

Technical Data Sheet



PES 301 POWERMETAL Epoxy Resin and Hardener

PES Powermetal 301 Epoxy Resin and Hardener is a two pack, thixotropic epoxy material for use in conjunction with a range of tapes and fabrics to produce high strength composite repairs.

Typical Applications

When used with either glass tape, glass matt, chop strand matt or linen scrim can be used for repairs to equipment such as leaking pipework up to 36", holed pump casings, leaking flange faces, leaking tank seams, leaking valve casings.

Surface Preparation

All oil and grease must be removed from the surface of the repair using an appropriate cleaner such as MEK. For optimum performance, the surface should be abrasive blasted to American standards Nace #2 near white metal, SSPC SP 10, or Swedish Standard SA2.5 and a minimum blast profile of 3-4 mil,(75 microns) using an angular abrasive. Once blast cleaned, the surface must be degreased and cleaned using MEK or similar type material. All surfaces must be repaired before gingering or oxidation occurs.

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

Where abrasive blast cleaning is not possible (excluding salt contaminated surfaces) the surface should be roughened by MBX, needle gun or grinding.

Where there is corrosion pitting, this should be rebuilt using PES POWERMETAL 180, which can also be used to enhance adhesion onto poorly prepared surfaces.

Mixing and Application

Warm the Base to 59-77°F (15-25C) before mixing and do not apply when the ambient or substrate temperature is below 50°F (10C) or the relative humidity is above 90%.

Pour the Activator component into the Base tin and mix the two components together until they are streak free. Apply the mixed material to the prepared surface using a short bristled brush.

PLEASE NOTE: For more information on using PES 301 Epoxy Resin and Hardener in conjunction with either glass tape, glass matt, chop strand matt or linen scrim, please refer to the PES marine or industrial repair kit manuals.

From the commencement of mixing, all of the material must be used within 25 minutes at 68°F (20°C.) For mixing small quantities the mixing ratio is 2parts of Base to 1 part of Activator by volume.

Cure Times

At 68°F (20°C) 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	25 minutes
Movement without load or immersion	2 hours
Light loading	16 hours
Full loading	5 days

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For Optimum Performance

After an initial curing period of at least 16 hours at 68°F (20°C), raising the cure temperature progressively to 140 - 212°F (60 - 100°C) for up to 8 hours will result in improved mechanical, thermal and chemical resistance properties

Storage Life

5 years if unopened and store in normal dry conditions 59-86° (15-30°C)

Technical data and Performance

Volume Capacity	53cu.ins./Kg
Compressive Strength ASTM D695	1034kg/cm ² (14,700psi)
Tensile Shear Adhesion ASTM D1002	148kg/cm ² (2100psi)
Flexural Strength ASTM D790	912kg/cm ² (13,000psi)

Health and Safety

Please ensure good practice is observed at all times during the mixing and application of this product. Protective gloves must be worn during the mixing and application of this product. Before mixing and applying the material please ensure you have read the fully detailed Material Safety Data Sheet.

Legal Notice

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