

# Product Specification



## PES 104 POWER METAL REPAIR FLUID XF

**PES 104 Power Metal Repair Fluid XF** is a two-component fast curing solvent free epoxy metal repair fluid. The product has been designed for use on a wide range of surfaces and is tolerant of less than ideal surface preparation and surfaces contaminated with grease, oil and lubricants.

### Typical applications

Suitable for emergency repairs to worn surfaces, as an anti-slip system for metallic substrates and for resurfacing and sealing leaking transformers. The material can also be used as a gap filling adhesive.

### Characteristics

#### Appearance

Base: Black viscous fluid  
Activator: White viscous fluid  
Mixed: Mid grey viscous fluid

#### Mixing Ratio

By weight: 1:1  
By volume: 1:1

#### Density

Base: 1.80  
Activator: 1.80  
Mixed: 1.80

#### Volume Capacity

33.8 in<sup>3</sup>

#### Solids content

100%

#### Sag Resistance

Nil at 0.118"

#### Coverage

0.44lb (200 gm) of fully mixed product will give the following coverage rates –  
1.2ft<sup>2</sup> at 40mil

1.76lb (800gm) of fully mixed product will give the following coverage rates –  
4.75ft<sup>2</sup> at 40mil

*Please note that the coverage rates quoted are theoretical and do not take into consideration the profile or condition of the surface being repaired.*

#### Cure Times

The applied material should be allowed to harden for the times indicated below before being subjected to the conditions indicated:

#### Usable life

50°F 10 minutes  
68°F 5 minutes  
86°F 2.5 minutes  
104°F 75 seconds

#### Hard dry

50°F 2 hours  
68°F 60 mins  
86°F 30 mins  
104°F 15 mins

#### Full Cure

50°F 8 hours  
68°F 4 hours  
86°F 2 hours  
104°F 1 hour

#### Storage life

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

### Mechanical Properties

#### Adhesion

**Tensile Shear** to ASTM D1002 on abrasive blasted mild steel with 75-micron profile  
2630psi (185kg/cm<sup>2</sup>)

**Pull off Adhesion** to ASTM D4541 on abrasive blasted mild steel with 75-micron profile  
2205psi (155kg/cm<sup>2</sup>)

#### Compressive strength

Tested to ASTM D695  
8750psi (615kg/cm<sup>2</sup>)

#### Corrosion Resistance

Tested to ASTM B117  
Minimum 5000 hours

#### Flexural Strength

Tested to ASTM D790  
9315psi (655kg/cm<sup>2</sup>)

#### Hardness

Rockwell R to ASTM D785  
85

#### Heat Distortion

Tested to ASTM D648 at 264psi fiber stress.  
68°F Cure 140°F  
212°F Cure 208.4°F

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## **Heat Resistance**

Suitable for use in immersed conditions at temperatures up to 140°F.

Resistant to dry heat up to 266°F dependent on load.

## **Food Contact**

USDA compliant for incidental food contact.

## **Chemical Resistance**

The product resists attack by a wide variety of inorganic acids, alkalies, salts and organic media.

For more detailed information refer to the PES Technical Center for advice.

## **Quality**

All PES Products are supplied under the scope of the company's fully documented quality system.

## **Warranty**

PES warrants that the performance of the product supplied will conform to the typical descriptions quoted within this specification provided material is stored correctly and used according to the procedures detailed in the Technical Data Sheet for the material.

## **Health and safety**

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

**Legal Notice:** The data contained within this Product Specification is furnished for information only and is believed to be reliable at the time of issue. We cannot assume responsibility for results obtained by others over whose methods we have no control. It is the responsibility of the customer to determine the products suitability for use. PES accepts no liability arising out of the use of this information or the product described herein.