

Product Specification



PES 101 POWER METAL PASTE

101 Metal Repair Paste is a two-component solvent free epoxy metal repair compound. The product has been designed for use on 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 material can also be used as a gap filling adhesive.

Characteristics

Appearance

Base: Dark Grey Paste
Activator: Light grey paste
Mixed: Mid grey paste

Mixing Ratio

By weight: 5:1
By volume: 3:1

Density

Base: 2.70
Activator: 1.70
Mixed: 2.46

Volume Capacity

24.7 Culn

Solids content

100%

Sag Resistance

Nil at 0.78"

Coverage

2.2lb of fully mixed product will give the following coverage rates –
4.3ft² at 40mil
2.2ft² at 80mil
1.45ft² at 1/8"

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 60 minutes
68°F 30 minutes
86°F 15 minutes
104° 7.5 minutes

Minimum machining time

50°F 4 hours
68°F 2 hours
86°F 1 hour
104°F 30 mins

Maximum overcoating time

50°F 12 hours
68°F 6 hours
86°F 3 hours
104°F 90 mins

Full Cure

50°F 6 days
68°F 3 days
86°F 1.5 days
104°F 18 hours

Storage life

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

Mechanical Properties

Abrasion Resistance

Taber CS17 Wheels/1Kg load
22mm³ loss/1000 cycles

Adhesion

Tensile Shear to ASTM D1002 on abrasive blasted mild steel with 75-micron profile
185 kg/ cm² (2630 psi)

Pull off Adhesion to ASTM D4541 on abrasive blasted mild steel with 75-micron profile
3480 psi

Compressive strength

Tested to ASTM D695
15300psi

Corrosion Resistance

Tested to ASTM B117
Minimum 5000 hours

Flexural Strength

Tested to ASTM D790
10,000psi

Hardness

Rockwell R to ASTM D785
100

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Heat Distortion

Tested to ASTM D648 at 264psi fiber stress.
68°F Cure 136.40°F
212°F Cure 208.40°F

Heat Resistance

Suitable for use in immersed conditions at temperatures up to 158°F.
Resistant to dry heat up to 392°F dependent on load.

Food Contact

USDA compliant for incidental food contact.

Approvals

Approved by BUREAU VERITAS for Surface Protection and Cold Repair Products applied to Marine Vessels.

Certificate No: 55258/AO BV
Expiry: 24th March 2024

Chemical Resistance

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

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.