Butyl Carbitol	(Most) Sulfides
(Most) Chlorides	Sulfuric Acid (up to 80%)
Hydrogen Sulfide	1,1,1-Trichloromethane
Isopropyl Alcohol	Urea Solutions
Mineral Acids	White Liquor
Nitric Acid (up to 45%)	
(*Ambient Temperature only)	

SERVICE TEMPERATURE

	Max continuous Exposure
Dry Service	390°F
Spill/Splash	293°
Immersion	194°

Your Local **ERS** Representative

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USING ERS-306

Surface Preparation: ERS-306 should only be applied to clean, dry and well-roughened surfaces. Depending on the surface, solvent clean or remove contamination by abrasive blasting, stream cleaning, high pressure water blasting, acid washing or other suitable means. **SALT-X** should be used for seawater, salts, bromates, phosphates, gypsum or lime.

Metal, Steel and Iron: Remove all oil, grease or scale from the surface and, then blast with an angular grit to give a minimum of 2-3 mil profile for the following services.

Non-chemical Service	SSPC-SP6 Commercial Blast
Intermittent Splash	SSPC-SP10 near White Metal
Immersion/Abrasion	SSPC-SP5 White Metal Blast

If blasting is not possible, use an appropriate grinding wheel or file to ensure a clean rough profile.

ALUMINUM AND FRP: Use an alkaline detergent cleaner to provide a clean, uniformly textured surfaced.

Concrete: All concrete surfaces should be primed with **ERS-1100** to avoid out gassing and to increase adhesion. Although **ERS-1100** can be applied to concrete that has cured a minimum of 7 days, it is recommended that it has aged at least 28 days before coating. Wash down old concrete to remove residues and neutralize the pH before surface prep. A second wash may be required for severeservice. Sandblast, scarify or water blast to remove any form-release agent, curing agent, laitance, calcification or sealant. Two coats of **ERS-1100** may be needed to prevent bubbles on highly
air-entrained concrete.

Mixing Procedure: (Mixing partial kits is not recommended.)

1. Thoroughly mix the resin before adding hardener.

2. Empty all the hardener into the resin container.

3. Mix thoroughly with a mechanical mixer (or stirrer) continue for 2 minutes after consistency is uniform. Keep blade low, to avoid trapping air.

Thinning: Thinning is not generally recommended. If thinning is necessary below 60ºF, add 4 – 6 fl. oz. of MEK to the resin and mix thoroughly before adding the hardener. Do not exceed 10% solvent by volume.

Application: Pour blended coating into rolling tray or a large basting pan to a depth of 3/8-in. or less to reduce exothermic, heat generation and shortened pot-life.

1. If the ambient temperature is 85ºF or higher, pot life may be as short as 10 minutes. Keep the material cool or put the tray on ice to extend life.

2. ERS-306 should not be applied below 40ºF.

3. ERS-306 should not be applied (nor should blasting commence) if the relative humidity is over 85% or if the substrate is less than 5ºF above dew point.

4.Second and subsequent coats must be applied before the previous coat has completely cross-linked. Apply additional coats immediately.

5. Dip the trowel or other tools in ethanol or a mixture of ethanol and water to prevent sticking.

Speed Curing: The cure time can be reduced and performance enhanced by applying heat during curing.

Clean up: Use a mixture of MIBK and butyl acetate (50/50), MEK or MIBK and xylene (50/50) for clean up. Skin can be cleaned with denatured alcohol (ethanol.)

Technical Support: The ERS engineering team is always available to provide technical support and assistance. For guidance on any question, call your local ERS rep or the ERS Engineering Center.