
Product Name: Abradable Attrition Coatings

Product Number: EPWA27 (PX/HX443D)

Product Description:

Also known as PX/HX 443D. Graphite filled two part attrition compound which has almost totally replaced an earlier multi-coat spray system. Uses included the engine rings of the AB-8B Harrier. Hardness 72-75 Shore D-hardness, ASTM D2240.

An alternative version is EPWA27 is available that was designed to provide a 1:1 mix ratio. This product is not formally adopted but it represents an identical composition to EPWA27 when the two parts are mixed.

Used in fan track linings where grooves are machined into the material; this is common in the compressor case area as 'knife seals' as it is denser than materials used in other areas.

Processing of EPWA27 for Rolls Royce machinery is given in RPS 340/1. This data is evolved from the original use of the material on the Pegasus engine. The material will fully cure at room temperature; 90-95% cure is achieved after 24 hours at typical working temperatures; the final 5-10% of the cure will take place over the next few days. Provided that ambient temperatures are not too low; EPWA27 will be sufficiently cured after 24 hours to be fully resistant to solvents and cutting oils. EPWA27 is designed not to slump and thus allows faster application into thicker, deeper grooves.

Approvals/Specifications:

- MSRR 9316;
 - RPS 340/1
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Performance:

Oil, Grease, Resistant attrition coating.
Cured coating – Shore D hardness – 70-85 units

Components:

EPWA27-A and EPWA27-B

May be thinned with MEK (methyl ethyl ketone)

Application:

Surface Preparation:

Dry abrasive blast using 120/220 grade Aluminium Oxide grit. Ensure all dust is removed from the substrate prior to primer or EPWA27 application.

Baking epoxy primer or ambient cure 2pk Epoxy may be used as a base for EPWA27. Refer to OEM requirements before selecting primer to choosing a direct to metal application.

Direct to metal applications must be validated by the user before use.

Suitable Primers, 700-155-003, IP9064-6362 (chromate options), IP985-6500, IP9064-6500, IP3-6700 (non-chromate options)

Baking primer must be part baked in line with manufacturer's recommendations for coating systems that are made up of multiple paint layers.

Paint Preparation:

EPWA27 is a two part mix with a 2:1 part A to B mix ratio by weight.

The product must be thoroughly mixed at ambient temperature before use. The mixing of large volumes can be problematic due to the thickness of the material and the exothermic reaction between parts A and B. Mixing small amounts per application is the most effective method of use.

The final layer of EPWA27 may be thinned in the ratio 100g mixed EPWA27 to 10-15 cc of MEK. This procedure allows the final layer to achieve a smoother initial profile prior to any finishing /machining operations.

Application Method: EPWA27 is applied by spatula that is used to press the coating onto the substrate and into groves.

The work piece may be heated up to a limit of 60°C prior to application. The heat from the substrate has been found to help substrate wetting and flow of the coating.

Multiple applications will be required to achieve thick film builds.

Drying Curing: The EPWA27 coating may be cured at ambient temperature or a heated process.

Drying process options:

- 24 hours at room temperature (18-23°C)
- 3 hours @ 70 +/- 5°C
- 1 hour @ 100 +/- 5°C
- 1.5 hours @ 100 +/- 8°C

Technical Properties:

Supply Viscosity:	Ready for use
Flash Point:	>200°C
VOC Content:	0 g/l as supplied mix
Colour:	Dark Grey/Black
Pack Size:	1 or 7.5kg kit
Density:	1.08 g/ml mixed
Gloss:	N/A
Thinner:	MEK
Solvent/Clean Up:	40006 gun Cleaner
Catalyst:	2 part kit
Theoretical Coverage:	9.2 sq m/kg @ 100 micron 184m length of 50mm wide strip @ 100 micron.

Storage:

Use suitable Chemical storage for semi-solid materials

Shelf Life: 12 months temperate; 6 months tropical

Before use, refer to Product Safety Data Sheet

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Safety Data Sheets:

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