Technical Data Sheet

PES 203 Super Flow Ceramic Repair Fluid

PES 203 Super Flow Ceramic Repair Fluid is an erosion-corrosion resistant coating used principally in fluid flow situations for improving flow efficiency. The material can be applied directly to abrasive blasted steel or to surfaces previously rebuilt with PES 101 Power Metal Paste or 201 Ceramic Repair Paste.

Typical applications

Suitable for the coating of equipment such as pump cases and impellers, valves, pipes, propellers, rudders, jet tubes, kort nozzles, etc.

Surface Preparation

All oil and grease must be removed from the surface of the repair using an appropriate cleaner such as MEK. The surface should be abrasive blasted to SSPC SP10 and a minimum blast profile of 3-4 mils. MEK and all prepared surfaces must be repaired before rusting or oxidation occurs.

NOTE: For salt contaminated surfaces the area must be abrasive blast cleaned as above and left for 24 hours to allow any ingrained salts to come to the surface. After this 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 salts have been sweated out of the surface and removed.

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

On surfaces already rebuilt with PES 101 Power Metal Paste or 201 Ceramic Repair Paste no further surface preparation is required where over-coating takes place within 3 hours. After this maximum over-coating time has elapsed roughen the surface by flash blasting or other means of abrasion.

Mixing and Application

Warm the Base 59-77°F before mixing and do not apply when the ambient or substrate temperature is less than 50°F or when the relative humidity is greater than 90%.

Mixing of the product can be on full units or by part-mixing.

If mixing the whole unit, transfer the contents of the Activator unit into the Base container ensuring that as much material is drained from the Activator container as possible. Mix the two components together until they are streak-free using the spatula provided and apply using a short bristled brush or applicator tool.

Application should be carried out in two coats. To achieve the correct film thickness of 10 Mils. (250 microns) per coat a practical coverage rate of 23 sq. ft. (2.2 sq. m/kg) should be aimed for.

From the commencement of mixing the whole of the material should be used within 30-40 minutes at 68°F.

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As soon as possible after application of the first layer, and no longer than 16 hours, apply a further coat as above. If the maximum over-coating time is exceeded, the first layer should be brush blasted or abraded before applying the second coat.

For part mixing use a mixing ratio of 5:1 by weight or 2:1 by volume.

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	30 - 40 minutes
Movement without load or immersion	6 hours
Light loading	10 hours
Full loading and cold water immersion	3 days
Hot water and Chemical immersion	6 days

Technical Data and Performance

Volume Capacity	40cu.in./kg 657cc/Kg
Compressive Strength ASTM D695	10,450psi (735kg/cm²)
Tensile Shear Adhesion(mild steel) ASTM D1002	2650psi (187kg/cm²)
Flexural Strength ASTM D790	8100psi (570kg/cm²)
Hardness (Rockwell R) ASTM D785	85
Corrosion Resistance (ASTM B117)	10,000 hours

Storage Life

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

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

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Legal Notice

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