PRODUCT INFORMATION

ALPHASEAL MT 150

Alphaseal MT 150 provides the opportunity to achieve significant economy in operation while providing reliable and effective sealing at medium temperatures.

Alphaseal MT 150 can be used on a wide range of aluminium alloys which have been anodised and finished as natural, electrolytically coloured or dyed with organic or inorganic dyes. These finishes can be bright or matt.

Alphaseal MT 150 is formulated to achieve penetration of the pores in the anodic coating. The subsequent precipitation process provides an effective sealing mechanism without the formation of bloom or smut.

Operating Conditions:

Concentration: 1.5 - 2.5 % V/V
(15 - 25 litres per 1,000 Litres)

Temperature: 80 – 85°C

pH: 5.2 - 5.3

Water: Good quality tap water or deionised water.

Sealing time: 0.5 -1.0 minutes per micron

(depending on the depth of the anodic coating.)

Agitation: Air or mechanical

Filtration: Through 10 - 15 µm filters
(with the tank volume being filtered 2 - 3 times per day.)

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The lower concentration can be used for sealing work dyed with organic dyes. If it is possible, program the sealing of dyed work before concentrate additions are made.

Sealing times per µm vary over a wide range. Generally lower thickness can be sealed at the lower end of the range.

The optimum operating conditions, within the ranges given, to achieve the required seal specification for various anodic finishes can be readily established for a given plant.

Preparing an Alphaseal MT 150 Bath:

1)   It is preferable to use a stainless steel tank with air or mechanical agitation and set up for continuous filtration. Ensure the tank is clean and free of scale and foreign matter.

2)   In addition to using good quality water it is important to check that the pH of the water used to make up the solution is between 5.5 - 6.0 before adding the Alphaseal MT 150. The pH can be raised with ammonia solution or dropped with acetic acid.

3)   Add the required quantity of Alphaseal MT 150 to the bath, partly filled with water. Make the bath up to the required volume and adjust the pH to the required range.

4)   Maintain the pH of the bath between 5.2 - 5.3.

5)   The concentration of the Alphaseal MT 150 should be adjusted regularly using the method described below.

6)   Filtration can be carried out while the bath is in service or outside of production hours.

After sealing rinse thoroughly with good quality water.
The final rinse should be 60°C – 65°C for around 15 minutes.

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Analytical Control Method:

1)   Take a sample of the Alphaseal MT 150 bath and cool it to room temperature.

2)   Take a 50 ml aliquot.

3)   Dilute with approximately 50 ml with distilled water.

4)   Add 5 ml of ammonia 25% solution or pH10 buffer solution and mix.

5)   Add 0.1 gm murexide indicator.

6)   Titrate with 0.1M EDTA until a violet colour is obtained. Let this titre be "**a**" mls.

7)   The quantity of Alphaseal MT 150 to add to the bath is calculated as follows.

Let the required volume in litres of Alphaseal MT 150 to be added per 1,000 litres of bath volume be **Q** and the Desired Concentration as % V/V of Alphaseal MT 150 in the bath be **C**

$$\mathbf{Q} \text{ litres} = (\mathbf{C} - (\mathbf{a} \times 0.334)) \times 10$$

Example:

Let the initial concentration be 2% V/V Alphaseal MT 150 and the titre "a " for a 50 ml aliquot be 4.5 mls

$$\begin{aligned} Q \text{ litres} &= (2 - (4.5 \times 0.334)) \times 10 \\ &= (2 - (1.5)) \times 10 \\ &= 5 \end{aligned}$$

The required addition is 5 litres per 1000 litres which for a 10,000 litre bath is 50 litres.