ECOPASS IR 1100

TRIVALENT IRIDESCENT PASSIVATION FOR ZINC AND ZINC ALLOYS

ECOPASS IR 1100 is trivalent chrome based iridescent passivation. The passivation film produced is pale yellow iridescent with good corrosion resistance matching that of hexavalent yellow chromate passivations. The steady state chemistry assures repeatable and uniform pale yellow iridescent coating through out the bath life. The process can be used for all zinc and zinc alloy deposits. The process may be used either by barrel or rack application.

OPERATING CONDITIONS

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
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</thead>
<tbody>
<tr>
<td>ECOPASS IR 1100</td>
<td>100 ml/ltr</td>
</tr>
<tr>
<td>Temperature</td>
<td>Room</td>
</tr>
<tr>
<td>pH</td>
<td>1.2 - 1.8</td>
</tr>
<tr>
<td>Time</td>
<td>30 - 60 sec.</td>
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<tr>
<td>Agitation</td>
<td>Rack or mild air agitation</td>
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</table>

BATH PREPARATION:

Fill the tank 2/3 full with fresh water and add the required quantity of ECOPASS IR 1100.
Make up the level with water and stir to ensure a thorough mixing.
Check the pH and if necessary adjust the pH to the required value using either nitric acid or caustic lye.

OPERATION:

Zinc plated components are thoroughly rinsed prior to passivating in ECOPASS IR 1100.
A nitric acid pre dip of 0.5% V/V is recommended to maintain the pH of the passivating bath.
The component are rinsed thoroughly after passivation and dried. Faster drying can be achieved by giving a final hot rinse.
Any component falling in the passivation bath should be removed immediately.

CONTROL:

The bath can be maintained by regular addition of ECOPASS IR 1100. The consumption will depend on the drag out and number of component processed. For each liter of dragged out solution 100 ml/ltr of ECOPASS IR 1100 can be added. The pH is to be maintained between 0.8 -1.2. The pH can be lowered by adding Nitric acid and can be increased by adding sodium hydroxide.

STORAGE:

Store in cool, dry place. If crystalline deposit or precipitate does occur at the bottom of the container, warm water should be added to the drum and mixed well. The slurry can then be added to chromating solution.

CAUTION:

The ECOPASS IR 1100 concentrates and the operating solution are acidic in nature and these are to be handled with care. Use protective clothing, safety glasses and facemask when using this material. In case of contact flush the affected areas with good quantities of clean cold water.

WASTE TREATMENT:
ECOPASS IR 1100 has no hexavalent chrome hence a reduction step is not necessary. Ecopass IR 1100 contains no strong complexing agents, Rinse water as well as spent concentrates of Ecopass IR 1100 can be treated with lime at a pH above 9 to form a chromium hydroxide precipitate. A reaction time of 2 to 3 hours is recommended. Concentrates must be diluted at a ratio of at least 1:3 before sending them to the west water treatment plant.

NOTE

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