



DESCRIPTION

PES 181 is a two component composite system for repairing and protecting substrates against coarse particulate abrasion and erosion. The system is based on toughened epoxy novolac resins and closely packed ceramic aggregates.

TYPICAL APPLICATION

• Option	Appropriate Metal Primer
• Body Coat	PES 181 @ 1/4" thickness

PERFORMANCE DATA

Compressive Strength .. ASTM C-579	10,000 psi
Tensile Strength..... ASTM C-307	3,000 psi
Flexural Strength ASTM C-580	6,000 psi
Density..... ASTM C-905.....	140 pcf (2.25 gm/cm ³)
Tensile Shear..... ASTM D-1002	3,000 psi
Heat Resistance	300°F

STORAGE & INSTALLATION

Storage Environment	Dry area, indoor: 65–80°F
Application Temperature, ambient	40–95°F
Application Temperature, substrate	40-95°F
Shelf Life	12 months
Pot Life, @ 77°F	25 minutes
Tack Free Time, @ 77°F	1 hour
Light Movement @ 77°F	8 hours
Full Loading @ 77°F	2 days
Contact with Chemicals @ 77°F	3 days

Material cures more slowly at cooler temperatures, and working time will be substantially reduced at higher temperatures. In hot weather, material should be cooled to 65°F to 80°F prior to mixing and application to improve workability and avoid shortened pot life. The data shown above reflects typical results based on laboratory testing under controlled conditions. Reasonable variations from the data shown above may result.

CONSIDERATIONS & LIMITATIONS

1. Do not thin with solvents unless advised to do so by PES.
2. Prepare substrate according to “Surface Preparation” portion of this document.
3. Always use protective clothing, gloves and goggles consistent with OSHA regulations during use. Avoid eye and skin contact. Do not ingest or inhale. Refer to Material Safety Data Sheet for detailed safety precautions.
4. For industrial/commercial use. Installation by trained personnel only.
5. Do not apply when the temperature is below 40°F (5°C) or the relative humidity is above 90%.
6. Do not apply when there is moisture on the metal surface or is likely to be deposited by subsequent condensation.
7. Do not apply when the working environment is likely to be contaminated by oil/grease from adjacent equipment or smoke from kerosene heaters or tobacco smoking.

PES 181

TECHNICAL DATA SHEET

**Anti Abrasion
Wearing Compound
Epoxy Novolac Ceramic**

BENEFITS

- Excellent dry-heat abrasion resistance
- Excellent impact resistance
- Excellent chemical and corrosion resistance
- Long working times
- Cures down to 40°F

RECOMMENDED USES

- Pipe bends
- Chutes and hoppers
- Deflector screens
- Wear plates
- Centrifuges
- Mixing bowls
- Cyclones
- Nozzles
- Impellers

GENERIC DESCRIPTION

Epoxy Novolac

STANDARD COLOR

Red

PACKAGING

20 kg units
1 kg, 2 kg, 3 kg and 10 kg units

MIX RATIO 4:1 BY VOLUME

COVERAGE

0.8 ft² per 1 kg @ 1/4" thickness

SURFACE PREPARATION

This product can be applied to substrate(s) that have been prepared according to the following Surface Preparation Guidelines:

Apply only to blast cleaned surfaces.

1. Clean up loose contamination and degrease with a rag soaked in an effective cleaner, e.g. methyl ethyl ketone (MEK), which does not leave a residue.
2. Use only an angular abrasive to give a minimum depth of profile of 3 mils (75 microns) and the necessary standard of cleanliness.
3. Blast-clean the metal surface to achieve near white finish SSPC SP 10.
4. After blasting, metal surfaces should be coated before any oxidation.

Salt Contaminated Surfaces

Metal surfaces that have been immersed in salt water should be cleaned to the required standard.

INSTALLATION STEPS

1. **Mixing:** Mix the components of PES 181 thoroughly until a consistent color is obtained.
2. **Application:** Apply PES 181 onto prepared surface with a plastic applicator, spatula, or trowel blade. Press down firmly to remove entrapped air and insure maximum bonding to the surface. Work the material to correct depth and profile. Cured PES 181 cannot be satisfactorily ground or machined. If necessary, additional layer should be applied when the first layer is still soft, within 3 hours at 77 °F. If the over-coating time is exceeded, brush blast the cured material before any further application.
3. **Cleaning:** Clean tools with a non-flammable and low evaporating cleaner. Always wear gloves when using this product. Wash hands, arms and face with warm soapy water.