Technical Data Sheet

PES 107 Power Metal Repair Paste XL

PES 107 Power Metal Repair Paste XL is a two component solvent free epoxy metal repair compound. The product has an extended working life and has been designed for use in hot climates or in situations where the complexity of an application requires a longer working time. The material can be applied to a wide range of metallic surfaces and once cured is readily machinable.

Typical Applications

Suitable for emergency repairs or part of planned maintenance to equipment such as worn or damaged pump shafts, cracked pump or valve casings, scored hydraulic rams, worn bearing housings, damaged flanges, leaking tank seams, worn keyways and cracked engine blocks. The long working life of the material also makes it ideal for complex shimming operations.

Surface Preparation

All oil and grease must be removed from the surface of the repair using an appropriate cleaner such as MEK.
For optimum performance, the surface should be abrasive blasted to SSPC SP10 and a minimum blast profile of 3-4 mils using an angular abrasive. Once blast cleaned, the surface must be degreased and cleaned using MEK or similar type material. All surfaces must be repaired before gingering or oxidation occur.

PLEASE NOTE: For salt contaminated surfaces the area must be abrasive blast cleaned as mentioned above and left for 24 hours to allow any ingrained salts to come to the surface. After this 24 hour period the surface must be washed with MEK prior to brush blasting to remove the surface salts. This process must be repeated until all ingrained contaminants have been sweated out of the surface.

In the case of cracked surfaces, the cracks should be stabilised by drilling the termination points and the cracks veed out and drilled, tapped and bolted every 2-3 inches.

Where abrasive blast cleaning is not possible (excluding salt contaminated surfaces) the surface should be roughened by MBX, needle gun or grinding.

In areas where the product should not adhere a thin layer of a suitable release agent should be applied taking care not to contaminate other areas.

Mixing and Application

Warm the Base and Activator to 68-77°F before mixing and do not apply when the ambient or substrate temperature is below 59°F or the relative humidity is above 90%.

Mixing of the product can be on full units or by part-mixing. If mixing the whole unit please ensure as much of the base and activator is dispensed from the plastic container onto a clean plastic mixing surface and mix using a spatula until a uniform material free of any streakiness is achieved while ensuring no unmixed material is left on

the spatula or the mixing surface. From the commencement of mixing the whole of the material should be used within 60 minutes at 68°F.

For part mixing, using a spatula place 3 equal measures from the base unit onto a clean plastic mixing surface. Clean the spatula thoroughly and then take 2 equal measures from the Activator unit and place alongside the base measures. Mix as above.

Using a spatula or applicator tool, apply the material to the prepared surface, ensuring the product is pressed into any holes, scars or cracks and profile the repair to a smooth finish.

Where a machined finish is required, the repair area should be overfilled by up to 1/16" and once hardened machined using a surface cutting speed of 200ft/minute and a feed rate of 50 thou/rev initially and 10 thou/rev for finishing.

Cure Times

At 68°F the applied materials should be allowed to harden for the times indicated below before being subjected to the conditions indicated. These times will be extended at lower temperatures and reduced at higher temperatures:

Usable life	60 minutes
Movement without load or immersion	5 hours
Machining and light loading	12hours
Full loading	4 days
Immersion/chemical contact	7 days

For Optimum Performance

After an initial curing period of at least 8 hours at 68°F, raising the cure temperature progressively to 140 - 212°F for up to 8 hours will result in improved mechanical, thermal and chemical resistance properties

Over-coating times

Minimum - the applied material can be over-coated as soon as it is touch dry.
Maximum - the over-coating time should not exceed 24 hours.
Where the maximum over-coating time is exceeded, the material should be allowed to harden before being abraded or flash blasted to remove surface contamination.

Storage Life

5 years if unopened and store in normal dry conditions (59-86°F)

Technical Data Sheet

Technical data and Performance

Volume Capacity	23.6 cu in
Compressive Strength ASTM D695	(11,900psi) 839kg/ cm^2
Tensile Shear Adhesion ASTM D1002	(2550 psi) 180kg/cm^2
Flexural Strength ASTM D790	8300psi 585kg/cm^2
Hardness Shore D ASTM D2240	87

Health and Safety

Please ensure good practice is observed at all times during the mixing and application of this product. Protective gloves must be worn during the mixing and application of this product. Before mixing and applying the material please ensure you have read the fully detailed Material Safety Data Sheet.