



PES 206 Ceramic HTA Fluid

PES 206 Ceramic HTA Fluid is designed to upgrade the performance of conventional materials of construction and in particular to protect equipment operating in contact with acids and highly aggressive chemicals at elevated temperatures. The coating once fully cured is capable of withstanding temperatures up to 194°F in continuous immersion in sulphuric acid, hydrochloric acid and phosphoric acid. 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 processing equipment, pumps, pipework, distillation units, stripper units, exhaust stacks and internal tank surfaces.

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 using an angular abrasive. Once blast cleaned, the surface must be degreased and cleaned using MEK and all prepared surfaces must be repaired before rusting or oxidation occur.

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 to 68-77°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%.

Only full units of material should be mixed and to aid mixing add only part of the Activator initially. Pour approximately one third of the contents of the Activator unit into the Base container and mix carefully using a spatula. Once the two materials have been blended, add the remainder of the Activator ensuring that as much material is drained from the Activator container as possible. Mix the two components together until they are streak-free and apply using a short bristled brush or applicator tool. The material once fully mixed has an application of time of 30-40mins at 68°F.

Two Coat Application

Where possible, the application should be carried out in two coats.

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a) The first coat of material should be applied at a target thickness of 22 mils using a practical coverage rate of 6.5 sq ft /kg. Use a plastic applicator as a squeegee to apply a **very** thin layer of product, forcing it into the blast profile. Special attention should be paid to detailed areas such as edges, corners and welds where brush application by stippling may be required. Immediately after the initial application apply further material by brush or applicator to give the required film build, checking film thickness with a wet film thickness gauge. Lay off the coating by brush to give a smooth finish.

Two Coat Application (continued)

b) Allow to harden for a minimum of 16 hours before removing any surface bloom by washing first with a detergent and water mixture and then clean water. This should be followed by sweep blasting at reduced pressure using fine grit, and removal of any debris before washing with MEK.

c) The second coat of material should be applied at a target thickness of 12 mils using a practical coverage rate of 13 sq.ft. /kg using a brush or applicator and once again checking film thickness with a wet film gauge before finally laying off the coating with a brush to give a smooth finish.

Single Coat Application

If a two coat application is not practical, the product can be applied as in (a) above in a single coat at 26 – 34 mils using a practical coverage rate of 4.8 sq ft /Kg. Using this method extreme care is required when carrying out visual inspection of the coating whilst still wet to identify any defects which should be corrected.

Once cured any surface bloom should be removed by detergent wash and the coating then wet sponge tested to identify any pin holes. These should be repaired by manually abrading the surface, cleaning down and applying freshly mixed PES 206 Ceramic HTA Fluid at approximately 10 mils thickness to the prepared area.

Cure Times

At 68°F, the applied materials should be allowed to harden for at least 6 hours before movement. PES 206 Ceramic HTA Fluid is designed for elevated temperature service and **in all situations** requires post cure. After an initial cure period of at least 24 hours at 68°F it should be post cured at between 140 and 212°F for between 2 and 24 hours. As an alternative, and where the service temperature will rise gradually, the material can be post cured in service after an initial cure period of at least 24 hours at 68°F

Technical Data and Performance

Volume Capacity	25.9 cu in./Kg
Compressive Strength ASTM D695	13,960psi (983kg/cm ²)
Tensile Shear Adhesion ASTM D1002	3125psi (220kg/cm ²)
Flexural Strength ASTM D790	8710psi (614kg/cm ²)
Shore D Hardness ASTM D2240	89 at 68°f 78 at 464°f

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Corrosion Resistance (ASTM B117)	5000 hours
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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

Legal Notice: The data contained within this Technical Data Sheet 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.