

TECHNICAL DATA SHEET

PHOS-PREP® PP 920 DRY-IN-PLACE POLYMER FOR ALUMINIUM & ZINC

INTRODUCTION

PHOS-PREP® PP 920 is a non-chromate replacement for chromate based products for the pre-treatment of aluminium and aluminium alloys, magnesium and zinc (i.e. galvanised surfaces). A very pale surface finish is produced, eliminating the possibility of pre-treatment staining being visible through the paint.

PP 920 product gives excellent adhesion and corrosion resistance after subsequent painting or powder coating. The product may be used as a dry in place final treatment or subsequently rinsed.

PP 920 may be applied by immersion, spray or cascade processes. It is also suitable for use in spray washer systems.

EQUIPMENT

The recommended material of construction for tanks and pipe-work is 316 stainless steel, although some plastics or rubber may be suitable, provided there is no mechanical damage.

PROCESS

Appropriate chemical treatment ahead of PHOS-PREP® PP 920 depends on the condition of the metal to be processed, but adequate cleaning and etching is recommended, so as to remove all dirt and grease and sufficient metal to comply with any required process standard. Any smut formed during etching should be removed.

For galvanised work, any white rust or oil should be removed in a cleaner, freshly galvanised material may be treated with PHOS-PREP® PP 920 with no intermediate stage.

PHOS-PREP® PP 920 is a dry-in-place pre-treatment, the PHOS-PREP® PP 920 stage, maybe followed by rinsing, if existing equipment allows.

PROCESS CONTROL

(A) MAKE UP

A PHOS-PREP® PP 920 bath should be made up in water by adding 10 to 20 litres of the PHOS-PREP® PP 920 concentrate per 1000 litres of bath volume, such as to obtain the correct free acid pointage of between 0.5 & 1.0 (see the test method below).

The bath should be tested after thorough mixing.

(B) OPERATION

The process is designed as a replacement for chromate pre-treatment products. It will operate at a temperature from 15°C to 35°C, with an immersion time of between 2 and 3 minutes, or in a spray application of between 10 and 30 seconds.

It is recommended, if possible, that the PHOS-PREP® PP 920 NF pre-treatment is dried off immediately after the subsequent rinse stages, using a temperature not exceeding 200°C. Recesses containing entrapped moisture should be blown dry with a jet of clean compressed air.

LABORATORY TESTING

(A) FREE ACID POINTAGE

The bath is controlled by testing the acidity. Take a 25ml bath sample and add 10-12 drops of bromothymol blue indicator solution. Titrate against 0.1M sodium hydroxide solution until the colour changes from yellow/green to a deep blue/green.

The titre is the free acid pointage.

For a 1% working solution

A value of 0.5 ml should be obtained - to replenish the bath, add 1 litres of PHOS-PREP® PP 920 NF concentrate per 1000 litres of bath volume for each 0.1mls by which the free acid pointage needs to be increased.

For a 2% working solution

A value of 1.0 ml should be obtained - to replenish the bath, add 2 litres of PHOS-PREP® PP 920 NF concentrate per 1000 litres of bath volume for each 0.1mls by which the free acid pointage needs to be increased.

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